1st EUROPEAN CONFERENCE

WHEELCHAIR BASKETBALL TODAY AND TOMORROW

PRE CONFERENCE AND WORKSHOP PROCEEDINGS

ATHENS 6-11 MAY 2003
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ATHENS 6-11 MAY 2003
Contributors

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Contents

Preface ................................................. 7
Agenda ............................................... 9

PART 1
PRE CONFERENCE WORKSHOP - SEMINAR
· Organization and Administration ............ 15
· Ergophysiology .................................. 19
· Planning of training .............................. 21
· How important is the role of Media in Basketball and generally in athletics? ............ 23
· Team Tactic ..................................... 25
· Psychology ....................................... 31
· Injuries and disability ............................ 35
· Athletic Sciences and Basketball Physical condition ............................................. 41
· Legal Defence ................................... 45
· Functional Classification ..................... 51
· Training practice part ........................... 53

PART 2
CONFERENCE OPENING
· Maureen Orchard
  President of IWBF ................................. 63
· Koutsouki Dimitra
  University of Athens .............................. 65
· Mary Karella - Diamantopoulou
  Chairman of ELEPAP ............................. 67
· Stavros Savas
  President and CEO of Ellinogermaniki Agogi ...................................................... 69
· Giorgos Kouzas
  Chairman HWBF, Vice-president Eurozone IWBF ................................................. 71

PART 3
CONFERENCE
· The role of sports in the socilisation and social incorporation of the disabled into society ........ 75
· Cardiovascular and thermoregulatory responses to prolonged .................................. 79
· Biomechanical movement analysis ......................... 81
· Wheelchair basketball training .................. 87
· Basketball training - The role of trainer at the contemporaty basketball ..................... 89
· The effect of a goal setting program on basketball skills and self-efficacy of adolescents .... 93
· Comparison of sport achivement orientation between professional, amateur and wheelchair basketball athletes ................................................................. 113
· Physical abilities of disabled people ............ 115
· Rehabilitation and Sports ........................ 121
· Individual skills of an offensive player ........ 125
· Function classification for wheelchair basketball ....................................................... 131
· Sport and disabilities .............................. 135
· Jes-Soft Basketball software .................... 139
· Common referring ................................ 145
· Playing Wheelchair Basketball ................ 149
· Yearly training program .......................... 151
· Presentation of the Leonardo da Vinci: “Training for the Life” program .................... 155
· Hellenic wheelchair basketball assosiation and the european prospect ......................... 161
· Moments of the Workshop ....................... 163
Preface

Organizing a pioneering workshop in the area of sports for disabled people is by itself a very complicated task; therefore it demands a very systematic and scientific approach taking under consideration all the factors (e.g. psychology, pedagogy, e.t.c.) that could play an important role towards that effort.

Considering the need for reinforcing the efforts of embedding the disabled people in the society of sports and specially in the society of basketball and the lack of scientific approach towards that need, the proceedings of the “Training for Life” workshop proposes the transition of Wheelchair Basketball from an entertaining activity to a professional prospect as a part of the rehabilitation programs, which support the professional establishment of disabled people, through a scientific methodology.

Wheelchair Basketball, is a well-known sport around Europe, therefore it can be a useful pilot application for the development of a workshop regarding Wheelchair Basketball training. The selection of the workshop’s themes is based on two fundamental principals. The identification of the trainers’ needs in the field of Wheelchair Basketball and the scientific modulation of its schedule. It should be emphasized, that the thematic areas of the workshop came as a result of the interaction between these principals.

Those thematic areas include all the subjects of the detailed schedule of training schools such as: Training, Psychology of Sports, Sociology, Sports medicine, Ergometry, Pedagogy, Arbitration rules, Classification rules, Management and Administration of the team.

The complete approach of ELEPAP and the ‘Ellinogermaniki Agogi’, the expertise of the scientific team of Department Of Physical Education and Sports Science of The University of Athens and the German Sports University of Cologne and the H.W.B.F. and I.W.B.F suggestions, can give a wide range of thematic areas for this workshop.

There is a strong belief among the consortium of the project "Training for Life" that this workshop is the beginning of a new era of equal opportunities among all athletes-disabled or not—who wish to be involved with wheelchair basketball training and accomplish the following goals:

• Strengthening the sport of Wheelchair Basketball.
• Training is the foundations for the development of every sport therefore, it brings up a complete and scientifically proved proposal and contributes in the qualitative and essential upgrade of sport.
• Promotion of the sport in a national and European level.
• Bringing together the disabled people and the rest of the society.
• The professional establishment of disabled people in the area of basketball.
• The development of a detailed training project in Wheelchair Basketball, one of the most important conditions for the promotion of the sport. However, it should be pointed out that the number and the diversity in the origin of the participants will also ensure the promotion of ideas and results of the Conference in a
European level.

- The development and documentation of material regarding Wheelchair Basketball and Basketball in general that can be accessed through Internet.

We all wish to realize the dream of establishing the first training school for Wheelchair Basketball with the contribution of the organizations mentioned above. Hopefully, this workshop establishes a starting point of this effort.
## Agenda

### PRE CONFERENCE WORKSHOP - SEMINAR

<table>
<thead>
<tr>
<th>TIME</th>
<th>TRAINER</th>
<th>SUBJECT</th>
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<tr>
<td><strong>TUESDAY MAY 6</strong></td>
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<tr>
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<td>Dr. N. GEORGIADIS</td>
<td>SOCIOLOGY</td>
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<td>G. TOLIAS</td>
<td>ORGANIZATION AND ADMINISTRATION</td>
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<td>Dr. G. NASSIS</td>
<td>ERGOPHYSIOLOGY</td>
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<td>WIM VAN EK</td>
<td>TRAINING</td>
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<td>G. KOGALIDIS</td>
<td>MEDIA AND WHEELCHAIR BASKETBALL</td>
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<tr>
<td>15:30</td>
<td>M. ZACHARAKIS</td>
<td>TEAM TACTIC</td>
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<td>Dr. N. GEORGIADIS</td>
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<td>C. KORONAKIS</td>
<td>PHYSIOTHERAPY</td>
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<td>C. PANOUSIS</td>
<td>PHYSICAL CONDITION</td>
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<td>V. ANNEKEN</td>
<td>EVALUATION OF TFL PROJECT</td>
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<tr>
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<td>A. PAVLOPOULOS</td>
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<td><strong>THURSDAY MAY 8</strong></td>
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<tr>
<td>14:30</td>
<td>A. ANDREADOU</td>
<td>CLASSIFICATION</td>
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<td>S. TSOUNTSOURAS</td>
<td>OFFICIATING</td>
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<tr>
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<td>WIM VAN EK</td>
<td>TRAINING. PRACTICAL PART</td>
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## CONFERENCE PROGRAMME

### FRIDAY MAY 9

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<tr>
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<tr>
<td>18:00 - 18:30</td>
<td>CONFERENCE OPENING</td>
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<tr>
<td></td>
<td>MAUREEN ORCHARD PRESIDENT of I.W.B.F.</td>
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<td></td>
<td>JAN BERTELING PRESIDENT of EUROZONE I.W.B.F.</td>
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<td></td>
<td>PANAGIOTIS GIANNAKIS PRESIDENT OF HELLENIC ASSOCIATION OF</td>
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<td></td>
<td>BASKETBALL COACHES</td>
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<td>CHRISTOS SOTIRAKOPOULOS CENTER OF SPORTS JOURNALISM</td>
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<td></td>
<td>Prof. Dr. KOUTSOUKI DIMITRA UNIVERSITY OF ATHENS</td>
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<td></td>
<td>KARELLA-DIAMANTOPOULOU MARY CHAIRMAN OF ELEPAP</td>
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<td>Dr. SAVAS STAVROS ELLINOGERMANIKI AGOGI</td>
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<tr>
<td></td>
<td>GIORGOS KOYZAS PRESIDENT OF HELLENIC WHEELCHAIR BASKETBALL FEDERATION</td>
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#### SESSION A (Chair: George Tolias)

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<tr>
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<tr>
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<td>&quot;THE ROLE OF SPORT IN SOCIALIZATION AND SOCIAL INTERATION OF PERSONS WITH DISABILITIES&quot;</td>
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<td>Prof. Dr. KOUTSOUKI DIMITRA UNIVERSITY OF ATHENS</td>
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<td>&quot;CARDIOVASCULAR AND THERMOREGULATION ADAPTATION IN PARAPLEGIC</td>
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<td>Dr. NASSIS GEORGIOS UNIVERSITY OF ATHENS</td>
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<td>19:10 - 19:30</td>
<td>&quot;BIOMECHANIC MOVEMENT ANALYSIS&quot;</td>
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<td>19:30 - 20:00</td>
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<td>20:00 - 20:20</td>
<td>&quot;WHEELCHAIR BASKETBALL TRAINING&quot;</td>
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<tr>
<td></td>
<td>WIM VAN EK COACH OF THE GREEK NATIONAL WHEELCHAIR</td>
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<tr>
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<td>PEDOULAKIS ARGYRIS COACH B.C. PERISTERI</td>
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### SATURDAY MAY 10

#### SESSION B (Chair: Dr. N. Georgiadis)

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<td>&quot;THE EFFECTS OF A GOAL SETTING PROGRAMME ON BASKETBALL SKILLS AND THE</td>
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<td>SELF EFFICACY OF YOUNG BASKETBALL PLAYERS&quot;</td>
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<tr>
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<td>Dr. GAVRILIDIS ANDREAS UNIVERSITY OF ATHENS</td>
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<td>10:30 - 11:00</td>
<td>&quot;COMPARISON OF SPORT ACHIEVEMENT ORIENTATION BETWEEN PROFESSIONAL,</td>
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<td>AMATEUR AND WHEELCHAIR BASKETBALL ATHLETES&quot;</td>
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<td>Dr. SKORDILIS EMMANOUL UNIVERSITY OF ATHENS</td>
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<td>11:00 - 11:30</td>
<td>&quot;PHYSICAL ABILITIES OF DISABLED&quot;</td>
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<td>ZACHARAKIS MANOLIS ASSISTANT COACH OF THE GREEK NATIONAL</td>
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<td>&quot;MOTIVATION AND COUNTER-MOTIVATION OF WHEELCHAIR BASKETBALL PLAYER&quot;</td>
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<td>12:30 - 13:00</td>
<td>&quot;SPORTS AND REHABILITATION&quot;</td>
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<td>&quot;INDISCRETE OFFICIATING: WAYS AND PROBLEMS IN APPLICATION&quot;</td>
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<td>10:30 - 11:00</td>
<td>&quot;PLAYING WHEELCHAIR BASKETBALL&quot;</td>
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<td>11:00 - 11:30</td>
<td>COFFEE BREAK</td>
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<tr>
<td>11:30 - 12:00</td>
<td>&quot;YEARLY TRAINING PROGRAMME&quot;</td>
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<tr>
<td>12:00 - 12:30</td>
<td>&quot;PRESENTATION OF THE LEONARDO DA VINCI : TRAINING FOR LIFE PROGRAM&quot;</td>
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<td>13:00</td>
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Part 1
PRE CONFERENCE WORKSHOP - SEMINAR

"With our hearts let us see, with your hands let us break every chain. Then, indeed, shall we know a better and nobler humanity."

Helen Keller
Wheelchair basketball has taken a tremendous development over the passed 20 years. The inclusion of athletes with disabilities other than neurological impairments and those with minimal physical disabilities of the lower extremities has extended the scope of potential players. This development was possible due to the fact that the international wheelchair basketball community, represented at that time by the wheelchair basketball section of the ISMGE, has introduced the present player classification system in 1982. From an elite sports point of view this regulation allowed the inclusion of more players, the organisation of more competitions with more challenges. This resulted in more innovations and a higher level of sports performances by the players. In this aspect wheelchair basketball follows the same rational and principles as any other elite sport.

Where are the differences on elite level between wheelchair basketball and 'stand-up basketball'? There is still a significant difference to the 'stand-up game'. The applied classification system demands the inclusion of players with severe physical handicaps to play the sport of wheelchair basketball. It is worth to review the underlying principles to upheld the use of this classification system:

- Not the body alone makes the player but his/her mental abilities. Physical limitations should not eliminate players who possess an athletic spirit and who had originally invented this sport.
- Wheelchair basketball is the only team sport that can be played by players with spinal cord lesions on elite level.
- Participation of the physically more disabled players is regarded more importantly by the IWBF than the only focus a team's victory. The specific skill proficiency of players with different functional profiles highlights one of the unique qualities of wheelchair basketball. Additionally, classification expresses and supports solidarity among all players as a humanistic quality.

What is the purpose of the elite sport? First of all to allow persons with disabilities to experience the excitement of elite performance and to develop each athlete's individual optimum. In this aspect elite sport has many positive secondary effects. It is no doubt that the elite performances of athletes with disabilities have a tremendous positive impact on the identity of persons with disabilities and the relationship between persons with and without disabilities. Elite sports can provide the role models of athletes that could assist to encourage more persons with physical disabilities to join their sport. Speaking from a national point of view it must be expected that the players who learn new experiences on international level assist to improve the quality of the national programme. The national organisations invest a lot of money for this purpose.

The actual weaknesses of the national programmes of sports for the disabled
The number of participating athletes is very small in sports for the disabled and also in wheelchair basketball. The existing teams are ageing but still demonstrate a high level of performance. The players of the national teams are recruited in many countries only from the few playing teams. There is no league system that includes weaker
teams and an effective youth programme rarely exists. In most countries the programmes are not widely disseminated. Often they exist only in major cities.

A novice player faces an insurmountable level of performance if he/she joins the training of one of the few existing teams. Only novices who are extremely gifted and who live close to one of the teams have a chance to start playing.

There are two major reasons for this weakness in the sports development:

• In the majority the national programmes did not grow from grass roots level. A few players and teams did not think about building a sound structure that provides playing opportunities all over the country with many teams playing in regional leagues but started with a national team and a first national league. A proper sports structure cannot be built from the top but only from the bottom.

• The recruiting of new players is a very difficult task and challenge. Persons who had been just recently injured are psychologically in a very difficult position to accept their limitations and losses. It is even more difficult to teach a sport to a person who feels disadvantaged, is anxious and suffers under the trauma of an acquired disability.

Systematic recruiting or development is applied only in a few countries. And if the playing opportunities are not appropriate to the level of new players the few that are encouraged drop out after a short time.

What has to be done?
The national federations have to initiate a professional development programme to provide the necessary playing opportunities on community level and to assist novices to bridge the gap between the medical rehabilitation centres and the community programmes.

The development programmes need trained peer counsellors. It is a fact that in the past mainly players recruited new players. The opportunity for former athletes to experience solidarity with persons who had been just recently injured could give them a lot of satisfaction and extend their career in a unique way.

Experienced athletes have the best requisites in combination with some educational training to become successful peer counsellors. In this function an athlete could provide the most effective psychological and educational assistance for a novice. In this capacity they can serve their sport most effectively.

The community programmes have to focus on self-aid; that means besides of sporting opportunities they give advises and encouragement how to manage the all day living. The offered programmes are designed in a way that they encourage participation and that they allow most probably to experience success with a team and to give personal satisfaction.

A proper base on community level is the best means to assist the rehabilitation process of persons with severe physical disabilities and secondly to recruit also those players who are willing to start a sports career. Elite sport has to be organised above the community programmes.

Only one out of twenty athletes may be interested to undergo systematic and time-consuming training and competitions.

The interests of persons are different and between elite sport and recreational activities there is a wide field of organised amateur sports. Germany comes close to this model. 150 teams play in a well-structured league system. Starting with many regional leagues with low level of performance four leagues built a pyramid in hierarchic order with the first national league on top.

Nevertheless, this system could be much more effective if the recruiting job would become a serious issue for the clubs and the national federation. Germany should have at least 300 teams playing.

Result:
Trained peer counsellors and coaches who know about the weaknesses of the national programmes could assist
to develop a sound sports structure and to organise an effective recruiting programme. This would bring on one hand the national federation into a position where they can assist in the difficult rehabilitation process of persons with acquired disabilities by the means of wheelchair basketball. And on the other hand the well-structured nationwide programme would become beneficial in long terms also for the recruiting of elite athletes and for the performance level of the national team.

The special psychological situation of just recently injured persons need specific means, with a strong involvement of experienced athletes with disabilities, that elite sport can prosper as well in long terms. Without a fair classification system that allows participation of elite athletes with a more severe physical handicap on international level and an active recruiting programme with peer counsellors only a relatively small population will enjoy the benefits of active sports participation. Solidarity between experienced players and novices and solidarity between the more and less physically handicapped players have to become the policy not only for all national and international wheelchair basketball organisations but for all other organisations in sports for the disabled.

The basic functions of the direction and the importance they have for the coach.

The objective of the administration in any organization is to pose a methodology, according to which the organization will function effectively and will create basic prerequisites for the achievement of preset goals. The primary adopters of this methodology in an organization are the counterparts that hold high positions within the organization (executives, general directors). The same methodology follows also an athletic organization and in this case, an athletic team, where in the high levels of the organized structure, along with the council of the directors, participates also the coach.

Up to recently there was the assumption that the sole role of the coach was only its occupation with the technical-athletic issues of the team. Nowadays this assumption is obsolete and doesn't stand in any case. The chief coach of a team has to have knowledge of organizational and directive theory of the athletic organizations, in order to be able to coordinate and to work effectively and successfully with his co-workers.

Besides the coaching and technical knowledge, which is necessary for a coach in order to prepare his team, there is a second category of knowledge and abilities regarding the organizational and directive techniques which include the five basic functions of the administration: the design, the organization, the employment, the direction and the control. With the cognition and the right use of these basic function from the part of the coach, is reassured the best programming of the team's activities, the best possible division of labor, the best direction of the human role and the more effective communication with the members of the team.

The design regards the definition of the goals from the coach's part and the choice of the necessary actions for their accomplishment. The importance of the design is great because: it helps the coach to persuade other members on the directions that he gives to his team, it contributes to the improvement of the coordination of the actions taken, and also reduces such actions that are unnecessary and create damage.
The design should always be realistic and move together with the abilities, the economic situation, the philosophy and the objectives of the team. The design splits in 3 parts regarding the time frame within which the actions are organized: long-term design (1, 2 or more years), medium-term design (1-6 months) and short-term design (1 week).

The setting of realistic objectives, the proposals to the direction, the determination of priorities and the procedure of decision-making, the setting of the action program and the setting of the evaluation criteria, constitute the seriate and secondary activities of the design. More particularly the activities of a coach within athletic team regard: the transcriptions, the basic preparation, the friendly games, the medical tests, the trainings, the spying of the opposite teams and the diet.

The organization regards the division of labor in teams and people the have as their objective the accomplishment of the preset goals. The basic functions that help a coach to organize his team are: the division of work, the grouping of activities according to their sector, the cooperation of the various sectors and the right choice of personnel. From the coach's part, his jurisdictions regarding the team's organization are: the determination of the employers' obligations, the programming of the trainings, the team's games, the meetings with the players and the personnel and the constitution of rules.

The coach is the one responsible for the choice of the right personnel. His opinion should be taken seriously into consideration in issues regarding transcriptions- disengagement of athletes, and in issues regarding the hiring of competent personnel who will reassure the effective function of the departments. The coach is responsible for the training of the personnel, for the determination of the personnel's salary, for the assignment of work to the most appropriate people, for the solving of the athletes' problems and for the evaluation of the personnel.

The coach's goal is to direct the members of his team towards the effective accomplishment of the preset objectives. This action is called direction. For an effective direction, the coach should always act according to his authorities of power (to demand from the athletes and the personnel to act in a certain way, to create motives for them, to be their leader and to direct them to the best possible performance).

One of the administrative capabilities that a coach should have is the one of the communication (communicating information inside and outside the team). It is essential the information delivered to be accurate and understandable and to reach only people who are interested in it.

The notion of the control refers to the procedure of certification, counting and rectification of the possible wrong aiming of the athletes and personnel to wrong goals and objectives. Regarding the function of the control, the coach controls the players, their performance, the personnel and the evaluation of the objectives and their outcomes.
1. Energy sources
Adenosine triphosphate (ATP) is the direct source of muscular energy. The reformation of ATP takes place during the breakdown of phosphocreatine, glycogen and fat. During short term peak performances that do not exceed 10 seconds the main source of energy comes from the breakdown of phosphocreatine. During a more long-term effort, which lasts from 30 seconds to 2 mins, the energy needed is being supplied by the mechanism of anaerobic glycolysis. During a 5 to 30 minute effort, the aerobic mechanism is responsible for the energy supplied. Finally, during a medium effort, which lasts for over 30 minutes the amount of energy needed is being provided by the burning of carbohydrates and fat. Exhaustion in such an exertion coincides with the reduction of the reserves of muscle glycogen. Such exercise in a warm environment will cause loss of water through sweating, a malfunction in the cardiovascular and temperature controlling systems that can lead to exhaustion or even stopping of the athlete's effort.

2. Muscle system and muscle strength
The skeletal muscle is made up of multiple muscle fibres, each fibre is made up from multiple myonids and the myonids are made up of sarcomeres. The sarcomere contains the two proteins that take part in the contraction, namely actin and myosin. The layers of actin muscle fiber sliding over the layers of the myosin fibers causes the muscle to contract. Muscle fibres are differentiated into a) oxidising slow contraction type I, b) oxyglycolytic fast contraction type IIA, and c) glycolytic type IIB. Training can change the type IIB to IIA but can also reform type I to IIB.

3. Aerobic capacity
Aerobic capacity is the most important indicator of the functional ability of the body. This parameter is expressed with the maximum oxygen intake, which is the result of the fully functioning cardiovascular, respiratory and muscle systems. The maximum oxygen intake, which ranges due to limits set by heredity, is affected by age and gender. Appropriate training can significantly improve it. Anaerobic threshold refers to the strain of the exercise, which if intense, causes the concentration of lactic acid in the blood to be significantly increased. It is also strongly related to the performance in sports of endurance, which is why training of athletes is based on anaerobic threshold.

4. Anaerobic capacity
Anaerobic capacity includes the anaerobic lactic deficient and the anaerobic lactic mechanism. The first mechanism, on which the output of sports of strength depends on, frees energy from the breakdown of ATP and phosphocreatin. The anaerobic lactic mechanism frees energy during the breakdown of glycogen in anaerobic glycolysis, the path that leads to the production of lactic acid.
5. Temperature-controlling mechanism
The loss of body fluids due to dehydration can lead to malfunctioning of the cardiovascular and the temperature-controlling systems, and as a result cause premature exhaustion, especially in warm conditions. Such unfavourable adaptations of the body appear as hypermetric increase of the heartbeat and an increase in body temperature. Securing the ideal level of hydration of the body before exercise and the replenishment of the fluids lost through sweating during exercise, are the most important factors in the bluntness of exercise-based malfunctioning of the systems mentioned above. Also, the replenishment of body fluids improves the performance in relation to conditions under dehydration.

6. Training and biological adaptations
The right training must be based on the principles of progressive loading, specialisation and turnover. The main adaptations of aerobic training are the increase of the maximum oxygen intake, the increase of the pulse volume and concentration of haemoglobin, the reduction of the heartbeat frequency in the same effort, the increase of glycogen and fat reserves, the increase of fat consumption etc. In brief, anaerobic training results in the improvement of the activity of specific enzymes and the improvement of anaerobic respiration.
Planning of training

Wim Van Ek

Basketball coach, Coach of the Greek national wheelchair basketball team

Before we begin to work in any team we should make a timetable of progress and objectives that we will have as trainers during of our service.

Initially, we should be committed by the planning and we must not be far from the plan limits in the first difficulties. Training without program is without doubt occasional and leads to negative results. Incidentally we should also need powerful administrative support, because without this, we will not exceed the problems of financing the preparation of the team and we will not have the credit of time to complete the microcycle and megacycle of the training.

As microcycle and megacycle we consider the training periods of week /weeks and month /months respectively, within which a training objective is completed. The precise determination of beginning and the expiry of each circle are decisive for the success of planning.

Each training should be planed carefully and be organised so that we can avoid the loss of time. There should be a special reason for each drill that we use and each drill should be placed in the proper time in the duration of training. The trainer and his assistants owe to calculate all the decisive factors for the athletic performance: the past and the future of the team, the natural situation, the season, the economic possibilities and a lot of other things.

The trainings should be kept in archives and be in the disposal of the trainer any time and accompanied from comments on the success or the failure of the implementation. Then the trainer must have a report about certain points of attention that should be observed in the planning of training, so that is served a more general philosophy.

• When the training begins the program should be followed to the letter. If there is not enough time for a drill, then it should not be continued because another important drill will be skipped, or that will extend the duration of the training, and nothing of these would be wise. Also it will be effective if a drill is completed in less than the forecasted time, to add a similar drill or if a drill is reported in some concrete player to be skipped if the player is not present.

• It is important for the training to begin with light drills with ball which are used for warming up the players, to be continued with stretching and runs which gradually will be increased regarding the intensity.

• The drills should differ from day to day so that the training does not become monotonous even if the objective is the same. It will be wise if there is an escalation in the drills and during the first days the simpler should be executed and the most complicated during the next days.

• Before each drill we explain the implementation of the drill and the reason for which this drill will be executed. In this way the players have some seconds to rest and then the flow of the next drill will not be interrupted for corrections.

• The drills must not have big duration and it is preferable each object of training to be taught with different drills.
• There must be alternation of the drills which have high energy requirements with those which have lower.

• The drills should include the element of competition and approach as much as possible the conditions of the game.

• New and complicated drills will be supposed to be presented in the beginning of the training, before the players are tired and their ability of assimilation is decreased. It is not right to insist for the right implementation when the drill is new but to require the right implementation the next day that we will have it in the program.

• The drills of team tactic should be used always more and more as we reach the game period. Of course the necessity of individual training which should occupy 50% of the training time should not be overlooked.

• The coach should evaluate the development and the conclusion of the training after the end of each session. He should discuss with his collaborators and the conclusions shall be used in the planning of the next training.

• Each drill should be a combination of as more basic movements as possible, even if the emphasis is given in only one element. We should not allow the players to acquire erroneous habits in some fundamental movements because we focus the training to another.

• Even if it is almost impossible to train separately the defence from the offence the emphasis should be given in each one of these two objects in a different day of training.

• We must end each training session with drills that leave the players with pleasant disposal and create optimism for the next training.

• The full recovery after the end of each training session is essential in order the players can cope with next.
How important is the role of Media in Basketball and generally in athletics?

George Kogalidis

Journalist, Press officer of HWBF, Director of basketball department of “Adesmeftos tipos” newspaper

Is easy for anyone to think that first of all athletics are a spectacle. For this reason, as more are the viewers so succeeded is the result and more successful the final job (either in the field or in TV). To spread the idea of Basketball (where basketball can be every other sport) media has to play an important role.

Players, coaches, and team administrators must learn to live with Media. To respect their job because in a way they express the team fans, to accept the criticism as tough as it can be. It can be easily observed that team administrators want to accept only good critics and deny the bad ones.

A coach prepares in a better way his team, when he studies the opponents and spends a lot of time to watch them in videotapes and finally improves with practice his players. For that reason, he has one or two assistants, video apparatus, and means for facilitation of practice sessions. Why is he doing all these things? Because the team must have the maximum performance in order to reach higher levels.

All these have a direct receiver the fan, which he will be touched from the results and good performance of the team. In that way he will come closer to the team. As more are the fans so bigger is the publicity. In this way it is going to be easy to find sponsors for the team.

As we see all these lead to a chain whose basic ring is media. So instead of being negative and deny their existence, is better to make the correct actions and make them our weapons.

How can we do that?

The function of Press Office is one important and productive variance. If the Press responsible does his job in a good manner the more will be the publicity and the relation with journalists.

In order the responsible of Press can be more effective all the members of the team (coaches players and administrators) must not afraid the Press. They must understand that they should not move in darkness when at the same time wants the light of publicity. Is important for them to know that even a negative critic sometimes is useful and they must agree that is a necessity the harmonic coexistence with media.

When the team informs on time the journalists for the administrative decisions (like changes in the team roster or something else) then has more publicity and the final analysis can be to impose the team’s policy.

Because there are examples of teams that tried to hide the change of players giving fake names. If there were not the administrators who did there were others from the inner part of the teams who wanted Press to be on their side. The results were disappointing because people had great expectations. We conclude that there was a bad communication policy.

There should not be any exclusion. Clearly there are bad journalists and two opponent parts of interest but the team must start from an equal base. That does not mean that the team cannot give credit to journalists that help the team before with publicity. This is Press men responsibility.

The spread of the news must come from the Press center and the Press responsible must take care of the publicity and nobody from the team must declare his own policy either he is a doctor or a player. If something like that happens it should be immediately confronted. Policy must come only from the Press center.
Press is always friendly, as long as the team knows what to expect and what to ask. Press is a helper even if we see the "dark side of the moon. Press is not bad, is teammate, and is on the same side.
Team Tactic

Manolis Zaharakis
Assistant coach of the Greek National Wheelchair basketball team

1. Team defence
   Commit to Defense
   It is not overwhelmingly difficult for a committed group of players with only average individual basketball skills to put together a very good team defense. Many good defensive teams are far better than the sum of their parts. Certainly each player must decide that he is going to improve as an individual defender as the season progresses to help accomplish this, but he must also make a commitment to the team that he is going to do his part within the system to help his teammates.

   The old slogan was, "I'll get my man, you get yours!" But today's successful defense is anchored by people who say to none another, "I'll get my man and yours too, if you need my help!"

   It's impossible for a player to accomplish many of the things he must do as an individual in the team defense, unless he knows he has the backup support of his teammates.

   To instill our philosophy, we drill our team defense to be able to accomplish the following items - which we call The Defensive Seven - on a consistent basis:

   1. **Have a great transition from offence to defense.**
      Don't give up fast breaks with quick, easy offensive shots. Make the opponent score five-on-five against a set defense most of the time, not two-on-one or three-on-two.

   2. **Push the ball to a sideline in order to establish a good weakside defense as early as possible.** A good weakside helps fortify the entry side, puts them in positions to attack penetration, and makes better defenders out of the players on the strong side.

   3. **Keep the ball from reversing easily from side to side.** To allow the ball to swing easily creates defensive problems for the weakside people, preventing them from giving adequate help angels.

   4. **Concentrate on stopping penetration via the dribble and pass.** Setting the defense early helps accommodate this.

   5. **Prevent a consistent low post attack.** Do early word to prevent good positioning inside; challenge cutters and post up people if the ball does get to a good position inside, it is vital to have a system of attack in terms of helping, trapping and rotating to reduce the damage.

   6. **Rotate to assist a teammate** who has gotten into trouble by getting beat on a drive, cut, post-up or by losing his man.

   7. **Rebound and pick up loose balls.**
      Performing The Defensive Seven combines with The Defensive Mindset to create a solid defense. The pay-off for the players who commit is that no individual defender has to be quite as good a one-on-one defender if everyone is helping each other.

      In the end, each player must do his best to know and to develop the individual skills and to understand the team concept. When the players on a team commit themselves to one another to be a cohesive defensive
unit, they get the feeling like that of an army going to war together. They feel they are a part of something that each can be proud of. They have spirit and camaraderie. And they have a team that plays

**Men to men defence**

The escalation of men to men defence commences by the four players. This escalation is constituted by four phases:

**Phase 1**

The offensive players take positions forming a square. Suppose that the players have the arrangement of pic.1

During this phase the offensive players simply pass the ball to each other, and assume the correct positions, depending on the ball and the personal opponent. When the player O1 controls the ball, his personal opponent defends according to the rules of defence and having the right to dribble as it was mentioned earlier. The defender 3 pushes player O3 performing an overplay defence. The defender 2 marks player O2, but not very close to him in case of penetration by player O1. The defender 4 moves toward the centre of the paint forming an imaginary triangle with his inner part of his foot, the player O1 who controls the ball and his personal opponent O4. When player O1 passes to player O3 (pic.2), the defender 3 marks a player who has the right to dribble, the defender 1 over-

plays his opponent, the defender 2 moves near the Free Throw Line and the defender 4 is around the basket blocking the inner lane.

**Phase 2**

During this phase the offensive players are trying to penetrate by dribbling towards the basket, while the defenders demonstrate the defensive strategy Help & Recover, this strategy is presented in pic.3, 4.

**Phase 3**

During this phase it is important to prevent any penetration that can take place from the inner lanes. As it can be seen in pic5, the player O4 penetrates from the inner lane. The defender 4 leads him towards his team mate who is coming from the weak side, and player O4 is trapped near the basket. The defender 2 moves towards the centre of
the Paint in order to mark the two offensive players O2 and O1. The defender 1 moves towards the baseline and covers any pass made by O4 to O3.

**Phase 4**
During this phase the objective is to block any attempt made by player O4 to pass the ball to player O1. (Pic.6) When player O4 passes the ball to player O1, all players perform the strategy of Rotation. Therefore the defender 2 marks the player O1, the defender 1 marks the player O3, the defender 4 marks the player O2 and the defender 3 marks the player O4.

Finally the player O5 is added, his personal opponent cannot help effectively his team-mates and as soon as player O5 receives the ball, the peripheral defenders flow towards him in order to help the defender 5.

**2. Team offence**
**Choosing the right offense**
The coach chooses the offence to be used by his team basing his decision on his own knowledgeability but primarily on his players' abilities. He should adapt the good parts of any system to his own philosophy. Teams should strive for maximum efficiency within the framework of the total abilities of the players involved. The coach must make use of the many talents on the team and take measures to protect players who lack talent in certain areas. Good ball handlers should handle the ball most of the time, and good cutters should be exploited. The good rebounders should be in position to rebound, and the good shooters should be constantly screened for by knowledgeable teammates.

Seldom do all players on a starting team possess similar abilities. Therefore, the coach should use the positive attributes of all in his offensive planning, blending these talents into the team pattern. He should assign individual duties that best utilize the personal abilities of each player. The type of shots each player takes should be determined by his basic shooting ability. Perfection of the offence comes from constant practice of correct techniques, first in small groups of two or three, then in team groups using drills incorporating various aspects of the team offence. The speed, timing and deception of movement are the important factors in the effectiveness of the offence. All offences should be adaptable for use against the three types of defences - man-to-man, zone and combination.

A coach should be learning constantly - reading books and magazines on basketball, videotapes on basketball, attending clinics on basketball and swapping ideas with other coaches - integrating into his own offence any new tactics that are suitable for his personnel. Offences are seldom entirely new. Chances are that one used ten years from now will be an adaptation of something that was in common usage five years ago.

The coach should know his material before installing a system. If he is new and doesn't know his material, his preseason practice will be essential in determining the system. The success of a system is due to the personnel more than the coach. If it is the wrong system, regardless of the coach's ability, it cannot succeed. For example, if a coach has slow players, they cannot fast break effectively; if he has tall, uncoordinated players, he cannot use a four or five out type offence effectively.

As a rule, coaches should not change their offence in midstream. When change is essential, they should adapt from the existing structure so that the change will not be too radical.
Breaking the man to man defence
An effective offensive strategy is based on certain basic principles:

1. The objective of every attack is to achieve an easy basket. Complicated offensive strategies are often inaccurate and ineffective.

2. There must be many alternative ways of performing a specific offensive strategy, as a result of the asphyxiating defence in contemporary basketball.

3. All attacking players must distract their personal opponents, preventing them to help their team-mates.

4. The players who are on the weak side must be alerted to help the development of an attack, in case of a Help & Recover situation.

5. The players must be aware of the offensive strategy used, otherwise every offensive strategy is inaccurate.

6. The offensive strategy of a team must take under consideration the capabilities of a talented offensive player. The coach must give the opportunity to this player to score, by using the proper offensive strategy.

7. The attacking players must avoid moving towards the corners of the court and therefore avoiding the defensive traps.

8. The tall player must be in motion, in order to accept a pass and score.

9. Although diagonal passing is risky, it is very threatening for the opponents in combination with three point shots.

10. The asphyxiating defence makes all the players to move away from the ball, instead of moving towards it.

Offensive strategies
Depending on the kind of players of a team, it uses different arrangements like 1-2-2, 1-4, 1-3-1, 2-1-2, e.t.c.

Flex
Flex is an old but accurate offensive strategy that is still...
used in nowadays with great success. The advantage of this strategy lies on the fact that all players have the opportunity to score and rotate. The primary arrangement is 2-3. Players O1 and O2 are on the left and on the right of the Paint just outside the three-point line. Player O3 is on the same side as player O1 while player O4 is on the opposite side. Finally, player O5 is at the low Post facing his home basket, being on the same side as O3 (Pic.8). Player O1 controls the ball.

Player O1 passes the ball to O2, while player O5 performs a weak side screen on O3. Finally, player O1 screens on player O5 (Pic.10)

The same thing happens on the other side.
Psychology

Nikos Georgiadis

Director of Athletic development and Education
THRILOS S.A., Sport Psychologist

Introduction To Athletic Psychology
What Is Athletic Psychology

Athletic psychology is the science which deals with the study of human behaviour in the frameworks of training and the way with which this behaviour (attribution, performance, appearance) is determined by three main sources: the athlete, the coach and the environment within which they interact. Athletic psychology has as its subject a. the right selection of athletes, b. the marking and projection of aims so that each person who contributes will compete to the maximum of their abilities, c. the teaching of psychological skills. Surely Psychology is a central fact of athletic competition. By studying and using Psychology in athletics, every one acquires the ability to describe the behaviour and to foresee the athlete's or the coach's behaviour.

Athletic psychology can contribute to two directions: a. improving athletic programs so that the participants can develop as individuals, b. maximizing athletic performance.

Areas of athletic psychology
Factors which Influence Athletic Appearance

A. The Athlete

The sport fans show particular interest in their own teams following the games either in the stadium or the TV, or listening or reading for them. The media devotes important time for the description of athletic meetings and for athletes who appear in these events. Greece ranks first in the world. For the number of athletic newspapers occupy in the political newspapers and the mass media. The news correspondence and the broadcasters who transmit the news have become "experts" in analyzing the facts, which determine the athlete's performance and those of the team. They attempt to describe an athletic using other terms than that of a "good player" when they want to describe the probable reasons for a successful performance at a game. Very often they do not mention terms like "the high psychology contributed". "... they must be careful with the psychology..." "... psychological preparation..." terms, which suggest knowledge of the science of athletic psychology but which in the majority, remain a superficial reference for simple reasons of sensationalism than for pure knowledge.

- Mental preparation is an important fact for athletic appearance (the performance-record). It has sufficiently been proven and it has become acceptable that all the athletes have the best level of arousal, which has a remarkable influence on the quality of their performance. Whether many athletes refer to the sport fans or not, many of the athletes use techniques of self-arousal as the main way of psycho-intellectual preparation before and during the length of their appearance. All the athlete's activities before and during the length of their appearance. All the athlete's activities before the appearance, the greeting toward the sport fans and the encouraging precepts of one towards the other has as their aim to create a desirable emotional atmosphere before the appearance. Another important reason is personality. Is there a personality type, which betrays a high quality of athletic performance? Can a coach foresee the athletic success from a personality test? Do the personalities differ between athletes and non-athletes, between athletes and non-athletes, between men and women athletes and between athletes of different sports? Athletic psychology has devoted important research on the subject "personality in sports".
• **The individual differences** is another beloved subject of research. Why do athletes differ in their performance although they have the same possibilities? Why do some athletes perform better when they are under pressure, while others do not? Which psychological factors differentiate the successfully stable athlete from the less successful?

• In the space of **exercising children** athletic psychology study the results of athletic activities. Should children athletes compete for trophies? Do younger athletes have different psychological, emotional and social needs from order and more capable athletes? If yes how can they satisfy their needs in a healthy athletic environment?

• Another psychological fact, which must be tested, is motivation. Why are some athletes more *motivation* than others, especially when it has to do with motivation which stems from interior impulses. The answer is because some athletes compete as best as they can because they like the sport it pleases them and not because exterior factors, trophies, money or recognition does motivate them. Which are the psychological factors which help to motivate athletes and which discourage them.

### B. The Coach

The real leader does not need to lead - he is pleased to show the road. This is the way the effective leader is in sports. Having as their sources the talent and the athletes knowledge of the sport, the coach has as its first target the development of the physical intellectual and psychic abilities of the athletes so that the athletes an individual and in a team can have continuous and stable success. In the team sports how can the coach facilitate the athletes cooperation in the team, how can he promote the team’s identity, the athlete’s satisfaction and the team’s cohesion.

Is the satisfaction of the needs of athletes for good fellowship and teamwork important? Is the performance of an athlete influenced by his satisfaction because he is part of a team or because he has good friends on the team?

Playing the role of the devils advocate, if victory is the only aim of the coach should he be interested in the social and emotional needs of the athletes? The largest part of the bibliography in Athletic psychology is devoted to why the athletes should be interested in matters beyond the athlete's performance if they want a successful team. But not all athletes have realized these important psychological subjects. In reality if we accept that generally the coach learns the secrets of the profession observing and listening to other coach (copying phenomena, mimicking) many times they do not take into account the athletes’ personal needs during preparation even during and after the athletic meeting. It is adequately recorded in the international bibliography that the coach praises very highly the usefulness of criticism in sports. Research, however, has found proof that coach has the tendency to reject other people’s intervention especially those who try to change the prototypes of coaching behaviour. Research conclusions in Athletic Psychology do not approve some of the common practices of trainers some of them may be harmful. There are some examples:

• **The Encouraging Discussion before the meeting**

Many coach, especially those involved in basket and football, deliver an arousing, emotionally charged speech before the meeting. Athletic psychologists and some of the most successful coach are opposed to this type of speech before the meeting. Researchers have found that the athletes are already worried or stressed about the game. A stimulating speech above the satisfactory levels. The satisfactory - up to a certain level tension - is transferred to anxiety. A low voiced approach during which the suitable instructions will be presented can be more productive. Cultivating enthusiasm must take place during training.

• **We must win**

Before the game emotions of anxiety and fear exist about an impending failure. It is the coach's obligation to help the athlete handle and face his emotions cor-
rectly (the complete obliteration is not realistic but can have non satisfactory results). Messages, which express the necessity of victory before the game, increase the athlete's anxiety. A review of systems and strategies and telling the athletes to enter the stadium and "to enjoy" the game or to "play" is definitely better than to place emphasis on victory.

• Critique
The result of critique in athletic performance is clear. Sometimes it is useful but every time it's effectiveness depends on the way it is done. The child psychologist Haim Ginott recommends to people who exercise power to judge the behaviour and not the personality or the character. The same stands for anger. This anger per se is natural and free expression must be allowed. When anger is expressed in aggressive and destructive ways it insults the athlete's self confidence and it creates feelings of guilt, thus evaporating whatever usefulness may exist.

• The Penalty
How often do we hear a coach force an athlete to run around the stadium twice just to punish him because the athlete failed to correctly perform an order? There is serious evidence that punishing an athlete with further exercise reduces the athlete's desire for training and for proper embodied athletic participation. The connection between punishment and exercise is not desirable. A better way of enforcing punishment is to forbid participation in athletic activities for a small time period.
There are many other examples of coaching practices, which have proven wrong, even morally unacceptable because they lead to an emotional breakdown of an athlete. Naturally coaching is not an easy occupation. The coach must satisfy the requirements of many different roles and be involved in many issues, which have a psychological basis. Some of the issues are:
A. To mobilize each of the athletes and the whole team before, during and after the athletic period, before, during and after the athletic meeting.
B. To influence positively the athletes' attitude, to reduce their anxiety, to promote emotions of enthusiasm and faith for the coach and the team.
C. To promote self-confidence and self-appreciation for the coach and the team.
D. To understand and satisfy the needs of each athlete.
E. To strengthen the stability of performance.
F. To occupy and help the athletes to cope with the pressure, the disappointments and other problems in and out of the athletic spaces.
Each of the above subjects has great importance for the successful participation of competitors and is connected directly with the satisfaction of psychological needs and with the encouragement of intellectual and psychic abilities of each athlete. The coach is the person who directly supervises and has to undertake the responsibility first of helping each athlete and then of satisfying those needs. Whether the athletes become successful depends on whether they will be assisted by their coach to reach the maximum of their abilities. Successfully guiding a team is a complicated and demanding specialized knowledge activity. To make everyone in the team feel s/he contributes to success and to promote desirable behaviour (for example development of qualitative leadership abilities of an athlete, demonstrating faith to the team developing an interior system of motivation) while simultaneously avoiding non desirable behaviours (for example "stealing", demonstrating aggressiveness towards other members of the team, forgetting skills and systems or abandoning the team) is difficult. The coach must achieve the most difficult of all human aims: to change the moods, the emotions, the views and the behaviour of others for the team's benefit. How? This is the object of effective coaching and the most important usage. Athletic psychology way, which helps to achieve this aim, is the creation of a suitable
environment for participating in sports.

C. The Environment
Some of the subjects which athletic psychology focus on in relation to the environment are:
It is confirmed by scientific research that the "home seat" is an advantage or is the above a myth?
• How important is it for athletes to compete under specific environmental conditions like the hour of the day, the weather conditions and the specific and unique characteristics of the area in which the meeting will take place?
• Do the clapping or disapproval of the spectators affect performance? Are great athletes influenced by the spectators' reactions?
• Is the influence of environmental conditions different in different sports? For example, skiing athletes who change skiing -sing are they influenced more than basketball athletes, when they change stadium?
• Is it important that co players have social relationships out of the athletic stadium? Can a team achieve harmony only if the athletes enjoy the company of each other out of the athletic stadium?
• Is it wise to tell athletes that their parents or a coach of an important team or somebody else in general is watching the game?
• When is anger or critique allowed and when does it destroy the development of an athlete and his performance?
• Is the following finding correct?
  "Everyone admits that praise has twice as better results than criticism when creating motives for improvement, but it is twice as difficult for most athletes to praise than to suggest imperfections."

These are only some matters, which refer to the way in which the environment can influence the result of athletic meetings. One or more psychological factors are present in each one of the following questions to an important degree. It must become known that training and partici-
Injuries and disability

Constantinos Koronakis

Physiotherapist

The motivation of a disabled athlete is no different from the motivation of an able-bodied athlete. As with all athletes, the intrinsic desires that compel an individual to succeed may vary, but the positive methods of motivation available to coaches remain the same. A discussion of the various motivation techniques that may be employed is beyond the scope of this chapter. Supportive personnel must develop a working relationship, and each must learn how to maintain the quest to strive for mutual goals and continued success. It is important to keep in mind that success is not always defined by winning.

Specific medical problems of athletes with disabilities

Preventive practices for disabled athletes are becoming a growing concern among coaches and medical staff alike. Coaches and athletes must be educated in proper warm-up techniques, including stretching, elevating core body temperature, and sport-specific drills. Moreover, all athletes should be required to wear or use the recommended safety gear for every sport. Coaches and event organizers should also be obligated to provide certified or skilled spotters, sighted guides, or assistive personnel to ensure every athlete’s safety during competition.

The health professional providing care to athletes with disabilities needs to be aware of common injuries and conditions that are inherent to certain disability groups. Table 1 provides information concerning presentation and treatment of common injuries and medical problems of athletes with disabilities. Table 2 presents the type and frequency of commonly reported injuries sustained by wheelchair athletes.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Prevention</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic overuse syndromes (shoulder impingement, tendonitis, bursitis, carpal tunnel syndrome)</td>
<td>Taping, splinting, protective padding, wheelchair positioning, good technique</td>
<td>Rest, apply injury-specific principles of care, selective strengthening, muscle balancing, flexibility, analysis of technique</td>
</tr>
<tr>
<td>Overexertion (muscle strains)</td>
<td>Warm-up and stretching, proper conditioning and equipment</td>
<td>Rest, gradual progression of exercise program</td>
</tr>
<tr>
<td>Falls, physical contact (sprains, contusions)</td>
<td>Equipment safety, appropriate padding for sport, appropriate sport-specific spotting, qualified assistance / guides for athletes</td>
<td>Apply injury-specific principles of care, check for signs of fracture in athletes without movement of sensation</td>
</tr>
<tr>
<td>Blisters</td>
<td>Encourage callus formation, protective taping, gloves, padding, cushioning, adequate clothing</td>
<td>Apply injury-specific principles of care, be aware of areas that lack sensation</td>
</tr>
<tr>
<td>Abrasions/lacerations</td>
<td>Check equipment for sharp or abrasive surfaces, wear protective clothing, use cushions or towels in all transfers, use mats on hard surfaces, camber wheelchair wheels</td>
<td>Apply injury specific principles of care, be aware of areas that lack sensation</td>
</tr>
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</table>
Injuries of athletes who compete in wheelchairs
Athletes with disabilities experience athletic injuries related to the specific risks and demands of their sport. Track, road racing, and wheelchair basketball are among the highest-risk sports for athletes who compete in wheelchairs. Athletes who train more hours per week and over a longer period of time generally report more injuries than those who have a shorter duration and less intense training history.

The most common injuries to athletes competing in wheelchairs are soft tissue injuries of the shoulder, elbow and wrist, abrasions and contusions of the arms and hands, and blisters of the hands. In addition, the spinal cord-injured population may experience some unique problems, including skin ulceration, temperature regulation disorders, and delayed recognition of injuries in areas that lack sensation.
### Soft tissue injuries of upper extremities

Both novice and veteran wheelchair athletes experience chronic soft tissue problems of the upper extremities. Wheelchair basketball players often practice and play in excess of 15 to 20 hours per week during the basketball season. Elite road racers frequently have training schedules that entail local distances in excess of 100 miles per week. Propelling a wheelchair such distances requires specific repetitive upper extremity motion and therefore stresses the shoulder, elbow and wrist joints. 

Rotator cuff injuries, bicipital tendonitis, shoulder impingement syndromes, lateral epicondylitis (tennis elbow), radial extensor muscle tendonitis, and carpal tunnel syndrome are common problems in wheelchair users. The excessive forces imposed by weight bearing and continuous shoulder use are implicated in the development of chronic shoulder problems. Bayley et al reported shoulder intra-articular pressures to be 2.5 times greater than arterial pressure during wheelchair transfers. Impingement posi-

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**TABLE 2**

<table>
<thead>
<tr>
<th></th>
<th>128 Adult Athletes, All Sports (% of 291 Reported injuries)</th>
<th>90 Adult Athletes, All Sport (% of 346 Reported Injuries)</th>
<th>69 Paediatric Track Athletes (% of Athletes Reporting)</th>
<th>19 Elite Adult Athletes (% of 50 Reported Injuries)</th>
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<td>Blisters</td>
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<td>Lacerations / abrasions</td>
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<td>Not reported</td>
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<td>Fractures</td>
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<td>6</td>
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<td>Wheel burns</td>
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<td>71</td>
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</tr>
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</table>
tioning is also frequent in this population, which must frequently engage in overhead activity, even to carry out daily activities. Surgical decompression via acromioplasty has been reported to be effective in relieving chronic shoulder pain. In addition to chronic soft tissue problems, osteonecrosis of the shoulder has been reported in wheelchair users.

Poor flexibility may be predisposing factor to the development of chronic shoulder problems. Wheelchair pushing stresses development of the chest, anterior shoulder, triceps, and biceps muscles. Specific stretching must be done before and after activity to emphasize flexibility in shoulder flexion, extension, horizontal abduction, external rotation to achieve full length of the triceps and biceps muscles since they are two-joint muscles. Strength training should emphasize achieving balance at the shoulder, posterior deltoid, latissimus dorsi, external rotators, rhomboids, middle and lower trapezious muscles. Many chronic soft tissue injuries can be prevented and managed by achieving such balance.

Abrasions and contusions
When athletes use equipment such as wheelchairs, they are also at risk for accidental injury from incidental contact with the wheelchair parts. For example, athletes frequently report friction burns of the inner arms from accidental contact with the large tires during the down stroke in pushing a racing wheelchair.

Blisters
Blisters are a frequent problem for most wheelchair athletes. Because the hands are used continuously for propulsion, athletes may experience frequent problems with blisters of the fingers and thumb from contact with the wheelchair push rim. Thick calluses may develop on the palm of the hand, they can crack and result in painful fissures, open to infection.

Lack of protective sensation
Spinal and injury, multiple sclerosis, and other neurological disorders interfere with the normal protection that pressure, temperature, and pain sensation provide. Pressure points, especially under sitting areas, may lead to skin breakdown, ulceration, and infection. Insensitive skin must be inspected frequently. Athletes with chronic pressure sore problems may need customized seating systems that alleviate areas of pressure. Wheelchair cushions can be modified to accommodate an athlete’s individual needs. If an athlete has chronic problems due to positioning in the sports wheelchair, he or she should be referred to a physical or occupational therapist for evaluation and recommendation for possible adaptations.

Rehabilitation of sport injuries
The rehabilitative management of disabled athletes is similar to that of any other athlete. The rehabilitation must be a comprehensive program designed to return the disabled athlete to his or her sport with the greatest degree of function and in the shortest time possible. Just as an able-bodied athlete’s program must be progressive and functional, so must a disabled athlete rehabilitation program. Therefore, a general rehabilitation program should include warm-up, strengthening, flexibility, coordination, proprioception, balance, speed, agility and muscular and cardiovascular endurance and conclude with a pool-down period. Some exercises may have to be adapted to meet the needs of the individual athlete.

One such adaptation is for cardio respiratory endurance training. Athletes with sympathetic nervous system involvement, such as individuals with neurological lesions above T4, have diminished heart rate and blood pressure responses to exercise. The diminished sympathetic response limits the use of the heart rate and blood pressure as effective indicators of exercise intensity. Age-adjusted formulas for calculation target hearts rates cannot be used easily with the population. Therefore, exercise prescriptions of these athletes may include parameters of speed, duration, frequency, or mechanical resistance rather than using a target heart rate to vary intensity.
It is also important to note that an athlete with a disability is often unable to rest an injury completely due to the demands for continued daily function. For example, a wheelchair athlete who sustains a shoulder injury is unable to rest because demands of everyday mobility require the use of the shoulder joint. An amputee who injures the sound limb will have increased difficulty with ambulation if the prosthetic limb becomes the dominant limb. In order to regain the ability to perform everyday tasks, the temptation to increase the use of the injured extremity prematurely may increase recovery time and the risk of injury. Alternatives to daily activities, rehabilitation, and training methods designed to reduce the risk of insult to the injured limb should be explored by the physical therapist and athlete.

**Education and injury prevention**

Education athletes as to the most effective means of prevention is an important task for both coaching and sports medicine staff. Commonsense coaching and sports medicine techniques, familiarization with the disability by the athlete, coach, and volunteers, planned workouts, and a thought toward safety can help prevent injuries, minimize risks, and ensure success.

**BIBLIOGRAPHY**

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Fitness State in Basketball for People in Wheelchairs
With the definition fitness state we mean the physical and mental state that are required from the athlete in order to respond appropriately in the challenges of the game. The preparation of physical state of the athlete involves a) strength, b) endurance, c) speed, and d) flexibility. The mental state includes the general will for training and the will to put the best and strongest possible effort into training as well as to have the right incentives. Fitness state can be divided into two categories: a) the general fitness state, and b) the specific fitness state. Finally there are different training periods each one with its own significance. These are: a) before-game period, b) game period, c) game period, and d) period of passive rest.

- **General Fitness State** is the sum of the psychosomatic moving abilities of the athlete.
- **Specific fitness** state is the sum of all of the psychosomatic moving abilities of the athlete that are required for the best possible performance in the specific sport that the athlete participates in.

1. General fitness state for basketball in a wheelchair
The purpose of general fitness state for basketball in a wheelchair is the development of biological adaptations of the body that are called upon during training and games. It is of great importance for a coach to have the most appropriate conduction during the movement of the wheelchair, especially if it is referring to less experienced athletes. Because the movement of the wheelchair is not as natural a movement as walking or running, great amounts of effort need to be put into learning the right propulsion of the wheelchair so to avoid the aimless adaptation of powers in the specific phase.

The biological parameters on which good performance is dependant upon and that always need to be constantly improved are: aerobic capacity (endurance), anaerobic capacity (speed), flexibility and strength.

**A. Aerobic capacity**
Each body has a certain endurance, which differs from one person to the other. Even though we can say that it is a hereditary ability, there are also many chances to improve it.

It is this ability that allows the athlete to have high output and a good performance without exhausting themselves prematurely. Aerobic respiration or endurance can usually be achieved through:

- Long distance runs (constant training). Duration 15-60 min. Strain 60-90% of the Maximum Heartbeat Frequency (MHF). A practical way of calculating MHF is the subtraction of the age of the athlete from the number 220.

- Interval training. In this type of training emphasis is placed on the number of pulses that the athlete reaches. Training carries on until pulses reach an intensity of 80% (about 180 pulses) and then starts again when the pulses drop to 130.

The latter has dominated in basketball in a wheelchair because of the individuality of the sport (athletes, due to disability appear to have higher pulse frequency) and also due to the difficulty presented with training in the field.

**B. Anaerobic capacity**
Anaerobic respiration or speed is one of the abilities that
can be improved on a smaller scale than endurance, even though it is of particular importance for basketball in a wheelchair. While endurance is the primary characteristic for building a good fitness state, speed is what mainly distinguishes better athletes of higher standards. For the improvement of speed the following are required:

- Small distance runs, with heart strain of 85-100%. Special attention needs to be given to the warming up of the athlete, as well as to the point in time for the adaptation in the training. Training for speed must be carried out immediately after warming up (especially during the games' period).

- Runs with different pace intervals of quick-slow nature. The rest breaks in all cases and all forms of training must be long, while emphasis should be placed on technical acceleration of the wheelchair (the first three pushes on the wheelchair must be small and quick).

C. Flexibility
Flexibility of the muscle system plays an important role in good and safe performance of the athletes; a flexible muscle can give more output and is less prone to injury. The exercises involving distension or straining the muscles during the warm up and at the end of training must always make up a big component of every day training of athletes.

D. Strength
The improvement of strength is a subject that does not get enough attention from coaches, as well as from the athletes themselves. The nature of the sport, with the intensity and the constant contact, requires constant effort to improve strength. Training with weights, with medical balls, with elastic strings etc, must not get overlooked by the organisation of training at any time or period in the preparation and training.

2. Specific fitness state for basketball in wheelchairs
In the specific fitness state emphasis is placed on the application of the general fitness state on the skills (technical characteristics) of the sport. The speed with ball possession, the ability to stop the wheelchair, the ability to quickly move with or without possessing the ball, the ability to stop the opponent during an attack, the proper, and with the right intensity, execution of passing the ball to other players, shooting the ball, tackling and ball possession are all the elements on which every team needs to work hard on.

Training periods
A. Before-game training
The before-game period must last about 6 weeks. At the beginning of this period, and especially for the first two to three weeks, comes the improvement of aerobic respiration of the athletes. While the preparation continues, attention is given to anaerobic respiration and to the specific fitness state. The frequency of training with runs is advisable to not exceed three per week. (for example, Monday-Wednesday-Friday); the same goes for training strength (example, Tuesday-Thursday-Saturday).

B. Game period
During the game period there is usually maintenance of the fitness state that has been accomplished through the last period (before-game period). The form of this training to maintain the fitness state can be carried out by interval training 2-4 times a month at the beginning of the week. This cycle of training is carried out through specially adapted exercises, (examples are lay-up, turning around cones, passing medical balls to other players, speed with or without the ball etc) mainly in three rounds with exercise duration of 30-40min and a break usually of equal time as the time of exercising.

C. Period of Transition
This is the period when the coach is called upon improving all the weaknesses of the fitness state of each player
individually, that were noted during the games period. It is
the period that is less stressful than any other, due to the
lack of pressure to build a team, which is commonly
observed during the before-game period, and also the
lack of the ordering need of positive results "required" dur-
ing the games period. It is this period in which progress is
made in aerobic respiration and in increasing strength to a
maximum.
Two Basic Guarding Situations:
1. Guarding the player who controls the ball
2. Guarding an opponent who does not control the ball
   - Stationary defense
   - Moving defense

Casebook Examples - Guarding: two basic situations

In IWBF basketball, contact is divided into:
• Guarding (action by the defense) and
• Screening (action by the Offence).

The offensive player who controls the ball also has a responsibility to avoid contact.

For the defense, the contact rules describe two basic guarding situations. These are:
• Guarding The Player Who Controls The Ball (IWBF Rulebook - Article 44.6)
• Guarding A Player Who Does Not Control The Ball (IWBF Rulebook - Article 44.7)

There are different rules and responsibilities for contact for the defender in each of these two basic situations.

First situation: guarding the player who controls the ball.
1. To establish a legal position in relation to an opponent who has the ball, a defender must either:
   • Cover the opponent's path, or
   • Give the opponent time and distance to avoid contact.
2. If a defender has covered the path of the player who has the ball, the defender is considered to have given the player who has the ball time to avoid contact. This concept is described by the following principle: "If Player B had time to establish a legal position in the path of opponent Player A, then that opponent Player A had an equal chance to avoid contact."

Note:
A player may not intrude into the space occupied by an opponent's wheelchair. For example, a player cannot push his footrest bar into or underneath an opponent's chair or in behind the front castors in order to prevent that opponent from moving. Nor can a player place his chair between the rear wheels of an opponent. To cause contact by doing any of these things may result in a foul being called against the player who caused the contact.

Question:
If that is what the defender must do, what must the player with the ball do when he comes to a defender?

Basic responsibilities of the player who has the ball:
1. The player with the ball must expect that he will be guarded.
   (IWBF Rulebook - Article 44.6.2)
2. The player with the ball must avoid contact with any opponent who has established a legal position in his path.
3. The player with the ball must maintain control of his chair at all times so that he can avoid contact with legal defense.

Second situation: guarding an opponent who does not control the ball.
The official must decide who got there first?
1. When deciding the responsibility for contact between a defender and an opponent who does not have the ball the IWBF official must determine "Who got there first?", subject to the other factors in Point 3 below.
2. In general, a player who reaches a position first before an opponent who does not have the ball is considered to
have legally occupied that position. (IWBF Rulebook - Articles 44.7.1.1; 44.7.1.2)

3. However, there may be other factors to consider, such as crossing-the-path, head-on contact, screening, pivoting, and whether a defender who was initially stationary has moved into the braking area of a moving opponent.

Casebook examples - Guarding on the ball and off the ball

These examples demonstrate that there is a difference in the responsibility for contact depending upon whether the contact occurs between a defender and an opponent who has the ball (ie on the ball), or between a defender and an opponent who does not have the ball (ie, off the ball).

Example 1: Guarding Off the Ball (Figure B.1)

Figure B.1 Neither player has the ball. Both players are moving

Two opponents "blue 6" and "red 4" are heading up the court in straight lines towards the same spot. In other words, they are on converging paths. Neither player has the ball. "blue 6" reaches that spot first. "red 4" runs into the side of "blue 6". The contact occurs while both players are still moving.

- Decision: "RED 4" committed a foul because "blue 6" got there first.
  (IWBF Rulebook: Articles 43.2.2; 44.7.1.2)
- Decision: Pushing foul by "red 4" because "blue 6" got there first.
  (IWBF Rulebook - Articles 43.2.2; 44.7.1.2)

Now let's see how the responsibility for this same piece of contact changes when we give "red 4" the ball in this same situation, or alternatively when we give "blue 6" the ball you can see the examples that follow.

Example 2: Guarding On the Ball (Figure B.2)

This is the same situation as in Situation One (Figure B.1), but this time one of the players involved in the contact "red 4" does have the ball.

Figure B.2 "red 4" has the ball

Two opponents "blue 6" and "red 4" are heading upcourt in straight lines towards the same spot. That is, they are on converging paths. But this time, "red 4" has the ball. "blue 6" is a defender. "red 4" is attempting to reach the key to attempt a lay-up. "blue 6" pushes his footrests just fractionally into the path of "red 4". Severe contact occurs. The contact point is exactly the same as in "situation one". The contact occurs while both players are still moving. Neither player has changed direction.

- Decision: Blocking foul by "blue 6" who has failed to cover the path of the ball carrier "red 4".
  IWBF Rulebook: 44.6.3.1: "The defensive player must establish an initial legal guarding position by either:
  1. Covering the path of the opponent, or
  2. Establishing a position in the path of the opponent that allows the opponent time and distance to avoid contact."
- Conclusion: In Situations 1 and 2 (Figures B.1 and B.2)
  The paths are the same. The point of contact is the same.
However, it is clear that in these two identical situations responsibility for contact has changed only because in Situation 2 (Figure B.2) one of the players has the ball.

**Example 3: Guarding On the Ball (Figure B.3)**

- **Question:** Who would be responsible for contact in Figure B.2 if "blue 6" had the ball instead of "red 4"? Figure B.3 This is the same diagram as Figure B.2 but with "blue 6" in control of the ball.
- **Decision:** Pushing foul by "red 4" who has failed to establish a legal position in the path of the ball carrier "blue 6". (IWBF Rulebook - Article 44.6.3.1)
- **Comment:** In Figure B.3, "red 4" has failed to cover the path of "blue 6", and he has also not allowed "blue 6" time to avoid contact. In fact, "red 4" is attempting to enter a position already legally occupied by his opponent.

**Example 4: Guarding Off the Ball (Figure B.4)**

Offensive player "red 4" does not have the ball. "red 4" is stationary in his front court near the baseline in a left forward position (i.e. in area 6). His chair is parallel to the baseline, close to the key, and his chair is facing into the key.

Defender "blue 5" is sitting very close to "red 4". "blue 5" is stationary just inside the key, facing the baseline, ready to cut off any baseline move by "red 4".

"Blue 5" is about a half chair-length from the intended path of "red 4". "red 4" attempts to cut baseline, i.e. between the baseline and "blue 5". "Blue 5" pushes across the path of "red 4", and gets half of his chair across the path of "red 4".

"red 4" crashes into the side of "blue 5". At the moment of contact, "red 4" has traveled about three-quarters of a chair length.

Although there was initially less than a chair-length between the players, this was time for "red 4" to avoid contact, because both players were not moving quickly.

- **Question:** Who is responsible for this contact?
  - "Red 4" is responsible for contact off the ball, because "blue 5" got there first. In basketball terms, "blue 5" ‘got there first’. "Red 4" has attempted to enter a spot already occupied by an opponent. Remember, neither player had the ball. If this contact was slight, the officials may decide to make no call.
  - (IWBF Rulebook - Article 44.7.1.2- Remember, neither player has the ball).

But there are two other possibilities.

1. Around the key, especially in a zone defense, this will often be a no call, when neither player is placed at a disadvantage. Officials and players do need to be aware of the conditions of article 44.7.4 (wheelchair tripping) in this situation. However, the reality is that it is unlikely that article 44.7.4 would be applicable here. The players do not usually generate enough speed in these confined areas around the key to make article 44.7.4 applicable. Around the key area in a zone defense, the chairs maneuver for position and defend-
ers close small gaps. Wheelchair tripping would rarely occur.  
2. Fouls are possible, however, and officials must be alert for significant illegal contact, such as holding of cutters. Therefore, a final decision in Figure B.4 will depend upon how the official reads this play.

- Comment: Around the key, contact of this type is common. Cutters push towards small gaps that are quickly closed by defenders. Because there is little room to build up speed, the cutters can see the gap disappearing and usually have time to stop or avoid contact. The contact that may occur here when the cutter bumps the defender may often be regarded as incidental, with no-call made, if the players were working reasonably within the rules.

Now let’s give the ball to “red 4” from Figure B.4 and see how the responsibility for contact changes.

Example 5: Guarding On the Ball (Figure B.5) “red 4” has the ball.

Figure B.5

The same situation as in Example Four (Figure B.4) but this time one of the players involved in the contact (“red 4”) has the ball.

In this example, EVERY position, movement, action and the nature of the contact is the same as in Situation Three. But this time, “red 4” has the ball. “red 4” pushes into the key. Blue 5 pushes in front of his path without covering the path or allowing “red 4” time or distance to stop.

- Question: In Figure B.5, with the ball involved, who is responsible for the contact?
- Decision: blue 5 has committed a blocking foul.
- Reason: blue 5 has failed to cover the path of the player with the ball, “red 4”, and has not allowed “red 4” time to avoid contact. (IWBF Rulebook - Articles 44.6.1; 44.6.3.1)

Stationary and moving defense - on the ball and off the ball rules for defenders

1. Stationary Defender v Any Opponent, Both On the Ball and Off the Ball
   If defender Player B takes any stationary position anywhere in opponent Player A’s path, or anywhere near the opponent, giving Player A time to avoid contact, then Player A is responsible for any resulting contact. (IWBF Rulebook - Article 44.6)

2. Moving Defender v The Player Who Controls The Ball
   The defender must cover the path of the player with the ball, or allow that player time to avoid contact. (IWBF Rulebook - Article 44.5.2)

3. Moving Defender v An Opponent Who Does NOT Control The Ball
   Defender Player B who is moving takes a position in the path of moving opponent Player A who does not have the ball. If defender Player B is still moving when contact occurs, then Player B must reach the position first in order to have established a legal guarding position. This means that Player B must have part of his wheelchair in the path of Player A. If he succeeds in doing this, then Player B is considered to have a legal position. Player B is entitled to occupy the position that he reached first. Player A must avoid contact with Player B. (IWBF Rulebook - Article 44.7)

4. Stationary Defender Who Moves into the Braking Area of a Moving Opponent Who Does Not Control The Ball
   Stationary defender Player B must allow moving opponent
Player A time to avoid contact if Player B moves into the braking area of Player A from a starting position within a chair length of the braking area of Player A. Remember that neither of these players has the ball. (IWBF Rulebook - Articles 44.7; 44.7.4)

The following principles are extremely important when determining responsibility for contact:
- The requirement that a moving defender must allow the player with the ball time and distance to avoid contact is considered to have been fulfilled once the defender has established a legal floor position.
- A defender who has covered the path of the player with the ball has reached a legal position, and, as a result, he has given the ball carrier the time and distance needed to avoid contact.

Rules for the offensive player who has the ball
- The player with the ball must always expect to be guarded. (IWBF Rulebook - Article 44.6.2)
  This principle is the same in FIBA rules. (FIBA Rulebook - Article 44.6.2)
- The player with the ball must maintain control of his chair at all times in order to be able to stop or change direction to avoid a defender who has established a legal position in his path. (IWBF Rulebook - Article 44.6.2)
- Comment: If the player with the ball takes his hands from his wheels in order to shoot or pass, he puts at risk his ability to control his chair. He has chosen to relinquish his ability to use his hands to control his chair. The player with the ball remains responsible for the movement of his chair even though he has chosen to remove his hands from his wheels.

Guarding Situations - more casebook examples
Guarding The Player Who Has The Ball
- Example 1. (Figure B.6):
  "Blue 6" has the ball. Opponent "red 4" pushes his footrests into the path of "blue 6".
  Decision: "red 4" is responsible for this contact. "red 4" has committed a Blocking foul. (IWBF Rulebook - Article 44.6.3.1)

- Example 2. (Figure B.7):
  "Blue 6" has the ball. "red 4" pushes into the path of "blue 6" and covers the path of "blue 6". "Blue 6" crashes into "red 4".
  Decision: Charging Foul by "blue 6". "red 4" has covered the path of "blue 6". (IWBF Rulebook - Article 44.6.3.1)

- Example 3. (Figure B.8):
  "Blue 6" has the ball. "red 4" pushes into the path of "blue 6".
  Decision: Charging Foul by "blue 6". "red 4" has covered the path of "blue 6". (IWBF Rulebook - Article 44.6.3.1)
"Red 4" is stationary 10 meters down court in the path of opponent "blue 6" well beyond the distance needed for "blue 6" to avoid contact. "Red 4" has only his footrests in the path of "blue 6". "Blue 6" continues to roll up court in a straight line and crashes into "red 4". Decision: Pushing Foul by "blue 6", who had time to avoid contact.

(IWBF Rulebook - Articles 44.6.1; 44.6.3.1; 44.7.1.2)

Comment: With or without the ball, it is the responsibility of "blue 6" to avoid contact with "red 4" who had a legal position in the path of "blue 6". Any player, with or without the ball, who has been given time and distance to avoid contact, will be responsible for contact that results from his failure to avoid such contact.
Functional Classification

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Ladies and Gentlemen, first I would like to thank you for being here as an audience and furthermore to thank Mr. Tolias and the H.W.B.F. for giving me the opportunity to make an introduction for a subject which is quite interesting and serious for Wheelchair basketball.

My introduction is focused on wheelchair basketball functional classification. First part is always history but before speaking about history we should mark that the purpose of the system of classification of the player of I.W.B.F. is to allow the participation of individuals presenting physical deficiencies. The ranges of persons include those with severe disability able to play basketball to those with minimal handicap as defined by the rules.

In Mid 40 the first system of classification was more anatomical-medical (Class attached to disability). In 1982 we have a new manual written by Courbariaux. The new manual introduces the four classes system and it is officially used since 1984 Paralympic Games. This is the functional classification system and it has to do more with basketballistics characteristics than medical ones. In nowadays we use this system with some changes such as the 1.5-2.5-3.5-4.5 classes since 1990 and the class of minimal disability as defined by the rules.

Disabilities concerning wheelchair basketball are Spinal Cord Injuries, Post-polio, Amputees, Cerebral Palsy and other motor disabilities. Sometimes it is really hard to classify players with spina bifida and cerebral palsy because of the nature of the disability.

When we talk about basketballistics characteristics we mean the sitting position of the player in the wheelchair, the propulsion of the wheelchair and how the player plays the ball actions such as dribbling, passing, shooting and rebounding. There are also aids for improving action potential such as belts, body corse, strapping, legs and foot stabilization, foot strap, orthoses or prostheses e.t.c. We should mention that the use of aids does not require an automatic increase of classification.

If we try to divide the classes we can make four groups. Lower classes 1.0 and 2.0 - higher classes 3.0 and 4.0 - mid classes (in which have characteristics of two classes) 1.5, 2.5, 3.5, 4.5 (amputee) and the group of minimal disability. One of the characteristics that gives a first sing of a class is the volume of action. So a wheelchair basketball player classified as 1.0 has no rotation, in class 2.0 has an active rotation, in 3.0 class has sagital and in 4.0 has frontal too.

The process of classification is the following. The classifier observes the player during a training session. When we have an international tournament the classifier should mark on the card of the player all the straps before the official game. That happens during the training session. The best classification comes out from an official game because the pressure of a game does not give the time to the player to "cheat" the classifier. Especially during tournaments the classifier can see, every motive structure that the player uses in the hotel. After this process the

This sum number is a matter of rules. For example in International Tournaments the sum is 14.0, for the Greek championship in A division is 14.5 and in B division is 15.5. I should also mention that in some countries it is allowed to able bodies to take part in the game classified as 5.0 but this is a matter of internal rules of every federation.
classifier asks the player what he-she thinks about his-her class. Then the classifier makes clear to the player why he-she should have this class.

Talking about wheelchair basketball sometimes I think I talk about a theater performance. Wheelchair basketball game has many common things with a theater performance. Protagonists on the stage players in the court, actors in second parts referees and classifiers for other jobs, directors and coaches and of course an audience which will visit us another time if it likes our game performance.
Fundamental Movements
One of your first and foremost tasks is to teach players how to move and control their bodies. Fundamental movements are sometimes called the basics of basketball; they are essential tools for each of your players to learn. You will need to teach each player to move effectively (because the bottom line is getting the job done) and also efficiently (moving the best way). Teach players to conserve time and space and to reduce wasted motion so they can develop balance and quickness. In other words, your players should always move with a purpose.

Basketball is a game of quickness (hand and foot or wheelchair) and speed (overall body motion), used at the proper time. Your coaching should continually emphasize the principle of doing things right, doing things quickly, and then making the right move quickly at the right time.

The five fundamental positions and movements of basketball that you will teach are basic position, passing and catching the ball, dribbling and shooting.

In my lecture I have decided to use two teams, one with able-bodied players and one with disabled players in order to show that the philosophy of a training session and the drills are similar. We have deference in the technique but the structure of training is done with the same way.

In this particular practice we will begin with lay ups, continue with stretching, teaching the basics, cooperation between two and three players and finally end with the developing a fast break.

1. Warming up with the ball: duration 7 min
   - Two lines on the middle court, two balls, one at each line. Players dribble the ball and lay up to the basket. Then take the rebound and pass to the first man of each line. The first men take the last place at the opposite line. (3 min)

   ![Diagram](image1)

   - Two lines, one left, one right. The ball is at the right line. Player 1 passes the ball to player 4. Player 1 cuts after changing direction towards the basket. Player 4 passes to player 1. Player 1 makes a lay-up and player 4 takes a rebound. (4 min)

   ![Diagram](image2)

2. Stretching: duration 3 min

3. Basic Skills (methodical exercise series): duration 15 min
   Bring ball under control
   a) Balls thrown sideways are stopped by extending one intercepting hand sideways, bouncing the ball and finally laying it on one's lap.
b) Picking up of balls at back wheel by players with limited sitting balance

The player supports himself with one hand on the back rest, controls the trunk when reaching down with one hand for the ball - lets the ball be lifted by the wheel - and pulls the trunk into the normal sitting position with the supporting hand.

c) The coach throws the ball high on to the field. The player tries to secure the ball as quickly as possible before it bounces once or twice on the ground. The ball is then passed back to the coach.

Notice: The ball should be thrown in a manner that the player must perform various changes of direction and only manages to secure the ball with difficulty.

d) A very low bouncing ball is secured by simultaneously pressing it with one hand against the ground and the rim of the back wheel.

This exercise can be prepared by bouncing the ball: bounce the ball - lead ball on to ground and rim and then let ball be lifted by the moving rim to highest point of the wheel. Players with no sitting balance must support themselves with one hand on the back rest of the wheelchair (hold on to back rest, in order to control the bending down).

e) Picking up the ball with the help of the back wheel while standing

The ball is placed at the foot of the back wheel. By pulling back long on the other wheel the wheelchair starts rotating. The “ball wheel” moves forward and the ball is lifted.

Dribbling

Beginners in WB particularly enjoy bouncing the ball combined with dribbling and moving with the ball in general.

This can of course be learnt at an earlier stage in time. Its inclusion into the elementary game is only possible when feeling for space and team understanding (play away from the ball, order within the team, secure passing and catching of the ball) have been mastered.

a) Bouncing the ball is basically throwing and catching the ball with one hand on a vertical level. Throwing vertically in the wheelchair is not at all easy for the beginner.

Depending on the trunk mobility, the ball is held with one or two hands by one side of the wheelchair, lifted up, simply let go and caught again. This helps to practice finding the proper point for the ball to bounce. Notice: In this case the hand or hands are not over the ball but under it!

Further exercises:
- The ball is thrown down with one hand and caught again.
- The ball is bounced 1, 2, 3... times and caught.

Notice:
The ball should be caught each time and not hit (the hand goes up slightly with the ball). Do not hit but accelerate the ball with a controlled movement.

Pre-exercise: The coach and the players bounce the ball towards each other alternately. (partner exercise)

Coach bounces ball - player bounces ball - coach bounces ball etc.

The definition of dribbling is relatively simple. The player is allowed to lay the ball on his lap and push twice. Then he must bounce the ball at least once in order to add two further pushes.

But dribbling is a bit more complicated than it appears to be. One push includes many different actions with one or two hands on the rim:
- pushing with one hand,
- pushing forward simultaneously with both hands,
- pushing backward simultaneously with both hands,
- turning the wheelchair by pushing simultaneously for-
ward with one hand and backward with the other,
• pushing forward with one hand,
• pushing backward with one hand.

These listed elements can lead to different combinations
with two pushes:
• pulling back with one hand and simultaneously push-
ing forward with the other
• pushing with both hands once forward then braking
and pulling the wheel backward etc.

Especially when the player is in possession of the ball the
following rule is important. The player is only allowed to
push twice as long as he is in touch with the ball.

The differentiation between pushing and steering/ braking
is important. Steering resp. braking of the wheel with one
hand is not counted a push even though a contact has
been made with one hand on the rim.
• a push accelerates the wheel
• with steering by means of braking the wheel slows
down

Steering by means of braking one wheel is a further ele-
ment which must be added to the combinations with vari-
ous pushing.

Exercises:
2x push, steer, bounce ball
1x push, steer, 1x push, bounce ball
1x push with one hand, steer, 1x push with both hands
etc.

Experienced players and players especially with good
trunk control learn to continuously push the wheelchair
with both hands and bounce the ball next to the wheel-
chair without laying it on their laps. The ball bounces
along with the moving wheelchair.

When starting the ball is thrown forward similar to an
under arm pass and the wheelchair is brought into motion
immediately.

Notice: *This skill is easiest to learn when the wheelchair
is brought into fast motion with both hands and the ball
is then bounced alongside the wheelchair with one hand.
After several test runs both hands simultaneously push
the wheels and the ball is bounced alternately with both
hands (bouncing forward and high).

After several exercises propulsion increases.

Another exercise for experienced and with trunk control
players is continuous bouncing of the ball with one hand
and pushing forward the wheelchair with the other.
Starting with one hand requires a lot of practice.

Notice: *Of course one handed push-
ing without the ball must be mas-
tered before the complex technique
can succeed.

The wheelchair is steered on the "ball side" by means of
cross gripping with the free hand whereby the ball must
be taken back in order to offer room for the front part of
the wheelchair.

A further popular technique is the bounce-stop and the
bounce-turn. The ball is bounced forcefully so that it bounces up shoulder-high. At the same time the player has time to brake or turn the wheelchair with both hands and to catch the ball again.

**Bank shot**
Sure high throwing of the ball is required which can possibly be practised thoroughly against a wall. The coach marks the way and the point of throwing the ball. First one should practise this standing at the point of throwing. If more strength is required the wheelchair can be pushed slightly. Practising to drive without a ball. The line is in the middle. The marked course leads past underneath the basket and possibly even cross the base line. When driving, rhythmic pushing is of great importance. The coach chooses a starting point on the marked line. Aim is to reach the throwing point with two pushes and taking up the ball. The coach supports verbally with: push - push - throw.

Should the player be standing too close, the starting point is set further back; should the distance be too great when throwing, the starting point is set further forward. The same exercise from the other side.

Later practice this alternately (starting left - starting right) When the bank shot is mastered (at least 70% scored), variations can be practised: e.g. setting off sideways and steering onto the right course; push twice - bounce - steer and push; coach passes the ball; steer the wheelchair by means of cross gripping, when coming from the left and throwing with the right hand etc.

Notice: Start very simply with every new training session

**4. Shooting drills: duration 8 min**
- One line at the right side of the court and the coach at the left side. Player 1 passes the ball to the coach and changes direction towards the basket. The coach passes the ball back to player 1. Player 1 stops and makes a shot. Player 1 takes the rebound. (4 min)

**5. Drills with two players: duration 6 min**
- Three lines at the baseline. The player in the middle line has the ball. Player 2 passes the ball to player 3. Player 3 passes back to player 2 and player 2 gives the ball to player 1 for a lay-up. Player 2 and 3 take the rebound. (3 min)

- Two lines. One faces the basket, the other at the free throws line extension, facing the opposite basket. Player 1 throws the ball to the board and takes the
rebound. Then makes the outlet pass to player 4 and runs behind him. Player 4 dribbles to the center and player 1 runs for the fast break. Player 4 passes to player 1 and player 1 makes the shot. (3 min)

6. Drills with three players: duration 10 min
- 3 or more players 1 or more balls In a weave player 1 passes to player 3 and Player 1 runs behind player 3. Player 3 passes to player 2 and player 3 runs behind player 2. Then player 2 passes to player 1 and runs behind player 1 starting the begin situation. (5 min)
- Three lines at the baseline. They make simple weave or dribble weave. The player that makes the shot is the defender and the other two are the offenders. (5 min)

7. Drills 1 against 1: duration 10 min
Two lines at the baseline coach in the middle having the ball. The coach rolls the ball and player 1 and 2 try to catch the ball. The player that has the ball is the offender and the other one is the defender. They play one Vs one, until a basket is made. (5 min)

We make the same drill, but the coach throws the ball to the board and the players take the rebound and play 1 Vs 1. 5 min

8. Fast Break: duration 20 min
Developing a fast break.
Fast Break is the most commonly used way of developing a counter attack. The objective of such an attack is to create an overload to the defending team in order to score. After gaining possession of the ball usually as a result of a defensive rebound, the team breaks towards the frontcourt. The coach controls...
the ball and bounces the ball on the backboard in order to develop a Fast Break.

Suppose that player 05 claims the rebound. The player 01 moves toward the head of the Three Point line extended (fig1141b). After receiving the ball, player 01 dribbles through the main lane, players 02 and 03 move along the right and the left lane, while player 04 follows player 01 as a first Trailer (fig1141c). Finally player 05 follows the rest of the players (fig1141d) moving along the main lane as a second Trailer or a Safety man controlling the development of the Fast Break and covering the defence in case of dispossessment of the ball.

When player 01 approaches the Three Point Line he then passes to either one of the two peripheral players. Suppose that he passed to player 02 (fig1141e). If player 02 cannot directly scores, he passes the ball to player 04, who cuts towards the ball side (fig1141f).

Player 05 cuts towards the opposite side and stops at the area of the Free Throw Line in order to help perform the actions mentioned above.

Secondary Fast Break

If none of the above works out and the attacking team does not achieve the objective, which is to score, the only thing that can be done is to score before the opponents organize defensively. Player 02 passes the ball back to player 01 and cuts towards the basket, while player 04 screens on player 02 (fig1141g). Player 01 passes the ball to player 05 and screens on player 04 (screens on the screener) (fig1141h). Player 05 can either pass the ball to player 02 or to player 04 (fig1141i).
Escalating a Fast Break

• Exercise 1
  All players have the same position. A player is positioned around the Three Point Line. After claiming the rebound a quick pass has been made to this player and the player who claimed the rebound replaces him, e.t.c. (fig1141j, fig1141k, fig1141L).

• Exercise 2
  All players are in pairs. Half of them are positioned along the free throw line and the other half positioned along the head of the three-point line. Suppose that player O1 and player O2 constitute the first pair (fig1141m). Player O1 bounces the ball on the Backboard, claims the rebound and passes the ball to player O2 who is at the Free throw line to claim the ball (fig1141n).

Consequently, player O2 dribbles towards the front-court (fig1141o) while player O1 moves along the left lane following player O2. As soon as player O2 exceeds the middle of the court he passes the ball to player O1 who finally scores.

• Exercise 3
  This exercise demands the participation of three peripheral players. Suppose that player O1 controls the ball at the middle of the court, while players O2, O3 are on the sideways (fig1141p). Player O1 dribbles the ball at the middle of the court and by the time he reaches the Three Point line he passes the ball

• Exercise 4
  Another player is added, who is called the trailer, this player controls the ball at the center of the Paint. Player O1 is at the High Post, while players O2 and O3 are on the sideways (fig1141s). Player O4 passes the ball to O1 who is at the Three-point line extended.

Consequently player O1 dribbles towards the middle of the court (fig1141t), while players O2 and O3 are
moving along the sideways lanes and player O4 (trailer) follows up the player O1. Player O1 passes to player O2 and he, in turn, passes to O4 who finally scores (fig1141w)

9. Game 2 Vs 2 (obliging use one screen): duration 15 min
"A promise kept, a dream comes true."

Jerry Krause
**Conference Opening**

**Maureen Orchard**

President of IWBF

The IWBF is a volunteer driven organization with one full time staff person, the Secretary General. We are in the business of developing and supporting the sport of wheelchair basketball in all countries worldwide. We promote, supervise, and direct the sport of wheelchair basketball throughout the world.

**We aim to:**
- Encourage the growth and development of the sport in all nations of the world through an organized program of education and instruction
- Establish the Official Wheelchair Basketball Rules; the Official Wheelchair Basketball Player Classification Handbook, the specifications for equipment and facilities; the Internal Regulations that govern the conduct of the Federation and ensure that they are enforced on all occasions
- Ensure that all international competitions, for which we have responsibility, including wheelchair basketball at the Paralympic Games, are conducted in accordance with the Rules and Regulations of IWBF
- Establish the standards for the training and certification of referees, classifiers, commissioners and examiners; control and govern the licensing of international referees, classifiers and commissioners
- Control and maintain the classification of players and issuance of Player Identity Cards and Player Classification Cards and regulate the transfer of players from one country to another.

**We ensure the timely administration of the matters of the IWBF by:**
- Establishing Commissions and Committees as deemed necessary for the proper conduct of our duties and make appointments to such Commissions or Committees
- Constituting a World Forum for the discussion, analysis, and approval of future proposals for the establishment of the rules for wheelchair basketball, the specifics for equipment and facilities, and the establishment of changes to the Constitution and Internal Regulations
- Represent IWBF to all bodies and organizations concerned with wheelchair basketball internationally on which we have membership or in which our interests are involved
- Promote amicable and courteous relations between national organizations governing wheelchair basketball (NOWB), Zones, and their officials and players
- Take any appropriate measures in order to prevent violations of the Constitution and the Internal Regulations of IWBF, the Official Wheelchair Basketball Rules and the Official Player Classification Handbook
- Provide the principles valid for deciding and settling all disputes and guaranteeing the right defense and an impartial judgment, as per the statutory provisions and regulations
- Maintain a documented history of the sport.

**We ensure the financial stability of the IWBF by:**
- Raising funds, collecting fees and accepting contributions and subsidies and ensuring that all resources are used solely to further the aims and objectives of the IWBF and in accordance with the principle that the IWBF is a non-profit organization
- Implementing an organized marketing program that involves communication, public relations and demonstration events to instill an awareness to the general public of the benefits of wheelchair basketball.
World development is organized through four zones which are referred to as the:

- European
- Afro/Arab
- Asia/Oceania
- America's Zone.

IWBF Executive Members (1998-2002) with FIBA Representatives in Munich 2001

Honorable Mr. President, honorable lecturers, ladies and gentlemen, dear colleagues. From my position as Chairman of the Department of Physical Education and Sport Science in the University of Athens, I salute the proceedings of the 1st European Congress with title: Wheelchair Basketball: today and tomorrow.

Involvement with athletics is the basis for the creation of a positive attitude against disability, as well as the understanding of the right in autonomous development and equal participation. The involvement of people with disabilities in athletic action is one of the few safe roads that lead to social acceptance in today’s Greek society. As long as this participation in common athletic activities grows up, the more society experiences the value of equality in athletic games and gentle rivalry.

The establishment, yet, to the society’s consciousness of the Paralympic Games as equal to the Olympics approves that commitment and performance is not only for able-bodied athletes. Paralympic Games, because of high competition level and high level of organization can have today an equal position in athletic system to that of the Olympics.

The society owes to have athletes with or without disability. Society must wait from the athlete the excesion of his physical and psychological abilities in order to succeed great performance and name him every time he wins a game as hero of will and winner of life. This notion takes away from the athlete with disability the right to be a member of the great athletic family.

The given ability to every citizen without exception, to participate in athletics activities establishes the social, pedagogic, cultural and recreational value of athleticism. In our times is common sense that athleticism is one of the more powerful means that society has for improving the quality of life of its citizens and surly constitutes a safe indicator for the civilization level and the development of a country.

I wish from my heart and soul Good Luck to your Congress hoping that it will be institution.
Conference Opening

Mary Karella - Diamantopoulos

Chairman of ELEPAP

It is my pleasure, on behalf of the board of ELEPAP to welcome you at the European Congress which is organized by ELEPAP in cooperation with the Hellenic Wheelchair Basketball Federation and "Ellinogermaniki Agogi".

I would like to inform you that ELEPAP is the first institution that actively confronted problems of physically disabled children.

Since its foundation in 1937, from the headquarters in Athens to other cities, Thessaloniki, Hania, Ioannina, Volos and Agrinio, we have embraced more than 90,000 children, ranging from a few days old up to 16 years old and for vocational training for young people up to 30 years old.

In the 66 years of ELEPAP function, many National and International organizations have been achieved in order to promote in the best way issues of the physically disabled.

Our daily efforts are focused on continuously improving the applications of our educational programs and in general the preparation of our youngster for social and professional integration.

In the last 15 years, through European Programs, ELEPAP is highly active in the area of vocational training of the physically disabled.

The training programs that we have carried out have been characterized by the innovation of choices (New technologies, journalism, production of radio programs etc.).

The "Training for life" program for "Leonardo Da Vinci" was realized in the same way, aiming on the education of wheelchair basketball players in order to work as coaches.

I would like to sincerely thank the National coordination unit of "Leonardo Da Vinci" which gave us all its support during the "Training for life" program.

Finally, I would like to thank everyone who helped realizing this science conference, of which the results, in combination with the results of the multination pilot program "Training for life", may open new frontiers for people with disabilities.
Conference Opening

Dr. Stavros Savas

President and CEO of Ellinogermaniki Agogi

Ladies and Gentlemen,

"Ellinogermaniki Agogi" serves its educational mission in all seriousness and consistency. Our goal is to lead our students beyond mere knowledge towards the constant moulding of their character and personality. Our aim is to provide our students with versatile incentives towards the cultivation of their mind. Within the scope of this aim, we mean to sensitize our students through several initiatives taken in the area of sports for people with special needs. Our co-operation with "ELEPAP" the Greek Association for the protection of children with special needs - has been long, constitutional and consolidated, while we are optimistically viewing the development of one Co-operation with HWBF.

The athletic events organized every 3d of December with the Co-operation of Ellinogermaniki Agogi and ELEPAP constituted the starting point for the realization of the "Training for Life" program, within the framework of "Leonardo da Vinci" action aiming at showing the abilities of people with special needs and helping them get set up in the area of sports. Our primary aim is for this program to change "basketball on a wheelchair" from an amateurish athletic activity into a professional occupation.

There have been two major keystones in the planning of this program: the determination of the needs and special traits of the area of basketball on a wheelchair and its scientific formation. The participation of three training centers and of a "Basketball on a wheelchair club" led to the realization of the first aim, while at the same time it supported the European dimension of this program, since the fellow members come from different countries like Greece, Spain, France, Slovenia, England.

The Research groups of the German Sports University of Cologne and of the Basketball documentation and Research center constituted the framework of this program, reinforcing the scientific approach, designing and evaluating the application of this training.

We meet in Athens today, almost 24 months following the first meeting of all the fellow - members, to sum up our conclusions but also to map out a course of future action. Ellinogermaniki Agogi will keep on supporting this effort, hoping that this conference will be the beginning of more intense effort by everyone involved to help people with special needs successfully enter the employment market.
Conference Opening

Giorgos Kouzas

Chairman HWBF, Vice-president Eurozone IWBF

Organizing a pioneering Conference in the area of sports for disabled people is by itself a very complicated task; therefore it demands a very systematic and scientific approach taking under consideration all the factors (e.g. psychology, pedagogy, e.t.c.) that could play an important role towards that effort.

Considering the need for reinforcing the efforts of embedding the disabled people in the society of sports and specially in the society of basketball and the lack of scientific approach towards that need, the 1st European Conference: 'Wheelchair Basketball: Today and Tomorrow proposes the transition of Wheelchair Basketball from an entertaining activity to a professional prospect as a part of the rehabilitation programs, which support the professional establishment of disabled people, through a scientific methodology. Wheelchair Basketball, is a well-known sport around Europe, therefore it can be a useful pilot application for the development of a conference regarding Wheelchair Basketball training. The selection of the conference’s themes is based on two fundamental principals. The identification of the trainers' needs in the field of Wheelchair Basketball and the scientific modulation of its schedule.

It should be emphasized, that the thematic areas of the conference came as a result of the interaction between these principals.

Those thematic areas include all the subjects of the detailed schedule of training schools such as: Training, Psychology of Sports, Sociology, Sports medicine, Ergometry, Pedagogy, Arbitration rules, Classification rules, Management and Administration of the team.

There is a strong belief among the Greek Federation of Wheelchair Basketball (H.W.B.F.) and the coordinators of the project “TRAINING FOR LIFE” that the 1st European Conference: ‘Wheelchair Basketball, the present and the future‘ is the beginning of a new era of equal opportunities among all athletes- disabled or not -who wish to be involved with basketball training and accomplish the following goals:

- Strengthening the sport of Wheelchair Basketball. Training is the foundations for the development of every sport, therefore, it brings up a complete and scientifically proved proposal and contributes in the qualitative and essential upgrade of sport.

- Promotion of the sport in a national and European level.

- Bringing together the disabled people and the rest of the society.

- The professional establishment of disabled people in the area of basketball.

- The development of a detailed training project in Wheelchair Basketball, one of the most important conditions for the promotion of the sport. However, it should be pointed out that the number and the diversity in the origin of the participants would also ensure the promotion of ideas and results of the Conference in a European level.

- The development and documentation of material regarding Wheelchair Basketball and Basketball in general that can be accessed through Internet.

H.W.B.F and I.W.B.F suggestions, the complete approach of ELEPAP and the school ‘Ellinogermaniki Agogi’, the
expertise of the scientific team of Department Of Physical Education and Sports of The University of Athens and the Sports University of Cologne can give a wide range of thematic areas for this conference.

We all wish to realize the dream of establishing the first training school for Wheelchair Basketball with the contribution of the organizations mentioned above.

Hopefully, the 1st European Conference: ‘Wheelchair Basketball: Today and Tomorrow’ will establish a starting point of this effort.
"We aim to encourage the growth and the development of the sport in all nations of the world through an organised program of education and instruction"

I.W.B.F.
The role of sports in the socialisation and social incorporation of the disabled into society

Koutsouki Dimitra

Professor, Chair of the Department of Physical Education and Sports Science of the University of Athens

Sports, historically, as well as in the 21st century, are directly related to the need of human beings of aiming to excel and supersede oneself; get through the difficulties that may arise and reward ourselves through our own participation and efforts. For as long participation takes place in both physical and sports activities, then the more our society experiences the true value of participation and healthy competition.

Physical activities, and furthermore, sports themselves, are an expression of one's culture, as well as an index of the life quality of a society.

In the wide spectrum of "disabilities", locomotive disabilities, emotional and mental disorders, sensory disorders (blindness, deafness), physical activity serves many purposes.

- **Improving their physical abilities** (cardiovascular endurance, muscle strength, balance (static and dynamic), mobility, flexibility and speed).
- **Learning and practising mobility and athletic dexterity**.
- **Building self-confidence and self-respect.** (concentrating on someone's "strong points" and developing skills that make success more possible).
- **Independent living** (developing locomotive skills that are directly related to the ability of independent and autonomous living).
- **Strengthening of interpersonal skills** (encouraging individuals to participate in activities, which will help them socialise and will create a sense of acceptance by the team.
  - **Stress Management** (carrying out activities that relax both the body and mind)
  - **Valuably using up spare time**
  - **Enriching life** (providing opportunities for creativity and expression of oneself).
  - **Reducing consequences** of the disease/disability, developing and improving skills.
  - **Distract individuals of thinking** about the symptoms of their health problems, which must be the realistic acceptance of their state and their state improvement. (Koutsouki - Koskina, 1997).

At a glance, the realisation of team as well as individual activities, which will be able to include all other family members, is a step forward in the social incorporation of disabled human beings into society. The next step would be to set the rules and to plan and realise sport and leisure schedules for both disabled and non-disabled people. Therefore, wherever possible, mixed activities could take place (swimming, basketball, volleyball, horse riding, etc).

The benefits from such mixed activities are two-way; even serious forms of disability do not disturb the conduct of these mixed activities, and do not at the least deduct from the quality.

Finally, legislation and regular organising of sport meetings (tournaments, workshops, friendly matches) between athletic unions of disabled and non-disabled people is one more step forward, which contributes to the socialisation of all those involved; also aids in lifting the mask of preju-
dice against individuality, excluding ghetto formations, such as racism and social exclusion. Generally, bringing mixed sport activities into being aims in strengthening acceptance attitudes of "others" with equal criteria and contributes to the changing of preconceived ideas against something "new". Also contributes to the creation of institutions that promote participation of all citizens with the same conditions applying, at all levels of social action; therefore, it reinforces democracy itself.

One requirement for lifting the biased ideas is the social politics with the participation of disabled people, and not "politics" for them. Substantial changes need to take place, social maturity, application of democracy to the participation processes, equal access in all life sectors, and political decisions towards this direction. All social teams, such as families, neighbours, work teams and work partners, in the field of social welfare and medical care, must co-operate with one another, activate themselves and work with this aim in mind. A disabled human being must be given the chance to fully develop his personality, so that he can be welcomed in the society as a healthy member.

The framework of "incorporation"/ "integration" in a sports environment
"Incorporating" in sports can be achieved in two ways: the inclusion of full contests of the Paralympic Games in the Olympics, or the parallel competition of disabled athletes with non-disabled athletes at the same time in the same sports (Steadward, 1996). Also, according to the "reverse incorporation", athletes without disabilities can participate in games set for the disabled athletes (Vanlandewijk, & Chapel, 1996).

Through co-existing in sports games, (wheelchair road racing), the experience from both sides was judged positively. The common athletes avoid stigmatisation, while disabled athletes strengthen their sport identity, battling against high quality athletes. Social relationships develop between them, while the myth of the disabled collapses. (Brandmeyer, & McBee, 1986; Sherrill, 1986). The integration of full games in the programmes of the Olympic games means, that their conduction, will include competition, times and medal awards ceremonies. (Vanlandewijk, & Chapel, 1996). Thus, the Paralympics would be established as the equivalent of the Olympic Games, thus proving that efforts and performances "are not privileges of non-disabled athletes only" (Steadward, 1996, pp. 35). The Paralympics, due to their high sports quality, and to the high organisation factor, can claim their place in the wide athletic spectrum (Steadward, 1996).

All of the above, lead to the "normality" of the disabled athletes, which means champions, that are distinguished for their high-quality performances, with full training support, sponsors, etc. "Normality" in sports means that the disabled athlete will have the same treatment from the social environment, at all levels. Thus, society will have the same requirements from the athlete, for a successful and reliable performance, and he will not be regarded as a hero at his first and only successful appearance.

To exceed the limits of the physical and emotional abilities and the accomplishment of a high-quality performance is a great work of art itself. For we must distinguish disability; "Normality" means equal rights and equal commitment. For example, a common health problem must be treated in the same way for both disabled and non-disabled athletes.

The incorporation into the sports environment might lead to the long-term incorporation into society, through the modification of ideas and concepts towards something "different". (Steadward, 1996; Linstrom, 1994 referring to Vanlandewijk, & Chapel, 1996).

There are, however, beliefs that consider "normality" a priority only in leisure activities. This is so because in sports
activities, competition and appointment of champions are considered more important, which are burdened upon when in mixed sports (Thiboutot, 1992 taken from Vanlandewijk, & Chapel, 1996). If equal opportunities for training and development of physical and emotional abilities are not available, then it is possible that mixed sports could cause a lot of problems.

Despite this, in team sports, mixed teams could compete against one another, on equal grounds. There are team sports such as basketball, in which non-disabled athletes can participate as well. Based on the rule of the minimum disability though, these athletes cannot participate, in the same way that disabled athletes are not allowed to participate in non-disabled athletes’ games. Thus, from both disabled and non-disabled points of view, activities are promoted which do not aid in the "normality" of the athletes. The important financial cost, that is required for the integration of games into international level of common athletes' games, is just another factor which makes it all the more difficult in many countries. (Steadward, 1996).

The first step for the incorporation is the classification system of the athletes. The recent system of functional classification requires less sports categories, prevents prohibition of serious disabilities and sets the rules for the fair competition of athletes, as well as increasing the viewers' interest (Steadward, 1996). The determination of the minimum disability is still an important matter that awaits to be resolved. (Vanlandewijk, & Chapel, 1996).

The realisation of the incorporation requires effort and improvements in legislation as well as technical matters. Will only sports with few modifications be included? Will such sports be excluded from the Paralympic Games? A series of questions like these could be answered, if the incorporation began with legislation changes in all international organisations and councils that work in the development and promotion of olympic sports at an international level. (Labanowish, 1993, taken from Vanlandewijk, & Chapel, 1996).

The main target of the incorporation and integration of the adapted sports into common sports is to achieve the technique without missing out the original target set; that is, the competition and the high resultant performances. (Steadward, 1996).

The above suggestions for the application of such programmes is the result of a philosophy, which respects the individuality and the human rights of all citizens, and at the same time leads to taking measures for the application of such institutions, the elimination of social racism, and social exclusion of disabled people.

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Cardiovascular and thermoregulatory responses to prolonged exercise

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Athletes with spinal cord injury present unique changes in cardiorespiratory and thermoregulatory systems which reduce their exercise ability compared with the able-bodied individuals or individuals with other types of impairment. In able-bodied subjects, heart rate progressively increases whereas stroke volume declines in prolonged constant load muscular effort. In some cases, cardiac output and mean arterial pressure may also fall (Nassis and Geladas, 2002). In order to avoid arterial pressure decline, a redistribution of blood volume takes place. Indeed, visceral and skin blood flow progressively decline when the elevation of heart rate can not compensate for the decline of stroke volume (Rowell, 1974). In spinal cord injured persons, cardiovascular system function may be in a disadvantage during prolonged exercise. This is due to the lack of sympathetic vasoconstriction below the lesion, which disturbs blood volume redistribution and results in a decline of venous return. In addition, the absence of leg muscle pump may also contribute to the diminished venous return and lower mean arterial pressure of spinal cord injured persons compared with able-bodied individuals (Hopman et al., 1993). The cardiovascular disadvantage of individuals with spinal cord injury becomes greater when exercise is performed in the heat.

In addition to the cardiovascular disadvantage, spinal cord injured persons present an impaired thermoregulatory ability. This is due to the reduced sweating capacity and lack of vasomotor regulation below the level of lesion (Sawka et al., 1989). To minimize the negative effects of cardiovascular and thermoregulatory systems dysfunction, athletes with spinal cord injury should: a) avoid hard exercise in a hot environment, b) start exercise always in a euhydration state, c) replace all body fluids lost by taking fluids regularly during exercise, and d) replace fluids lost following each training session (ACSM, 1996).

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Biomechanical movement analysis

Nikolaos Darras

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The purpose of this lecture is to present the methods and instruments that are used in biomechanical analysis of the movement and more specific in wheelchair basketball. Movement is the change/displacement of body position. Biomechanics is the science that studies the changes in human body. Two different methods are used:

a) Qualitative analysis
b) Quantitative analysis

In Qualitative Analysis evaluation of movement characteristics takes place. This analysis is based on movements observation, describes its characteristics that may be visual, hearing or even kinaesthetic. The words evaluation and observation, are quite subjective and depend on a person's ability to distinguish these characteristics. The instruments that can be used are Visual Observation, Photography, Cinematography, Videotaping, Kinesiographs etc.

Great impulse was given in movement analysis with the use of video. It offers the ability to freeze the picture, to show it in slow motion and hence movement details can be studied. A specific movement can also be replicated several times and the cost is very low. All these provide direct

In Quantitative Analysis measurements of various movements analysis is performed. The main advantage of quantitative analysis is the objectivity that makes this analysis valid. Quantitative analysis is divided in two categories: a) kinematic analysis where kinematic parameters are measured and analysed and b) kinetic analysis where kinetic parameters are measured and analysed.

Kinematic analysis: In kinematic analysis parameters that describe the changes of the human body position in space are measured. Such parameters are: displacement, angle, velocity, acceleration etc. The following instruments are used: electrogoniometers, goniometers, cameras, stroboscopic photography, cinematography, videotaping and finally optoelectronic systems (2 and 3 dimensional). Kinetic analysis: In kinetic analysis parameters that describe forces and derivatives of forces are measured. Such parameters are: Force, pressure, torque, work, power etc. Force transducers, piezoresistive transducers, accelerometers etc are used to measure the above parameters.

In general, kinetic analysis concerns the various factors that cause of movement (forces) and kinematic analysis concerns the result of forces application.

Since Ancient Greece there was interest in movement analysis.

Smaller stride length, vertical body position and more flexed elbows in endurance runners compared to sprinters are the first qualitative characteristics that were evaluated.

The same period the first 3-dimensional kinematic pictures with details of anatomical elements are developed in sculptures.

The first scientist who attempted to explain human and animal movement was Aristotelis in his scientific work "Animal Movements" 384-322/3 BC. His student, Plato, among other scientific issues, presented the basic ele-
ments of the mechanics of body movement that are similar to Newtonian mechanics (17th ce). It was supported that continuous movement is based always on one factor: a force that acts on moving object.

Giovani Borelli in his scientific book "Animal Motion" 1680, is first that presents the human as a lever and force system that produce movement.

Photography was the basic step in movement analysis. Edward Muybridge (1830-1904), the "father" of photography was excited with the capabilities of the new instrument. He was initially taking photos of human movement. He created a unique photo collection and cinematography that concerned human and animal movement. Etienne-Jules Marrey, a French physiologist, used photography and cinematography to measure movement elements. Using stroboscopic photography, illustrated on a picture successive body positions of a Pole Vault athlete. He also presented new methods to analyse the movement. Marrey presented the bases for a technological approach to study the movement.

Nowadays, high technology systems that record and analyse simultaneously in real time various movement parameters are used. Software that are connected through PCs with various instruments has been developed, in order to collect movement data.

**Kinematic analysis**
In kinematic models the kinematic parameters that are collected by the system are determined. These include the points that are recorded by the system, as well as the axes that are created between these points. Markers are placed on basic human joints and with the videotaping the markers' coordinates are calculated for each frame. Hence, the human movements is copied on the PC. Mathematical algorithms are then used to transform the 2 dimensional coordinates from 2 or more cameras in 3 dimensional and hence a 3-D moving figure is created.

Three levels are used in movement analysis: a) **frontal**, b) **transverse** and c) **anteroposterior**.
For example, on anteroposterior level, knee/hip flexion-extension is recorded, on frontal level hip adduction - abduction is recorded and finally on transverse level pelvis and hip rotation is recorded.

The following model was used to analyse the movement of the wheelchair basketball shot (Nitoyuki Nunome et al.). The model used 9 points to determine the shoulder, trunk,
upper arm, lower arm and hand axes and 1 point for the ball.

Additionally, the levels of the movements were determined. Hence, upper arm adduction was the angle on the transverse level between shoulder and upper arm axes. Elbow flexion was determined by the angle between upper and lower arm on anteroposterior level etc.

**Kinetic Analysis**

Instruments that are connected to PCs are used to record forces during the movement. Force platforms record three forces that are applied at each moment on the ground (vertical, anteroposterior and horizontal).

Using this method the point of force application, its magnitude and direction from the individual on the ground and vice versa during gait, are measured. Based on these data human gait is evaluated and abnormal movement is determined.

Other instruments that are used in kinetic analysis are pressure recorders that measure pressure that is applied on the foot or on the seat of the wheelchair, on various contact points in order to improve the ergonomics of the wheelchair.

Accelerometers are used to record force alterations. These instruments record the acceleration that develops the point where accelerometers are placed. Based on these alterations the force that is applied is calculated (Force = mass * acceleration).

Finally, in movements analysis, the above instruments can be used together to provide more information.

For example, in order to measure the torque that is applied on the knee joint during stance phase, kinematic and kinetic data are essential. Kinematic data include knee coordinates and shank position. Kinetic data include force point of application, direction and magnitude. Hence, it is known that the force applied on the ground is in front of the knee and rotates the shank towards extension, creating extension torque. Hence, the force that should be applied by the hamstrings to "hold" the knee during flexion, can be calculated.
Simulation models based on kinetic and kinematic data are used in various studies such as orthotics, movement improvements or even robotics.

**Biomechanics application on wheelchair basketball**
Mainly, three elements are analysed: a) wheelchair ergonomics, b) performance and c) technique.

**Chair ergonomics**
Assessment of a wheelchair Basketball chair

Wheelchair maneuverability is the basic ability for the sport (Owen, 1982). Chair response to velocity and direction changes is the most common cause for injuries. The stability of two different types of wheelchairs performing rotational movements was studied. Using 3-D analysis, the vertical displacement of various points on the wheelchair was measured. On horizontal plane, stability was found normal while on anteroposterior level stability was not good.

**Performance analysis**
Drag and sprint performance of wheelchair basketball players.

Nine males and 8 females, athletes of wheelchair basketball (national team level) participated in the study. A switch, that was connected to a PC, was placed on the wheel and was recording the rotation frequency. Hence, velocity was measured from stance to completion of 35 metres. The following were found:

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velocity</td>
<td>4.75 m/s</td>
<td>4.08 m/s</td>
</tr>
<tr>
<td>Max. Accel</td>
<td>1.32 m/s²</td>
<td>1.03 m/s²</td>
</tr>
<tr>
<td>Max. Power</td>
<td>530 W</td>
<td>264 W</td>
</tr>
</tbody>
</table>

**Technique analysis**
Shooting mechanics related to player classification and free throw success in wheelchair basketball (2002).
Laurie A. Malone, PhD; Pierre L. Gervais, PhD; Robert D. Steadward, PhD

3 dimensional kinematic analysis of the free shot for the categories 1, 2, 3, and 4, showed statistical significant differences:

a) lower release height and larger release angles in categories 3 and 4.

b) Higher release velocity in category 1 in relation to categories 2, 3 and 4.

A kinematic study of the upper-limb motion of wheelchair basketball shooting in tetraplegic adults (2002)

Hiroyuki Nunome, MS; Wataru Doyo, MS; Shinji Sakurai, PhD; Yasuo Ikegmai, BS; Kyonosuke Yabe, PhD

This study examined the free shot from 2.16m between tetraplegics and normal individuals using 3D kinematic analysis. There were statistical significant differences in vertical ball velocity and release height. Tetraplegic people scores were lower.
There is great interest in biomechanics of wheelchair basketball. Biomechanical analysis can enhance athletes' performance. A better understanding of the technique problems is possible. The systems for biomechanical analysis every day become more easy to use. Application of biomechanics is powerful. An application example is the Greek Foundation for Protection and Rehabilitation of Children with Disabilities, where the last two years the 3D kinematic system BIOKIN V 6.0 has been installed with two AMTI forceplates for gait analysis of individuals with neuromuscular problems.

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**Wheelchair basketball training**

**Wim Van Ek**

*Basketball coach, Coach of the Greek national wheelchair basketball team*

**Defense**
Defense is extremely important in basketball where, unlike other sports, every member of the team has to play a large part. In soccer, for example, teams are made up of attackers, defenders and midfield players. In the basketball team everybody fills these roles. This is precisely what makes the game so exciting.

**Defending the home basket**
Like in pedestrian basketball the players are allowed to occupy any free space on the field. But this must be done avoiding body contact (wheelchair contact) with other players. The wheelchair is part of the player. Employing skilful wheelchair movements the defender can stop the attacker from reaching the basket. The players defend by taking in a position between their own basket and the attacker. In order to follow the attacker's movements the foot rests, as a rule, point in the same direction as those of the opponent.

- Position to the basket.
- Overtake partner and bring him to a stand still by crossing his path.
  - Remember: The axis of the back wheel must pass the furthest point of the partner before effectively blocking his way. In order to screen effectively and fast the inner wheel is broken and the outer wheel strongly pushed forward.
  - 1 against 1 while standing
    - The partner (defender) pulls back the wheelchair and then turns it in a new direction.
    - Notice: To be able to turn away close to the partner a turn on spot is executed. One hand pushes forward on the inside wheel while the other pulls back on the outside wheel.
  - 1 against 1 in motion
    - In order to pursue the partner (opponent) the player must turn his wheelchair in the opposite direction.
Notice: The wheelchair’s axis of rotation lies between the axis of the back wheels; i.e. the wheelchair has a long part to the front and a short one to the back.

- 1 against 1 defending in motion
  The defender follows the attacker’s movements in order to occupy the space lying between the basket and the attacker.

- Fake in 1 against 1
  With the last exercise the back player can change his course in different rhythms and modes in order to deceive the opponent ahead of him (to trick him).

An even more effective trick is when only half a turn away from the opponent is performed, the wheelchair stopped and turned in the opposite direction. In motion (opponent driving parallel) ½ turn- stop - ½ turn back and starting forwards.

- The two previous exercises can be combined on a small space.
  Use ground markings or stick two marking lines on the ground, which should have a distance of 3-4m (depending on ability of the players). Aim of the attacker is to pass his opponent without crossing the marked borderlines.

**Offense**

**Basic Form of Screening and Picking**
This is a fundamental attaching move used by players of all ages and abilities and in various degrees of complexity as part of their team’s attaching strategy. In the screen and pick an attacking player without the ball acts as a screen to block the path of a defender who is trying to follow another attacker. First practise 1 against 1, like before, on defending the home basket. With experienced players an attacking player (A3) could drive into the marked area and play 1 against 1 with his opponent. A2 would then have the possibility to pass the blocked player B.

With the exercise above, mistakes, which can lead to technical deficiencies, are easily made. Beginners also have difficulties to estimate the proper speed and distances required. The following model can be used to facilitate the basic understanding of the teamwork of two attackers.

- C drives behind B
- Parallel to B
- Rotation performed by A, C plays 1 against 1 against B
- Variant 1
- Variant 2
- A drives diagonally backwards outwardly until the front part of the wheelchair can easily pass B.
- B follows A, C must follow B and not let himself be influenced by B.
Basketball training
The role of trainer at the contemporary basketball

Argyris Pedoulakis

Basketball Coach, Coach B.C. Peristeri, Hellas

Teams are built, are planned, are created, and are not bought. The finance is a very important factor, but not the dominant one. This is the trainer plays an important role.

The job of the trainer the preparation of both the player and the team: The united philosophy of basketball regarding the game and the team.

1) Discipline - Self-discipline, must derive from oneself and not self-imposed. The trainer has to substantiate what he says.

During watching video and during teaching, it is very important the way he talks: he/she should use "I, You" and not "We, You".

2) A player must acquire sociality within the team and has to get rid off egocentrism.

Key ways to become a team out of practices in the court:
- Meetings, going out for lunch, dinner etc. among the teammates, coaches, team and the members of board of directors
- Meetings with former team players.

The preparation period is very important for the team not only to improve the players fitness, the players techniques and tactics. Moreover it is important psychological preparation, while the players live together, meet each other and cohabit as personalities.

The trainer is responsible to develop the players character and thus he/she to enhance the team members with:
- Moral values
- Life values
- The meaning of team work
- Respect
- Parity
- Coherence

The trainer is the one to support the players physiologically:
- To reduce the stress and the anxiety
- To outline and remind each player separately and consentantly the motives

Game philosophy and the job of the trainer inside the court
In basketball there are two main values. The first one is that what looks simple is the usually and the most difficult and the second one is to play vertical basketball. The team is built on a triangular base. On this triangular base we add more elements through giving different roles to the rest of the players.

Starting the training job
An emphasis is given to the individual technique by analyzing watching the video both the defense and the offence, a technique used by Valerio Biankini. Tsartsaris and Ford have improved their individual elements as a result of such a tactic. Especially the second one has become familiar with the way he shoots while he is going down after a jump shoot, through watching a video. We have found the mistake, we worked on it and his three points shoot stats have been improved radically.

1) The struggle of negative and positive elements dominance in the team.
2) Emphasis during the training, on the retaining the right
distances (tall players - small distances) whether the player possessing the ball is facing the basket, or is at the post up with the back on the basket.

Retaining the right distance with players constantly moving when the ball is also moving.

All these are included in:
1) Vertical basket
2) Giving different roles in offence
   • All five players are responsible on defense. The defense philosophy is to reduce the distances.
   • Following cross pick e.g. what happens with Makris at Iraklio.
3) Great emphasis on both creating and understanding how to make rivals lose balance. The players learn and must thing as though they were coaches in the court.
4) Coach managing means to share roles plus supporting his assistance. He/she should never allow anyone to swear on his assistance whether he is a trainer or equipment manager. A lot of times the trainings take place under the directions of his/her assistances. He/she must always be present to insure the smooth functioning of the training.

A coach is allowed to make mistakes. His job is maths and with this must take decisions. For example he/she has to decide whether one of his/her player must foul one rival to bring the game on draw when 15” are remaining. A coach must outline and enhance his/her players the positive aspect of things. Positive elements can be retained through a loss, something that eventually will lead to winning.

Bosman players help the Greeks to add more elements at their game and generally receiving positive elements. Players imitate and have idols. Some of them do tattoos, most children want to be like Nikos Galis, while a lot of young coaches admire Yianis Ioanidis.

The coach’s way of thinking in creating offensive tactics. Against Iraklio we have prepared for example to face a team with four shooting guards, which means we had to adapt our game to long distances on defense. Our aim was to break the ring. To do so, we asked our player to post so that his defender, Makris would have no other option but foul him.

Against Near East we knew that Xanthopoulos was a key player in organizing our rival's game and was the one to give a fast rhythm to their game. Once more, we did the same thing, which means we posted against him to make him foul our player.

Ioanidis used fake pick en roll on the Galis's defender, to make him tired.

- The coach's way of thinking in creating defensive tactics: Analyzing the rival's tactic, codes, adapting your game to the rival's weaknesses, i.e. Blue Edwards has no developed his passing skills.
- Helping players to get rid of bad habits. For instance, Ford had a poor performance in passing game. This is when a coach has to explain the player what his mistake is through watching video, something that we will help him to acquire a team spirit.

**Weekly training program of regular season**

If we say that the game is on SATURDAY (we talk about one game per week, because when we have two, our program is very different).

Our daily training plan is this:

**MONDAY:**
- **Morning:** Fitness training with emphasis on aerobics and weight lifting.
  Individual training in two groups: face - back without defense.
- **Afternoon:** We put an emphasis on offence exercises plus on fast break exercises e.t.c.

**TUESDAY:**
- **Morning:** Day off (resting for Monday's exhausting training)
- **Afternoon:** Usually a training simulating a real game. Starting with warming up, then players play...
against each other for four periods while, each assistance coach replaces the head coach on the bench.

WEDNESDAY:
- **Morning**: Power training using weights plus individual training with one to one and two to two exercises.
- **Afternoon**: Specialized warming up with emphasis on individual techniques.
  Co-operation on both offense and defense among three and four players.
  5 to 5 in half court under the coach instructions.

THURSDAY:
- **Morning**: Shooting training in 2p shots, 3p. Shots and free throws while the assistances write down the player's stats.
- **Afternoon**: Specific warming up of individual technique.
  Individual technique exercises with high rhythm in half court.
  5 to 5 in half court with emphasis on facing the rival's offensive tactics.
  5 to 5 in half court with emphasis on our offensive tactics, the once to use against our rival.
  Real game training.

FRIDAY:
- **Morning**: Day off
- **Afternoon**: Long duration specialized warming up with emphasis on couple individual techniques exercises.
  Analysis of tactics in the rival's half court.
  Ten - minute high-speed exercises (fast breaks with no defense) with emphasis on shooting from different places of the court.
  Players get to couples and shoot.
  Video watching and rival's theoretical analysis.
The effect of a goal setting program on basketball skills and self-efficacy of adolescents

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Summary
The effect of a goal setting program on basketball skill (AAHPERD, 1984) and self-efficacy (Bandura, 1977a, 1982) of adolescent basketball players was examined. Self-efficacy and basketball skills were pre tested on a group of seventy-eight (N = 78) basketball players (M = 15.1 years). The sample was divided into three equal numbered groups (n1 = n2 = n3 = 26). Univariate ANOVA's revealed no significant skill and self-efficacy differences in pre testing among the three groups. During the experimental treatment period, the groups were exposed to three different types of goal setting and practiced the skills in nine separate basketball sessions (three sessions per week). The three types included the: a) 'do your best' approach of goal setting (experimental group 1), b) 'self-set' approach of goal setting (experimental group 2), and c) control group with no goals. The participants were post tested, after the three week treatment period, on basketball skills and self-efficacy. The examination of differences among groups was based on two pre planned orthogonal comparisons: a) both experimental groups against the control group, and b) experimental group 1 ('do your best') against experimental group 2 ('self-set'). We planned, for both comparisons, separate ANCOVA's for statistical analyses (SPSS)(Norusis, 1993). Heterogeneity of regression, however, led us to the Attribute Treatment Interaction Analysis for the first comparison (Pedhazur & Pedhazur-Schmelkin, 1991; Huck, 2000) were both groups improved from pre to post testing on basketball skill and self-efficacy. The rate of improvement, however, in basketball skill and self-efficacy, was significantly higher for the experimental groups compared to the control group. Different types of goal setting, therefore, improve performance to a wider extend than absence of goals in adolescence. For the second comparison, homogeneity of regression allowed the use of two separate ANCOVA's for skill and self-efficacy. Participants exposed to the 'self-set' goals scored significantly higher than participants exposed to the 'do your best' goals in post testing, when controlling for their pre testing scores in basketball skill and self-efficacy. Adolescent players who set their goals individually, improved more than players who were instructed to do their best during training and testing. Overall, self-set goals appear as a regulatory factor at the process of improved performance of adolescent basketball players.

Key-Words: goal-setting, basketball skill, self-efficacy.

The effect of a goal setting program on basketball skill and self-efficacy of adolescents

Introduction
Goal setting constitutes a strategy for improving performance in various aspects of life (academic, occupational, athletic, etc.) (Boyce, 1992a, 1992b, 1994; Boyce & Wayda, 1994; Burton, 1992, 1993; Lambert, Moore & Dixon, 1999; Locke, 1996; Locke & Latham, 1985, 1990). According to the model of Locke and Latham (1990), the personal goal setting refers to a conscious pursuit towards a desired outcome. Locke and Latham (1990) believed that the process of setting a specific goal incorporates two major elements: a) satisfaction and b) tension. Satisfaction refers to the feelings associated with
the fulfillment of the task or the outcome of a specific act, while tension refers to the magnitude of effort in order to achieve the desired outcome. The Locke and Latham's (1990) model predicts that goal setting provides orientation and increases the tension and sustained effort. These elements seem to be important for the fulfillment of a certain goal. Finally, the model incorporated five latent moderate variables, all related to successful performance: a) ability, b) commitment, c) feedback, d) task complexity and e) situational constraints (Locke and Latham, 1990). Burton (1993) suggested that the examination of goal setting has to incorporate three factors: a) how consistently goals enhance performance, b) how large the performance enhancement effects are, and c) how well goal setting effects generalize across tasks, populations and time spans. Duda (1996) indicated that the predetermined goal setting has a strong relationship with the development of motor skills in children, while the same was not true for self setting goals.

Researchers examining the influence of predetermined goal setting in performance, have not reached to a consensus yet (Boyce, 1992a; Boyce, 1992b; Boyce & Wayda, 1994; Burton, 1992; Locke & Latham, 1985). Few have demonstrated that the performance increases when the coach is setting the goals for the athletes (Boyce, 1992b; Burton, 1992; Locke & Latham, 1985), while others have not reached to the same conclusion (Boyce, 1992a; Boyce & Wayda, 1994). The conflicting results might be attributed to the different methods and theoretical approaches towards goal setting.

Bandura (1977a) suggested that the use of indirect, with low difficulty sub goals, have better results than direct and very difficult goals. The indirect and easier to achieve goals, decrease difficulty and provide satisfaction to the athletes. The indirect goals, constituting an introduction to the stepwise process of goal orientation, are in contrast to the long term goals which frequently fail to become motivational factors for the athletes. The long term goals do not have direct importance and may be reversed. Therefore, the motivation to succeed remains with indirect and easier sub goals, which constitute the steps for the successful fulfillment of difficult and long term, future goals.

Goal setting has been reported as a common method for improved performance during the last decades (Locke & Latham, 1990). In an excessive review of literature of 400 research studies, Burton (1993) found significant relationships between certain goals and successful outcome in different exercises, participants, criteria for success, etc. Burton (1993) suggested that goal setting might lead to negative performance outcomes in low ability athletes when the specific goal is beyond their abilities. Recent studies, providing an outlet to Burton's (1993) conclusion, found that a carefully selected individual goal can improve the performance of all athletes, regardless of skill level and competitive situation (Locke, 1996; Weinberg & Weigand, 1993). Goal setting can explain and predict behavior and performance for all participants in different athletic situations, including physical education class and sports (Duda, 1996, Roberts, 1992).

Kirschenbaum (1985) found that athletes who set personally their goals, perform better compared to athletes who have their goals set for them. The researcher concluded that there is more flexibility in personal goal setting and people can be trained to set their personal goals according to the difficulty of a certain task. Finally, Bandura (1989) indicated that participants who are informed for their capabilities, are more likely to perform better when they set a specific goal to reach.

Research has shown conflicting results concerning whether different approaches of goal setting can improve performance more than the simple 'do your best' approach (Hall, Weinberg, & Jackson, 1987, Weinberg, Bruya, Jackson, & Garland, 1987). Locke and Latham (1990) stated that differences between specific and do your best goals represent "the most nonobvious comparison, since 'do your best goals', despite being nonquantitative, imply a high level of motivation" (p. 29). Locke and Latham (1990) concluded that the ambiguity of personal goals allows the benefit of doubt in evaluating perform-
ance, since "a wide range of performance may be interpreted as being compatible with doing one's best" (p. 31). Bandura (1977a, 1989) stated that self-efficacy is stimulated from the participant's selected goals. The researcher presented a casual model where the perceived levels of self-efficacy were affected from the information provided to the participant along with previous performance, perceptions, emotions, etc. The four basic sources of information regarding self-efficacy are originated from: a) performance accomplishments, b) vicarious experiences, c) verbal persuasion, and d) emotional arousal (Bandura, 1977a). Bandura stated that the most important source of information is personal experience from previous performance accomplishments, which influences the perceived levels of self-efficacy for the successful fulfillment of a task. Personal experience has a significant impact on performance and it depends on the difficulties of the exercise or task, sustained effort, intensity, assistance, etc. Repeated success increases a stronger sense of self-efficacy compared to repeated failures. Reversing the perceptions of self-efficacy, however, is the product of a cognitive process towards personal judgment of success in a particular exercise or task. Individual perception, therefore, relate to self-efficacy more than the difficulties of an exercise or task and is influenced from individual perceptions of success.

Bandura (1989) stated that the perceived levels of self-efficacy constitute the most important element of human action. He suggested that the perceived self-efficacy depends on the organization of human acts towards the successful execution of exercises or various tasks, in order to reach the desired performance. Participants experience a sense of uneasiness when they do not know how well they can perform in a certain exercise and not with the exercise itself.

Researchers have also examined the effect of personal experience, self-efficacy and feedback in human performance (Escarti & Guzman, 1999; Fitzimmons, Landers, Thomas & Van der Marsh, 1991; George, Feltz & Chase, 1992; Gould & Weiss, 1981; Weinberg, Gould, Yukelson & Jackson, 1979; Weinberg, Gould, Yukelson & Jackson, 1981). Locke, Frederick, Lee, & Bobco (1984) stated that self-efficacy can predict performance more accurately compared to previous personal experiences. Researchers in the goal setting field (Filby, Maynard & Graydon, 1999; Theodorakis, 1995, 1996) agreed with Bandura and used multiple ways of goal setting as a mediator variable for improved performance. The above researchers believe that the process for improving the athletic performance is multidimensional and dynamic and requires a manipulation of specific goal setting, according to difficulties of the particular task each time. Specialized goals determine the amount of required effort to achieve a certain predetermined level of performance. Future researchers, analyzing different ways of goal setting, self-efficacy and feedback towards successful performance will enhance coaches and athletes to reach to a consensus concerning the kind of received information with a significant impact on self-efficacy and athletic performance.

Researchers have examined the significant impact of self-efficacy in accordance with predetermined goal setting to improve athletic performance (Bandura & Jourden, 1991; Earley & Lituchy, 1991; Locke et al., 1984; Theodorakis, 1995, 1996). The researchers believe that there is necessity to extend the above research efforts and examine pathways for coaches, from various sports, to manipulate different goal setting strategies and levels of self-efficacy to assist athletes reaching their optimum athletic performance. The present study therefore, was designed to examine the effect of a goal setting program to the skill performance and levels of self-efficacy of adolescent basketball athletes. Based from previous research findings, we anticipated that: a) participants exposed to the 'self-set' goals, will exhibit the highest skill and self-efficacy scores at the end of the program, b) participants exposed to the 'do your best' goals, will experience higher skills and self-efficacy scores than participants not exposed to any type of goal setting, at the end of the program.
Method
We examined, in a true experimental design, the effect of goal setting program in basketball skills and levels of self-efficacy of adolescent players. Three separate basketball skill tests were presented to an initial sample of 138 adolescents, who were instructed how to execute them properly (AAHPERD, 1984). The participants, afterwards, reported in pre testing their levels of self-efficacy and completed the three separate basketball skills. Finally, we divided the sample in 3 equal numbered groups (two experimental and one control) and obtained an informed consent from. Unfortunately, only 78 adolescents agreed to participate throughout the study and we randomly assigned them in three equal numbered groups (n1 = n2 = n3 = 26), two of them experimental and one control. During the experimental treatment period, participants from the two experimental groups were exposed to two different types of goal setting (1: 'do your best' goals and 2: 'self-set' goals), and practiced the three basketball skills twice in each session. The control group was not exposed to any type of goal setting, and was just practicing twice in each session the basketball skills. Finally, during post testing, all participants reported their levels of self-efficacy, and completed the three separate basketball skills identically with the pre testing session.

Participants
The present sample was consisted from 78 male, adolescent basketball players. Their ages ranged from 15 to 16 years old (Mean = 15,1 years, S.D. = 0.5), with an average experience between 5 to 7 years in basketball, from 13 different athletic clubs in Athens, Greece. The sample design was purposive (Skordilis, Koutsouki, Asomitou, Evans, Jensen, & Wall, 2001), and the selected teams were: a) not exposed to any goal setting program in the past and b) trained under the supervision of the senior researcher. The demographic characteristics of the participants are presented in Table 1.

Measuring Instruments
We utilized for the purposes of the present study, a specifically designed form to record the: a) goal setting (‘do your best' and ‘self set' goals), b) perceived self-efficacy and c) scores on the three basketball skill tests. The designed form (Harris, 1984) was based on the theory of Bandura (1977a), with three specifically designed parts, respective to the three separate basketball skills required from the participants to fulfill. The forms, completed by the researchers, indicated the participant's goals, their perceived self-efficacy (Harris, 1984) and their scores on the three separate basketball skill tests.

Basketball Tests
The AAHPERD (1984) was used to select the following three basketball skills: a) jump shot, b) defensive slide, and c) dribbling. The reported validity of the three skill tests ranges from .65 to .95 and the reliability ranges from .84 to .97 (AAHPERD, 1984). Jump shot was evaluated through the successful and quick shot performance, from predetermined positions into the basketball court, in a specified period of time (AAHPERD, 1984). Every participant completed three separate, 60 sec. trials. The first trial was pilot, and the recording included the sum of scores from the second and third trials. Five separate predetermined points into the basketball court, 4,75m distance away from the basket, were used to measure jump shot (Figure 1). Each participant, after the initiation signal, attempted a jump shot from the first predetermined point, recovered the ball, and continued with another jump shot from the second predetermined point. During the execution of jump shots, the participants had to keep at least one of their feet behind the specifically designed drawing lines, determining the 4,75m distance from the basket. Every successful jump shot was given a two point score, while every shot into the rim was given one point. Whenever the participants violated the specified testing rules in a jump shot, they received a score of zero for that specific shot. The recorded scores from the two 60 sec attempts were
added and the sum constituted the final jump shot score for every participant (Figure 1).

Defensive slide was evaluated through the time needed from the participants to move side ways, left and right, without crossing their feet, into a specifically designed space into the basketball court (AAHPERD, 1984). The participants fulfilled three separate trials. The first trial was pilot, and the final scores were recorded from the sum in seconds of the second and third trials. After the initiation signal, each one of the participants, separately, with his back turned on the basket, moved sideways from the starting point 0, without crossing his feet, to the next point and touched it with the same side hand. Then, he continued to the next point, etc. The task was completed immediately after the participant crossed the starting/finishing line with both feet, at point zero (Figure 2).

The dribbling skill was evaluated in a specifically designed area into the basketball court (AAHPERD, 1984) (Figure 3). The participants were required to move around the area (17.9m long), by changing direction and dribbling hand. The score was the time in seconds needed to move around the designed area. Three trials were performed in total. The first trial was pilot, and the sum in seconds of the remaining second and third trials were used to record the total dribbling score. After the initiation signal, each one of the participants moved from the starting line, by dribbling the ball with the non dominant hand, to the first cone. Then, he moved to the second cone by changing dribbling hand and direction, etc. The time between the starting signal and crossing of both feet from the finishing line was the score for each dribbling trial (Figure 3).

Scores from the three separate basketball skills were transformed into standardized T values. The three separate T values were averaged to obtain a total score on the basketball skill tests for the participants (AAHPERD, 1984).

Self-efficacy
Self-efficacy was assessed in a specifically designed questionnaire (Harris, 1984), adjusted to the skill levels of our sample. The questionnaire was based on the self-efficacy theory of Bandura (1977a), were the participants responded in 4 specifically designed questions for every skill. In every question the participants indicated how confident (in percent) they felt for the successful fulfilment of their personal goal respective to the basketball skill test. The self-efficacy scale is presented in Appendix.

Goal-Setting
Two types of goal setting were assessed in the present study (Locke & Latham, 1990). The first type, named ‘do your best’ goal, was assessed in the first experimental group only (No 1) during the experimental treatment period. The participants were informed for their previous scores in the basketball skill tests across practice sessions. They were requested, afterwards, through guidance from the senior researcher, to do their best when executing the three separate basketball skill tests. The second type of goal setting incorporating the ‘self set goal’ approach, was applied in the second experimental group (No 2), during the experimental treatment period. The participants were informed in detail for their previous session scores in the basketball skill tests and were instructed to set a specific goal for each basketball skill test and try to reach it at the end of the session. Participants in the control group were not exposed to any type of goal setting. They were only informed for their previous basketball skill scores and practiced the skills in each session.

Experimental Procedure
The experimental procedure, for both of the experimental (No 1 and No 2) and the control groups, was fulfilled in three separate stages (stage 1: pre test, stage 2: experimental treatment and stage 3: post test).

Pre test
The 78 basketball athletes who signed the informed consent form and participated in the study, were initially instructed how to perform the three separate basketball skill tests. The initial assessment of the skill test scores
was used at the end of instruction to construct the self-efficacy scale (Appendix). The participants, finally, responded to the self-efficacy scale and executed the pretesting skill tests, after a 15 min. warm up period. After the completion of the skill tests, the participants were divided into three equal numbered groups (n1 = n2 = n3 = 26), according to their skill scores. Through random assignment, the three groups included equal number of athletes with high (higher 75% of the present sample), medium (50 to 75% of the present sample) and low (lower than 50% of the present sample) scores on the skill tests. The calculated ANOVA revealed that the three groups, named experimental group No 1, experimental No 2 and control group, did not differ significantly on the basketball skill tests. Additionally, calculated ANOVA for the pretest measures on self-efficacy revealed no significant differences as well. The results from the above comparisons are presented in Table 2.

Experimental Treatment
The experimental treatment lasted for three weeks. During the three weeks, the participants were exposed into nine basketball practice sessions within their groups (3 practice sessions per week). During practices, the participants were exposed to training of the three basketball skills. At the end of each session, performance on the three basketball skills was assessed. The two experimental and the control groups were divided into three subgroups each, to facilitate training and testing of basketball skills in a counterbalanced order.

Before each practice session, the participants were informed for their performance in the skill tests of the previous session. For the first session only, the participants were informed for their pre testing performances. Participants in the first experimental group (No 1) were asked to ‘do their best’ for the session and testing at the end (‘do your best’ approach). Participants in the second experimental group (No 2) were instructed to set a specific goal during practice and try to reach it during testing at the end of the session (‘self-set’ approach). Finally, participants in the control group (No 3) were informed for their previous skill scores, participated in the training and testing of their skills, but were not instructed to set any goals during sessions and/or testing.

Post test
Participants were initially informed for their basketball skill scores during the last practice session. They assessed afterwards their levels of self-efficacy and finally, after a 15 min warm up, they were tested on the three separate basketball skill tests identically with the pre testing session.

Statistical Analysis
The Statistical Package for the Social Sciences was used for statistical analyses (SPSS) (Norusis, 1993). The independent variables were: a) experimental group with three levels [1: experimental group No 1 (‘do your best’ approach of goal setting), 2: experimental group No 2 (‘self-set’ approach of goal setting) and 3: control group], and b) time with two levels (1: pre test and 2: post test). The dependent variables were: a) the overall basketball skill test score, and b) the participant's levels of self-efficacy. The predetermined level of significance was set at the .05 level. We planned, for the purposes of the present study, two separate ANCOVA's for data analyses. The goal was to examine the post testing differences on: a) basketball skills and b) self-efficacy, among the experimental groups, adjusted from their pre testing effects. According to Huck (2000), the assumptions for ANCOVA are the same with ANOVA, “plus three that are unique to the situation where data on a covariate problem are used in an effort to make adjustments and increase power” (p. 551). The three assumptions indicate that: a) there is homogeneity of regression among groups, b) the independent variable should not affect the covariate problem and c) the within-group relationship between the covariate and the dependent variable should be linear. According to researchers (McNemar, 1969; Pedhazur & Pedhazur-
the major step is to determine homogeneity of regression as a major condition for the valid application of ANCOVA. Had we found heterogeneity of regression among the experimental groups from pre to post testing, the Johnson-Neyman technique from the Attribute Treatment Interaction (ATI) method of analysis was used instead (Cronbach, 1975; Huck, 2000; Pedhazur & Pedhazur-Schmelkin, 1991).

Homogeneity of regression analysis was obtained at the end of data collection and is presented at the results section. At this point, only the second and third basic assumptions for ANCOVA were examined. Huck (2000) indicated that “if the data on the covariate variable are collected before the treatments have been applied” (p. 552), then the independent variable does not affect the covariate. In our study, the data was collected in pre testing before the application of the experimental treatment (different goal setting programs), meeting therefore the second basic assumption. The linearity assumption between the covariate (pre test) and the dependent variable (post test) was examined separate for the three groups on basketball skill and self-efficacy. Tabachnick and Fidell (1996) indicated that violation of this assumption reduces the power of the statistical test, while Shavelson (1988) reported that the application of ANCOVA might be inappropriate if linearity is rejected. The examined linearity assumption between pre and post testing, separate for groups (experimental 1, experimental 2 and control group) and tests (basketball skill and self-efficacy scores), met the third basic assumption for the valid application of ANCOVA.

Results
We examined the effect of a goal setting program on basketball skill and levels of self-efficacy. Athletes were: a) pre tested on basketball skills and self-efficacy, b) exposed to three different types of goal setting during a three week experimental treatment program on basketball (1: ‘do your best' goals, 2: ‘self-set' goals and 3: control group with no goals) and c) post tested on basketball skills and self-efficacy. The initial attempt was to calculate two separate ANCOVA's, examining the differences among the three groups in post testing (dependent variable), adjusted from the effect of pre testing (covariate), on: a) basketball skills, and b) self-efficacy.

The first step was to fulfill the homogeneity of regression analyses to determine whether the major assumption for the calculation of the ANCOVA's was met. We utilized, for the purposes of the above analyses, orthogonal coding with two comparisons. Specifically, we examined the differences between: a) both of the experimental groups combined against the control group, and b) experimental group No 1 (‘do your best' approach of goal setting) against experimental group No 2 (‘self-set' approach of goal setting). For the first comparison, we coded -1 for both experimental groups and 2 for the control group, while for the second comparison we coded 1 for the experimental group No 1 and -1 for the experimental group No 2. We hypothesized, for both comparisons, that there would be homogeneity of regression from pre to post testing in basketball skills and levels of self-efficacy, among the participants exposed to the different treatment groups.

The regression b values of the product vector between the first comparison (O1: both experimental groups coded -1 against the control group coded 2) and the covariate (X1: pre testing) was significant (p < .05) for basketball skills (b = 0.091) and self-efficacy (b = 0.181) respectively (Table 3). Both analyses, therefore, provided heterogeneity of regression evidence (separate for the basketball skills and levels of self-efficacy) and failed to meet the major assumption for the valid application of ANCOVA. Pedhazur and Pedhazur-Schmelkin (1991) suggested that it is the comparisons of separate b's that are of interest when dealing with heterogeneous groups. We utilized, therefore, the Attribute Treatment Interaction method to examine trend differences from pre to post testing between the combined experimental groups (coded -1's) and the control group (coded 2), separate for basketball skills and
self-efficacy. The Johnson-Neyman technique was used to determine regions of significance between the experimental and control groups. Finally, separate regression equations were calculated to determine the trends from pre to post testing for the two groups (1: both the experimental groups and 2: control group).

An ordinal interaction was set between pretest and group (Group 1: both experimental groups and Group 2: control group), with respect to the post test basketball skill scores. The calculated non significant pre testing independent samples t-test between: a) both of the experimental groups (M = 64,03) and b) the control group (M = 63,22), allowed the use of a common a (intercept) in the separate regression equations (t = 0,231 Table t (76),(05) = 2,00, p = .818). The respective regression equations (experimental groups: Y = 25,126 + 0,847*X and control group: Y = 25,126 + 0,665*X) indicated that the expected change, for the experimental groups, associated with a unit in pretest score is .847 units in post test scores, while the respective change from pre to post test scores for the control group is .665 units. The rate of improvement however in basketball skills, from pre to post testing, was significantly higher for the experimental groups compared to the control group. The results can be attributed to the effect of goal setting and are depicted in Figure 4. The employed Johnson-Neyman technique determined the regions of significance between groups. The calculated value of X = 71,91 indicated that participants in the experimental groups with higher than 71,91 pre testing scores in basketball, scored significantly higher in post testing than participants in the control group.

The separate regression values of the product vector between the second comparison [O2: experimental group 1, coded 1, ('do your best'), against experimental group 2, coded -1, ('self-set')] and the covariate (pre testing), was not significant (p > .05) for basketball skills and self-efficacy, indicating homogeneity of regression. The homogeneity evidence therefore permitted the use of two separate ANCOVA's. We examined in this case the differences in post testing between the two experimental groups, adjusted from their pre testing scores in: a) basketball skills and b) self-efficacy.

The ANCOVA F value examining the differences in basketball skill scores between the two experimental groups was significant (p < .05). Examination of the adjusted post test mean scores indicated that the first group, exposed to the 'do your best' treatment program (coded 1), scored significantly lower than the second group, exposed to the 'self-set' treatment program (coded -1), when controlling for their pre testing basketball skill scores. The ANCOVA results, along with the pre, post and adjusted post test mean scores in basketball skill, for both groups, are presented in Table 4.
The ANCOVA F value examining the differences in self-efficacy between the two experimental groups was significant too (p < .05). Examination of the adjusted post test mean scores indicated that the first experimental group, exposed to the 'do your best' goal program (coded 1), scored significantly lower than the second experimental group, exposed to the "self-set" goal program (coded -1), when controlling for their self-efficacy pre testing scores. The ANCOVA results, along with the pre, post and adjusted post test mean scores in self-efficacy, for both groups, are depicted in Table 5.

Discussion
We examined the effect of a goal setting program on basketball skills and self-efficacy. The results, in general, support the theory for the effects of goal setting and self-efficacy towards improved performance (Bandura, 1977a, 1977b, 1982, 1989). Specifically, we examined whether adolescent athletes exposed to three different types of goal setting ('do your best', 'self-set' and control) increased significantly their basketball skills and self-efficacy. We found that all three groups improved significantly from pre to post testing. The rate of improvement was higher, however, for the experimental groups ('do your best' and 'self-set') compared to the control group. Finally, we found that the participants who followed the 'self-set' goal program increased more their basketball skills and self-efficacy than participants in the 'do your best' program.

It became apparent, from the control group, that simple training during the three week experimental period, led to an increase in basketball skills and self-efficacy. The different rate of improvement, however, in skill and self-efficacy for the experimental groups compared to the control group, led us to conclude that training under goal setting produces better results. Adolescent athletes, training in basketball and exposed to a goal setting program, increase their skills and self-efficacy more than athletes who are simply training. Coaches are strongly encouraged therefore, to use a goal setting method with their adolescent athletes during training season. The type of goal setting seemed to influence the improvement in skill and self-efficacy for our sample too. Adolescents, who were allowed to set their goals for them selves, improved more their skills and self-efficacy than adolescents whose coaches set goals for them ('do your best').

The specific goal setting, providing orientation and intensity of effort for the successful fulfillment of the basketball skill tests, is in agreement with Locke and Latham (1990). Successful fulfillment of the tests was dependent from the specific type of goal setting (Locke, 1996; Weinberg & Weigand, 1993). Respective to the self-set goals, the results agree with Kirschenbaum (1985) too, who stated that people who set their goals individually, pursue them more positive and with more sustained effort than people whose goals are set externally. Kirschenbaum concluded that self-set goals are associated with greater flexibility and provide individuals with a safe outlet to reach successful performance.

The present findings agree with Zimmerman and Kitsantas (1996) who stated that the setting of personal and progressive in difficulty goals are clear and easier for people to reach. On the other hand, the researchers stated that not progressive but individually organized self-set goals, are sometimes difficult for people to reach. The methodology and results of the present study agree with Ames (1984) who supported the process of developing the proper individual and progressive in difficulty goals, which can be taught successfully to athletes. Athletes can utilize their experiences from previous performance and attempt to improve themselves.

Conclusions from the present study support the notion that improved performance, through goal setting, is multidimensional, requiring careful selection of the attributes, specialization and difficulty of the selected goals. The goals leading to successful outcome, increase self-efficacy (Bandura, 1977a; Bandura & Jourden, 1991; Earley & Lituchy, 1991; Feltz, 1980; Filby, Maynard & Graydon, 1999; Locke et al., 1984; Theodorakis, 1995, 1996). Through the setting of direct and personal goals,
with progressive difficulty and avoidance of indirect and/or very difficult goals to reach, the athletes in the present study managed to improve their basketball skills. Through the setting of personal goals the athletes managed to avoid inappropriate goals which decrease the motivation when not achieved (Bandura, 1977a). Our method separated initially the three groups of athletes to similar levels of self-efficacy and skill, allowing us to overcome the limitation of negative reactions to improve performance from athletes with lower levels of self-efficacy (Burton, 1993). The participants in the second experimental group (‘self set’), who improved their skill in a wider extend than participants in the first experimental (‘do your best’) and the control group, were restricted in a process of developing progressive in difficulty personal goals. The direct setting of goals for the first group influenced the most important source of information for self-efficacy, their personal experience, which emerged from their experience on the previous practice session and is referred to as the most important source of motivation (Bandura, 1977a, 1989). The setting of progressive goals, from one practice session to the next, along with successful performance on the basketball skill tests, increased their levels of self-efficacy. Athletes, initiated their efforts in each session from a higher stand point regarding self-efficacy, responded with confidence to the testing requirements, set a higher, compared to the last session, goal to achieve, activated themselves to reach that goal and sometimes they even managed to surpassed their self-set goals.

Researchers, in the past, have argued that different methods have produced conflicting results concerning the combination of self-set goals and self-efficacy (Hall, Weinberg & Jackson, 1987; Miller & McAuley, 1987; Poag & McAuley, 1992). It became apparent, however, in the present study, that the manipulation of different goal settings into a practice session in basketball had a positive impact when the goals were set individually by the athletes. The coach in this case, facilitated the process of setting individual and progressive in difficulty goals, and attempted to control the efficiency of these goals in cooperation with the athletes.

The present study may provide a useful tool for basketball coaches who are searching for different methods to improve the skills of their athletes. With all the limitations of the present study, we reached to the following conclusion: coaches who support their basketball athletes to set their goals individually just before practicing, will actually motivate them to reach these goals and improve their overall athletic performance. At this point, replication study is necessary to confirm the present findings, and examine the effect of goal setting programs to: a) different groups of basketball athletes (e.g adults, professionals), b) different sports, other than basketball (individual or group sports), c) males versus females, etc.

Bibliography

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Table 2

Pre testing Differences Among Three Experimental Groups (No1, No2 & Control) on Basketball Skill and Self-Efficacy

<table>
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<td>213.74</td>
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Homogeneity of Regression Analyses for the Post and Pre Testing Scores in Basketball Skills for Participants Exposed to: a) both of the Experimental Groups and b) the Control Group

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<tr>
<th>Dependent Variable: Post Test</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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1: Comparison between a) both experimental groups, against b) the control group)  
2: Significant X1*O1, indicating heterogeneity of regression

Homogeneity of Regression Analyses for the Post and Pre Testing Scores in Self-Efficacy for Participants Exposed to: a) both of the Experimental Groups and b) the Control Group

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1: Comparison between a) both experimental groups, against b) the control group)  
2: Significant X1*O1, indicating heterogeneity of regression
### Table 4

**ANCOVA Comparing Differences in Basketball Skills for Groups Exposed to: a) a 'Do Your Best' Goal Program and b) a 'Self-Set' Goal Program**

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Table $F(.05)(1, 49) = 4.04$

*: $F$ for ANCOVA

Means and Adjusted Means in Basketball Skills Scores for Experimental 1 and Experimental 2 Groups (1: Do your Best Goals & 2: Self-Set Goals)

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ANCOVA Comparing Differences in Self-Efficacy for Groups Exposed to: a) a 'Do Your Best' Goal Program and b) a 'Self-Set' Goal Program

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Table F (.05)(1, 49) = 4.04
*: F for ANCOVA

Means and Adjusted Means in Self-Efficacy Scores for Experimental 1 and Experimental 2 Groups (1: Do your Best Goals & 2: Self-Set Goals)

<table>
<thead>
<tr>
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<th>Experimental 2</th>
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<tbody>
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<tr>
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Appendix
Self-efficacy scale
During initial instruction of the basketball skill tests, the range of scores for every skill was obtained and used for the design of the self-efficacy questionnaire. The questionnaire was based on Bandura's theory of self-efficacy. We used 4 separate questions for every skill, according to the example of Harris (1984). The participants responded to the questions describing the skills by indicating how confident (in percentage) they felt they could reach the described score for the particular skill.
For the 'Jump shot skill test' we used a range, obtained from the recording of scores at the end of instructions, between 11 and 25 points.
For the 'Defensive slide skill test' we used a range, obtained from the recording of scores at the end of instructions, between 9sec. and 15sec.
For the 'Dribbling skill test' we used a range, obtained from the recording of scores at the end of instructions, between 7sec. and 14sec.

Self-efficacy Questionnaire
INSTRUCTIONS:
- The level of self-efficacy is the belief that one can perform given activities. These beliefs vary in strength from low to high certainty.
- On the following scale we would like you to designate, with a check (X), those tasks that you consider yourself capable of executing.
- Hen, on the right hand side, rate the strength of your efficacy beliefs.

Figure 1.
Jump shot skill test (AAHPERD, 1984)

Figure 2.
Defensive slide skill test (AAHPERD, 1984)

Figure 3.
Dribbling skill test (AAHPERD, 1984)

Figure 4.
Attribute treatment interaction analysis between pre test and group* with respect to post test basketball skill scores
*(Group 1: both experimental groups & Group 2: control group)

Figure 5.
Attribute treatment interaction analysis between pre test and group* with respect to post test self-efficacy scores
*(Group 1: both experimental groups & Group 2: control group)
## Jump Shot

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</tr>
<tr>
<td>a) 11-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) 16-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) 21-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) 26+</td>
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## Defensive Slide

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</tr>
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</tr>
<tr>
<td>b) 11-13sec.</td>
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<td>c) 09-11sec.</td>
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<tr>
<td>d) less than 9</td>
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## Dribbling Skill

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<tbody>
<tr>
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</tr>
<tr>
<td>a) 11-14sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) 09-11sec.</td>
<td></td>
<td></td>
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<tr>
<td>c) 07-09sec.</td>
<td></td>
<td></td>
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<tr>
<td>d) less than 7</td>
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Comparison of sport achievement orientation between professional, amateur and wheelchair basketball athletes

Dr. Emmanuel Skordilis, Dr. Andreas Gavriilidis

University of Athens

Abstract
The purpose of the study was to examine the differences in sport achievement orientation among 35 professional, 36 amateur and 35 wheelchair basketball athletes. The participants, all adult male athletes in Greece, completed the three subscales of competitiveness, win orientation and goal orientation, of the 25-item Sport Orientation Questionnaire. The utilized multivariate analysis of variance (MANOVA) revealed significant differences among the three groups of athletes. Win orientation was the factor, through discriminant function analysis, that significantly separated the athletes into the three groups. The highest win score was obtained by the professionals (M = 4.53), followed by the amateur (M = 3.99) and wheelchair (M = 3.97) groups of athletes respectively. Replication study is necessary, to confirm the present findings.
Physical abilities of disabled people

Manolis Zaharakis

Assistant coach of the Greek National Wheelchair basketball team

Introduction
In the recent years, sharp increase of disabled participating in sports has been noted. In 1960, in Rome, the first ever Paralympic Games took place, with 400 participants, from over 23 countries, while in the recent Sydney Paralympic Games, 4000 athletes participated from 123 countries worldwide (archives HWBF). More specifically, wheelchair basketball in Greece has shown great progress. In 1987 the first athletic union for the disabled was established. In the same year, another athletic union called Great Alexander was established and the first Greek Wheelchair Basketball Championship took place. Today, the Greek Wheelchair Basketball Federation counts 14 athletic unions and 220 athletes that participate in A and B Class Championships (archives HWBF).

The effect of exercise on the physically disabled
Researchers have long been studying the effect of physical activities on disabled persons. Physical activity is one important factor for the proper development and functioning of the biological and mental characteristics of the disabled. The need for exploring this phenomenon emerged also for the better rehabilitation of those that fought in the various wars (especially after the Vietnam war), as well as for the reason that sports help in more quickly accepting a person's new state of being after an accident (Robinson C.J. 1975).

This led researchers to further note and evaluate the psychological or mental (Jacobs, 1975) and biological characteristics (Coutts, 1990; Hutzler, 1993). This development created the need for scientific backup of the training programmes, especially when it concerns measuring and testing the mechanisms of the human body that are activated during exercise. Such measuring equipment is similar to what is used in athletes without any disabilities. (Emes, 1977; Veeger et al., 1992).

Comparison of measuring equipment
One of the greatest difficulties that scientists come across when dealing with measuring and evaluating biological adaptations of the disabled, is in the choice of the appropriate measuring instruments. Measuring instruments usually differ according to the variables concerned in each case.

For laboratory measurements of biological adaptations the instruments used are: Arm Cranking, used for measuring anaerobic abilities of the athlete under laboratory conditions.

Roller system
Motor driven treadmill, used to measure the aerobic ability of wheelchair athletes.

Specifically, for measuring one's anaerobic ability, researchers have agreed that Arm Cranking is the most appropriate instrument with the most advantages over all others. This instrument is reliable, cheap and its use does not assume previous experience. On the contrary, to measure the aerobic ability of disabled people, more than one instrument is used. Evaluating this can be successfully achieved with the use of the Arm Cranking. The greatest disadvantage is that the people under trial do not carry out the same motion required of them in everyday wheelchair motions. For this reason, researchers calibrate their measurements against two different instruments: (a) the Roller System, (b) Motor Driven Treadmill.
Comparison of paraplegics and non-disabled people

Comparing results of different experiments on the biological adaptations that take place during the physical activity of the upper body, in disabled and non-disabled people has been a matter of discussion amongst researchers. (Flantrois 1986, Lin 1992, Vinet 1997 etc). More specifically, in early experiments for the reliability and trustworthiness of the instruments used for measuring biological adaptations, healthy young athletes were used. Some parts of the research have suggested different conclusions. It is clear though, that the values of different parameters in disabled people fall short compared to those of non-disabled people. Previous experience of the non-disabled people under tests is one very important factor to consider. Also, in paraplegic individuals, maximum oxygen intake is significantly lower yet maximum heartbeat frequency is higher. Conversely, during strenuous exercise heartbeat frequency appears to be significantly lower while it seems to be affected by the height of the injury on the spine. On the same oxygen intake levels, no differences in the heartbeat supply are noted. Furthermore, the pulse volume is lower and accounted for by the venous blood pool due to the stagnancy of the lower body skeletal muscles. Finally, lower quality performances of disabled people are accounted for by the participation of less muscle masses during exercise.

Comparison of different disability degrees

An important factor that affects the biological adaptations and technical characteristics results, is the different types of disabilities. This, along with the impact degree of the results from disabilities caused by accidents or health problems, has also concerned the researchers. Still, all international federations have instituted Classification systems with which they can allocate athletes in different categories (e.g. I,II,III, and IV in wheelchair basketball). Quadriplegic people present even lower values for all parameters regarding biological adaptations compared to paraplegic individuals. (Lasko et al 1990, Dallmeijer.J et al 1994, Bhambhani.Y.N 1994).

Paraplegic basketballers

Wheelchair basketball is one of the sports included in the Paralympic Games and is very spectacular as well as competitive. The demands are greater and resemble everyday wheelchair activities for disabled people more than any other sport (archery, table tennis etc) (Hoffman,1986, Veeger H.E.J et al 1989). Many researchers were concerned with the matter of examining the biological abilities of disabled people, their improvement as well as comparing them to the equivalent values of non-disabled athletes. (Coutts1990, 1991, Vanlandewijck et al 1995,1999, Hutzler, 1993,1995 etc).

Coutts (1991) presented the dynamics of wheelchair basketball. More specifically, she noted the percentage of strength used up by athletes during the propulsion effort and wheelchair immobilisation. Four wheelchair basketballers (two men and two women) were examined under game conditions (one man and one woman) and under trial of maximum effort on a basketball court. It was concluded from the results that during a basketball game, 64% of the time is consumed in propulsion effort, and 36% in trying to immobilise the wheelchair. It was also deduced that a basketball player that participates in all 40 minutes of the game covers the distance of about 5 kilometres at an average speed of 2 metres per second and maximum speed at 4 metres per second. Finally, a correlation was found to exist between high body weight in men and the wheelchair's force of acceleration.

Evaluation of technical characteristics in wheelchair basketball players

The six trials, which will determine the technical characteristics of wheelchair basketball players, are:

1) **Speed:** The person under trial positions himself behind the final line at the basketball court. He begins with the signal of the examiner and covers the distance of about 20m as fast as he possibly can.

2) **Free shots:** the person under trial carries out 40 shots, in two rounds of 20 each. Between the two rounds there is a 2-minute break.
3) **Manoeuvre with ball**: the athlete manoeuvres between a series of hurdles, as fast as possible, pushing the wheelchair and completing the movements with the ball, according to the rules set by the international federation of wheelchair basketball. More specifically, the athlete begins on the right side of the hurdle, and moves around to the left. Then, he turns right and passes the next hurdle on his right side as well. A left turn follows, and getting around the left side of the next hurdle. The last turn is right and a reversal of the last hurdle on the left side follows. The athlete ends up pushing the wheelchair behind the start line. This trial is carried out in the same way once more, but this time without a short break. Every time the rules are not obeyed, when dribbling, 5 seconds are added to the total time of the trial. During each test, every time the ball, or wheelchair, comes in contact with a hurdle, 1 second is added to the test time. When the athlete loses possession of the ball, he must regain it at the point of loss, and then continue the rest of the test. Every athlete is given a rehearsal trial in order to become familiar with the process.

4) **Lay-up**: to carry out this test, 2 cones are placed on the three-point line perpendicularly to the line crossing point; this is, the line that joins the free shots line to the final line. The athlete positions himself outside the 3-point line on whichever side of the basket his wishes. When signalled by the examiner, he begins to carry out as many lay-ups as possible in 2 minutes time. After each trial, he must pick up the ball himself, and push his wheelchair onto the opposite cone so to carry out the next lay-up. The sum of the attempts as well as the successful shots are all noted as the results of the process.

5) **Distance Transfer**: The athlete places his wheelchair so that the front wheels are behind the court's final line. Then, using the chest ball pass, he must attempt to throw the ball as far as possible. He has 6 attempts, the distance of which is measured and noted.

6) **Accuracy Transfer**: In order to carry out this test, 3 concentric rectangles of different sizes are drawn on a smooth wall (Brasile1984). The dimensions are: (a) 50.8 cm X 25.4cm (20 X 10 inc), (b) 101.6cm X 63.5cm (40 X 25 inc) and (c) 152.4cm X 101.6cm (60 X 40 inc). The base of the largest rectangle is 60.96cm (24inc) away from the ground. The athlete positions himself behind a line of distance 10m from the target, for those players with classification degrees II-III and IV, and 7.5 m, for classification degrees of ❄️. When signalled by the examiner, the athlete carries out 10 transfers in any way he wishes (transfer with 2 arms, transfer with 1 arm, over the head, etc.) (Anastasiadis, 1993). Transfers where the ball bounces first on the floor, and then on the wall are not allowed. The attempts, during which, the ball hits: (a) the inner rectangle (the smallest one) or the lines that form this rectangle, are given 3 points, which is the highest score possible, (b) the middle rectangle, or the lines that form it, are given 2 points, and (c) the outer rectangle or the lines that form it, are given 1 point. In the case that the ball does not hit the target, the athlete is given zero points for this specific attempt. The athletes have 3 attempts and they are not allowed to cross the line.

**BIBLIOGRAPHY**
7(1), 62-66.

Appendix
Deposit rates VO2 max of disabled people

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Anaerobic Strength of disabled people on different types of ergometers

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Speed (20m)

Distance Transfer

Free Shots (20x2)

Accuracy Transfer
Manoeuvres with the ball
Rehabilitation and Sports

Volker Anneken1, Klaus Schule1, Horst Strohkendl2, Peter Richarz3

1German Sport University Cologne / Germany
2University of Cologne / Germany
3Women National Coach Wheelchair Basketball / Germany and Director of the 'sport unit' of the German Association of Wheelchair Sports DRS

Introduction
Since Sir Ludwig Guttman introduced sports into the rehabilitation of paraplegics at the Stoke Mandeville Hospital in the 40ies, the acceptance and the development of the positive effects of sport for people with a disability in the process of rehabilitation has spread all over the world. Guttman followed 3 main aims:

1. Using sport as therapy and as a mean for a change in lifestyle
2. Through Animation giving the person a hand for overcoming the resignation of permanent impairment and to show the possibilities the new life situation gives.
3. Making the public aware of the abilities of disabled people by creating a positive image through the sport to lead the way for more publicity and professionalism we have today. Without using the positive image of wheelchair sport the Paralympics would not be as big as they are know. The Paralympics 2000 in Sydney has been the second biggest sport event worldwide after the Olympics 2000!

These aims are still in the centre if talking about the relationship of rehabilitation and sports and also the growth of wheelchair sport. Furthermore there are two main aspects for the necessity of sports in the process of rehabilitation:

1. The rehabilitative effectiveness of sport
   This means not only the positive physical effects for the body of the individual but also the psychological and social effects.
   Researches at the GERMAN SPORT UNIVERSITY COLOGNE for people with a paraplegic but also for people with cardiac infarction have shown that sportive active persons have a higher social prognosis then others not doing sport at all (Schule 1987, 94ff).

   Participation in social life for the disabled person is the major aim in the process of rehabilitation (WHO 2002). Sport follows this aim on high level which means participation through sport!

The rehabilitation chain
The rehabilitation chain from the clinical to the community rehabilitation (see figure 1) shows the process in which 'movement therapy', and 'rehabilitation sports' are used to support the disabled person following the aims to lead disabled people to be independent and active in their lifes. Especially being active in sport. But who are these people?

In Germany the clients in the different fields of therapy have changed compared to the time of Sir Ludwig Guttman: More so called 'new disabilities' are involved in movement therapy and rehabilitation sports (i.e. people with arthritis, cancer, heart disease, stroke, diabetis or other kind of disabilities - for examples 6000 heart groups existing in Germany). On the other hand less 'classical disabilities', like paraplegic or amputation doing rehabilitation sport. In other countries like Irak, Cambodia or Israel due to war or civil war there are still a lot of young people with so called 'classical disabilities'. They are going through the above mentioned rehabilitation chain and can
be introduced into wheelchair sports.

**Development of wheelchair sport**

This chapter looks at the situation of the rehabilitation sport in countries of the European Community regarding the development of wheelchair sports. Due to more professionalism and specialization in the field of disabled sport, the bridge between the rehabilitation sport and the self-motivated club-sport is becoming bigger and bigger. The interfaces between the different level of wheelchair sport (clinic/school - leisure - elite) need more structured and professional organization to solve the following problems in the field of rehabilitation and sport:

1. Interface problems between the clinical rehab and the leisure sport:
   - the patient has to cope with the new life situation
   - short period of time in the rehab clinic means less time to introduce the patient to wheelchair sports.
2. Interface problems between the leisure sport and elite sport
   - there are less leisure players due to the reasons above
   - the level of the elite game is getting higher and higher; like this it is hard for new player to get integrated

- On low level there are not enough possibilities to compete against other players.

**Conclusion**

Following these thoughts the conclusion is the necessity of recruiting new player on all different levels in the rehabilitation process:

1. The sport for the disabled on every level is keeping alive through recruiting new players.
2. Best experts in finding, motivating and coaching new players in disabled sports are players with own experiences in the sport and in coping with their own disability.
3. Building a structure from the bottom-up would have the positive effect of more talented and motivated elite players.
4. More elite players would result more image for the sport.
5. More players means a bigger pool of motivated players who could support their sport as educated peer counsellor for recruiting new players (see figure 2).

**Figure 1: Movement Therapy and Sports in the Rehabilitation Chain (Schule/Jocheim 1996, 10)**

**Figure 2: The Necessity of recruiting new players to keep the sport alive.**
Literature

- World Health Organization (WHO) 2003 - URL: http://www3.who.int/icf/icftemplate.cfm
**Individual skills of an offensive player**

**Nikos Kostopoulos**

**General Secretary of Hellenic Trainers Association**

With the term individual offensive actions we name all these facts are required for the offensive instruction of a basketball player. It is common knowledge that no offensive system on its own is effective if the players who perform it do not possess the proper individual technique. All the systems are successful when the players who carry them out are in a position to threat the opposite defence when the offence is hindered by the good defence cooperation of the opponent team. The individual offensive actions can be effective these techniques are performed at the right time. The modern form of basketball where hard defence usually surpasses the spectacle, in combination with the addition of the 24'' regulation, requires the player to possess superbly the individual technique of the sport so he has the ability to function outside of the narrow boundaries of an offensive system.

Another important point is that the players should be trained at all positions irrelevant of the position they normally occupy in a game while special care should be given to the younger players. The coaches who are engaged with these tender ages in their effort to show work through the results of their team many times ignore coaching the basic principles of the sport. In addition the new players are rashly placed in positions (short, tall) a fact, which may prove detrimental for their future career development.

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**GETTING OPEN**

**V-Cut**

**Description**

The player starts his action doing a fake cut towards the basket. When he approach the 3'' line he changes direction suddenly and goes out ascending to a higher point at the line's extension where the free shoots are performed. The fake step is small while the first step outwards is greater and is performed full of energy so the offender is removed very fast from the defence player if during the stride of fake, the offender lands his foot in front of his personal opponent the whole movement becomes more effective. During his exit the player puts in front the hand to prepare the reception of the ball and to show a target to his team mate.

**Table of important facts:**

- It is a normal movement.
- It is taught easily.
- It is easily understood by the players.
- It is a common way of getting open.
- It requires a major burst of energy from the offender.
- If the player who passes the ball does not have a sense of synchronization, there is serious threat of the ball being stolen.
**Π-Cut**

**Description**
The offender performs the first phase of getting open like in the previous movement with the difference that after the fake stride the offender ascends the line of the fault line and later with a dynamic step he opens up accepting the ball.

At the beginning of the movement the player tries to place his opponent as close to the box. At this point he changes abruptly direction (previously he has made a fake with the legs interior) ascending up the personal line with the exterior leg. When he reaches the line, he places his interior leg between the defence players leg while simultaneously his interior hand is bent at chest height. At this point he performs a dynamic major step outwards parallel to the base line while the hand obstructs the defence player to follow his route.

Table of important facts:
- It is an unusual way of getting open.
- It protects the ball avoiding possible stealing.
- The player has more space for the performance of personal offensive energy.
- It is a complicated movement.
- It is taught with difficulty and requires more time for its perfection.
- There is the danger of an attacking foul if it is not performed properly.

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**Getting open with a turn**

**Description**
Getting open with a turn or roll over is applied after a small fake stride as mentioned above. The offender when approaching the 3point line, places his foot between the feet of the defensive player. Later he makes a dorsal turn and with the help of his interior hand he opens up and receives the ball.

The right position of the foot is of outmost importance before starting the dorsal turn. It is important to come in contact with the defence player and to roll on his body before he places his hand at the height of the opponent's chest.

Table of important facts:
- It is the most unusual Getting open movement.
- The offender can take advantage of the contact and pressure the defence player to foul.
- It requires excellent technique.
- There is the fear of an offensive foul.

**Methodology**
1. The players free throughout the field perform continuous change of direction.
2. We place two cones at the extension of the middle post and at the line's extension from where the free shoots are performed. The players in a row start their cut from the first cone; they do fake cut at the box's height and ascend to the second cone lifting their hand.
3. The same exercise with the players in pairs. We give great importance at the players synchronization at the stride stop and at the recipients turn (after the pass) towards the basket at the stance of triple threat.
4. The same exercise with the players coming out and accepting the ball with a jump stop and facing the basket.
5. Continuation of the exercises with shooting and fake.
Notes
1. All the exercises should be performed from both sides and from the top of the box (player maker getting open).
2. The escalation of exercises is in effect to all three types of getting open.
3. The exercises should be performed with a pathetic defence at the beginning and later with normal defence.

RECEIVING THE BALL
The players moving around the field to get open must know at all times where the ball is. At the same time they must see the defence players so they can move away from them thus giving a target to their team mates so they can accept the pass at the right position and time. The position where they will receive the ball differs depending on the defence pressure and where the receiver is situated in the court.

The players when they accept the ball with one hand they must immediately secure it with the other simultaneously, they protect it from any contact from the defence player. Therefore when they accept strong pressure mainly from the periphery they must take a pass to the exterior hand, away from the defence player and after the right turn they should threaten the basket. When they ask for the ball with their back at the basket or away from a defence player, they raise their reception hand high or low so to show to their team mate which point they want and which position they are allowed at the court in order to accept the pass.

At all situations, the offence player must make the right move first towards the ball, so he will be in front of the defensive player in order to catch the ball. It is wise that the players meet the ball in the air and to land on the ground with the stop movements, maintaining full control of the ball and their balance from the position of triple threat. The ball's reception is successful if the recipient of the pass pays attention to the following points:

- The player should receive the ball as close as possible to chest height,
- The reception of the ball should happen with hands stretched towards the passer thus eliminating the distance of the pass. When the ball comes in contact with the hands they must bend to the chest absorbing the power of the pass.
- The palms should be turned to the direction of the ball and the thumbs should be united forming a W so to stop the route of the ball. Only the fingers should come in touch with the ball and not the surface of the palm.

Points of importance
The reception of the ball is distinguished by the movements of the feet and the placement of the hands.

i. Movement of the legs in two timings (stride stop).
ii. Movement of the legs in one timing (jump stop).

Stride stop
The moment the defence player is ready to receive the ball, he makes a small jump and lands at first one foot (interior foot) which from this moment his pivot and later the second at the same time he touches the ball. The hands are placed on the ball with the exterior hand extended to facilitate the passer's target while the other tries to obstruct the defensive player's movement.

Table of important facts:
- It is a natural movement.
- It protects the ball very well.
• It is easy to learn.
• It is a slow movement.
• The offence player has only one steady foot (pivot).
• There is the danger of making more steps.

Jump stop
With this movement the offender directed towards the sideline performs a small jump with a simultaneous turn to the basket and lands receiving the ball with both feet at shoulder opening at a stance of preparedness. The hands are in front of the chest at the position of triple threat. The hands are in front of the chest at the position of triple threat.

Table of important facts:
• It is a fast movement.
• The offence player has two steady feet.
• The player from the minute of landing faces the basket.
• This movement requires good balance.
• This movement is not for immature players.
• This movement requires excellent synchronization between the passer and the receiver.

Methodology
1. Players with a ball. They throw the ball in front of them and they catch it with a stride stop.
2. The same exercise as above, the only difference is that the players make a jump stop.
3. Players in pairs. One team of players (without a ball) is at the top of the box while the other team is (with the ball) sideways from the box. The player with the ball passes and when he gets open he receives the ball with a stride stop.
4. The same exercise with a jump stop.
5. The same exercise with the only difference that there is a defence player. The choice of stop depends on the flow of the player and the pressure defence player.

OFFENSIVE MOVEMENTS OF PERIPHERAL PLAYERS
Fake
The success of fake depends on certain factors, which must be comprehended by the players:

1. Many times after a successful getting open the immediate penetration of an opponent is sufficient an opponent who has not had time to organize his defence. Simple movements are more effective.
2. The offensive player must have a good balance and his body weight must be low.
3. His fake movement must be natural without unnecessary actions.
4. Before fake, one must know the defence location of the opponent. Depending on the defendant's position there must be a suitable selection of the offensive action.
5. While performing the act, the opponent must fell threatened mean while the offender's movement must be natural and not hast.
6. Variety during fake makes the aggressor more effective so he may be more threatening during whichever defence situation of his opponent.
7. When coaching fake must be performed at both sides of the box.
8. After fake, the next movement should happen fast and dynamically so the defendant doesn't have time to recover from his defendant position.
9. Rigorous training is required for all fake actions to be effective.

The most important fake actions, which will be mentioned below, are:
1. The crossed stride,
2. the hesitation stride,
3. fake for penetration and shoot,
4. fake for shoot and penetration.

The cross stride
Description
At this fake, the offensive player misleads his opponent showing that he will penetrate towards one direction while he changes and goes from the other.

For example, the player is at the right side of the box and
wants to penetrate from the base line. Holding the ball at the position of triple threat he makes a small stride with the left foot towards to the right while protecting the ball close to his body. Simultaneously with the movement of his foot his body weight is shifted, while his sight looks at the same direction. Next movement is the left foot to move forward from the opponent and to cross over the right foot of the offensive player. At the same time as he is stepping on the left foot he dribbles towards the right side going through the interior side of his opponent. The movement must be full of energy while it is important to synchronize all body parts, which are used by the offending player.

Table of important facts:

• It is a simple movement.
• It can be taught when the child is young.
• Many variations of play act can happen from the same position.
• It is a usual fake.
• If the first step is not small there is danger of further steps.

The hesitation stride
Description
The player makes a fake from one side with a small step and with a fast movement he continues with a larger step towards the same direction penetrating from the same side. Let's imagine the player from the right side wants to penetrate from the base line. He makes a small natural step forward towards the right (like at fake of the crossed step) with his right foot. When the foot lands down he lifts it immediately and makes a larger step towards the same side while at the same time he triples to avoid his opponent. The second step must be decisive while caution is given to the steady foot to avoid steps.

Table of important facts:

• It is a very fast movement.
• It requires small space for moving.
• It startles the opponent.
• It goes well with the crossed step.
• There is great danger of further steps.
• It requires great balance.
• It requires a lot of training.

FAKE FOR PENETRATION AND SHOOT
Description
During this movement the player pretends that he will penetrate towards one direction while he returns and performs a fast shoot.
The first step of fake is the same as that which was described above in the other fakes. When the defence player looses his basic position and follows the first step the offensive player returns his foot at the initial position (triple threat) and shoots.

Table of important facts:
- It is an unusual movement.
- It is quite effective for good shooters.
- One needs powerful legs due to lack of impetus at the shoot.
- This shoot is not that effective.

**FAKE FOR SHOOT AND PENETRATION**

**Description**
It is perhaps the most usual fake both for peripheral and central players. At this point the player pretends that he will shoot while he lowers and penetrates. The player is at a position of triple threat. From this position he lifts the ball at the height of the head pretending that he will shoot. The movement must be full of energy as if would happen when performing for shooting. After he lowers the ball and moves his leg from the side of the defender's penetrates towards the basket. After the fake, the player can dribble with the homonymous hand of the side he changes to penetrate and with the opposite protecting the ball with the opposite hand and shoulder.

Table of important facts:
- It is a simple effective move.
- It is used by peripheral and central players.
- The player can penetrate from both sides.
- It is a usual movement and is easily spied on.
- If the defence player does not accept the initial fake he has a disadvantage compared to his opponent.

**Methodology**
1. Without the ball perform the movements with the player's thinned out in the court.
2. Players are with the ball. They throw the ball in front of them and perform a fake after a stop jump at both sides.
3. The same exercise with stride jump.
4. The players form pairs. The ones who have the ball are situated at the side of the box while the ones who do not have a ball at the top of the box. Pass getting open and fake from both sides of the box.
5. The same exercise with the only difference that the balls are thrown at the top of the racket. Performance of fakes at both sides.
6. The same exercises with the defendant's intervention.
7. All the exercises with cones, which resemble a screen without a defence.
8. The same with defence.
Trien Tan Dinh

Classification Officer Eurozone IWBF

How to become IWBF Licensed Classifier
There are two qualification levels for classifiers
• Classifier Silver Level
• Classifier Gold Level

Silver Level:
For students who need the requirements of the award.

Gold Level:
For student who have received the Silver Level award and are registered for the Gold Level course.

Before presenting him/herself to the Silver Level exam the candidate must:
• Have a basic knowledge about the principles of classification
• Have studied the IWBF booklet on classification
• Have passed an examination if there is one in his/her own country
• Must have sufficient knowledge of the English language, as English is the official language to communicate with the players.

To become a student at Silver Level, his/her National Organisation governing Wheelchair Basketball (NOWB) must:
• Complete an application form to register the candidate and send this form to the EuroZone Office
• Pay 95 Euro registration fee after receiving an invoice from the EuroZone Office.

To achieve the Silver Level, the student must take part in a course of 8 days or two courses each three days minimum, supervised by an IWBF classifier. Such courses are possible during the European Championships or its qualification tournaments, the finals of the Champions Cup, Andre Vergauwen Cup or Willi Brinkmann Cup, and other tournaments determined by the EuroZone Standing Committee for Classification.

To achieve the Gold Level, the student must:
• Pass successfully for the Silver Level
• Work as a classifier in his/her home country for a period of one year
• Register again by submitting an application form and paying 95 Euro
• Take part in two courses, each three days minimum or a seven day course (European Championship or its qualification tournaments, or other tournaments determined by the EuroZone Standing Committee for Classification)

During these courses the student must show that he/she understands the classification system and can give a clear explanation about the situation and physical actions of the players;

The last exams to be taken in order to become an IWBF Gold Level classifier will be held with a panel of three IWBF Classifiers different from those of his/her home country. The EuroZone Classification Officer will be included in the panel.

The Classification Officer of the EuroZone Standing Committee for Classification will inform the President of the IWBF Player Classification Commission about the nominations and results of the new IWBF classification students.

Should you have any further question, please, do not hesitate to contact the EuroZone Classification Officer or the EuroZone Office immediately.
levels of physical ability. The governing bodies involved in the promotion of the sport support a system that encourages and secures an opportunity for players at all levels of physical potential to participate in a wheelchair basketball game together. Therefore, in order to ensure fair competitive opportunities for all athletes a classification system has evolved that recognizes the physical functional abilities of athletes and categorizes or assigns a classification to them. It is important to note that the classification measures the players volume of action as opposed to his/her power, technique or ability.

The classification point value of the five players competing on the court is totalled, and may not exceed 14 points at any given time during international play (15 Points in CWBL Open, Junior, and Mini Basket Divisions, and 19.5 in the Women's Division).

The present classification system was introduced by Dr. Horst Strohkendl in 1982, and replaced the then medical classification system. The vision of Dr. Strohkendl was to reduce the medical stigma attached to classification by creating a system that players, coaches, and other people involved in the sport could understand and participate in, yet provide for fair competitive opportunities for all participants.

Mr. Phil Craven, President and CEO of the International Wheelchair Basketball Federation (IWBF) and Bernard Courbariaux, President of the IWBF Classification Commission were instrumental in refining the system and popularizing it in the world basketball community. Bernard Courbariaux in an observation and theory statement referred to category "A" and "B" athletes. He explains that these two categories have led to the formation of the four classes 1, 2 and 3, 4.

**CATEGORY A**
This category is comprised of players who are not able to fix their pelvis, ie: complete paraplegics to lumbar 1 including those who have voluntary hip flexion with iliac psoas.

- **Class 1**
  These athletes are not able to perform active rotation of the torso and lack abdominal muscles. Generally speaking thoracic level 7 paraplegics and above.

- **Class 2**
  These athletes have torso rotation, active stability and are generally speaking thoracic level 8 through lumbar 1 paraplegics.

**CATEGORY B**
This category is made up of players who are able to fix their pelvis and move their torso in the frontal and sagittal planes.

- **Class 3**
  These athletes have mobility in the frontal plane and can therefore lean forward and return to an upright position without pushing off with their arms. Generally speaking they could be categorized as lumbar 2 to lumbar 4 paraplegics.

- **Class 4**
  These athletes have active mobility in the frontal and sagittal planes and can therefore lean at least to one side using hip abduction to maintain balance in the chair. Generally speaking these athletes have lumbar 5 function or lower paraplegics.

Most athletes fit readily into these four classes, however there are exceptional cases where extenuating circumstances warrant the issuing of a classification which is of a half point nature. In these cases, the classification committee's have reviewed the individual circumstances and concluded that it is most fair for the athlete to assign a half point as the individual in question has to much functional ability for the lower class, but not enough for the higher class.

Therefore, athletes may be classified as a 1, 1.5, 2, 2.5, 3, 3.5, 4, or 4.5. In Canada, the CWBA has made a commitment to creating an inclusive environment in sport and therefore allow able bodied participation and quadriplegics. An able bodied athlete is classified as a 4.5 whereas...
we have a 0.5 class that may apply to quadriplegics. For further information pertaining to classification, please contact the national office.

APPENDIX

APPLICATION FORM TO BE FILLED IN AND FORWARDED TO:

EuroZone Office
Bosweg 29
3350 MR Papendrecht
Tel. **31 76 6440611
Fax **31 76 6440612
E-Mail office@eurozone-iwbf.org

Please return within 2 months

APPLICATION FORM

Section 1. Personal details of applicant

Surname: ..................  Telephone: ............  Home
Given Name: ..................  ............  Office
MR / MRS / MS  E-Mail: ............
Address: ..................  Date of Birth: ............
Place: ..................  Country: ............

Section 2. Tournament to be used for examination: (to be completed by EuroZone)

Date of Tournament: ............  Status of Tournament: ............
Organiser of Tournament: ............  Address: ............

Section 3. Classification experience:

Wheelchair:  Years of experience: ............ national level

(signed)  (name)  (title)

Address of NOWB: ............

Attached: 2 (two) passport photos
Note: Exam Fee € 95 (EUR) you will get an invoice
Sport and disabilities

Nick Tasiopoulos

Physiatric A', National Rehabilitation Centre of Greece

Sports events for disabled people have evolved from the level of simple pastime of paraplegic Second World War soldiers into complex events that are now in the interest of thousands of athletes from all over the world. It all started in 1944, when the British government asked Dr. Guttmann to create a Care Centre for the injured soldiers of the Second World War, in the area of the hospital Stoke Mandeville. This care centre would treat or care for those with injured spinal cords. Before World War II, survival expectancy for those with injured spinal cords was only up to a few months (rarely over 2 years).

Causes of Death:
- Septic infections,
- Kidney failure
- Lying.

His innovative beliefs though, like …
- Regular emptying of the urinary sac,
- Regular change of position on the bed to prevent lying,
- Treating urinary infections and
- Quick mobilisation
All succeeded in keeping alive our fellow human beings.

Epidemic elements of injured spinal cords

**Frequency**
(number of new cases per year):
30 - 50 per million people

**Age:**
More than 50% are of ages under 30, with the average age being 26.

**Gender**
Men tend to develop injured spinal cords at a younger age than women.

**Causes**
- Car accidents 48 %
- Falling 21 %
- Violence 15 %
- Athletic Activities 14 %
- Others 3 %

**Spinal cord injuries**
Muscle paralysis comprises only one of the many symptoms of an injured spinal cord.

**Accompanying problems - consequences of injured spinal cords**
- Neurogenic cyst
- Neurogenic intestine
- Sexual disorders
- Spasticity
- Low blood pressure
- Pain
- Metabolic disorders
- Thermoregulation disorders

**Complications of injured spinal cords**
- Urolithiasis
- Urinary infections
- Kidney failure
- Skin irritations
- Ulcers from lying
- Fistula myelitis
- Vein thrombosis
- Thrombophlebitis
- Autonomous dysreflex
- Lung clotting
- Displacing ossification
• Respiratory Infections
• Fractures,
• Psychological disorders, - etc

Rehabilitation
Mobilising the rehabilitation team is immediately required, which is made up of…
• Physiatrist,
• Doctors of other specialities,
• Nurse,
• Physiotherapist,
• Gymnast,
• Argotherapist,
• Speech therapist,
• Biofeedback Expert,
• Neuropsychologist,
• Clinical psychologist
• Orthopaedic technician,
• Social worker,
• Nutritionist,
• Musical Therapist,
• Occupational Guidance Counsellor etc.

In the rehabilitation of the paraplegic, the following are included:
1. Dealing with consequent problems of injured spinal cords
   • Neurogenic cyst
   • Neurogenic intestine
   • Sexual disorders
   • Spasticity
   • Low blood pressure
   • Pain
   • Metabolic disorders
   • Thermoregulation disorders

2. Dealing and preventing complications
   • Urolithiasis
   • Urinary infections
   • Kidney failure

3. Family, social and work integration of the paraplegic and the achievement of a satisfactory life quality.

Sports
Dr. Guttmann’s innovations were not limited to medical and nursing interferences, but also in his effort to establish rehabilitation units for paraplegics all over the world, also expanding in the sports field.

Through sports Dr. Guttmann aimed at…
• Improving cardiovascular strength,
• Maximising performances…but also promoting the re-integration of paraplegics.

Thus, in 1948 the first Stoke Mandeville Games took place, with two teams of athletes (16 athletes in total), competing at archery; one team was from Stoke Mandeville and the other from Star and Garter Home, Richmond, Surrey.

Very rapidly athletes from other paraplegic units in Britain began to participate, while new sports were introduced.

In 1952, the director of the Military Rehabilitation Centre in Doorn, Holland, suggested to Dr. Guttmann to send a team of veteran paraplegics to Britain in order to participate in the Stoke Mandeville Games, competing in archery.
This way, the first International Wheelchair Games were born, with progressively increasing participation from various countries. This event triggered the creation of the International Games Federation of Stoke Mandeville, which is now called International Stoke Mandeville Wheelchair Sports Federation, closely related to the International Olympic Committee.

For the next 16 years, Stoke Mandeville was the place of sports meetings, up until 1969, when the Sports Stadium, named after Dr. Guttmann, was built in the hospital.

In 1960 the games took place in Rome, which was then hosting the Olympic Games, thus they were the first Paraolimpics.

Since then, they are always conducted every 4 years, usually about 15 days after the end of the Olympic Games, in the same country where the Olympics were held.

The benefits for the disabled athletes are huge.

In relation to non-athletes, it’s been observed that it…
- Reduces the need for hospitalisation by a factor of 3
- Reduces the frequency of lying occurring
- Reduces frequency of urinary infections
- Reduces the heart attack risk
- Promotes better cardiovascular functioning
- Improves the physical, mental, and emotional states.

Sports can offer the disabled athletes an excellent means for continuous therapy, as well as a motive for partaking in regular physical exercise.
Jes-Soft Basketball software

Clearchos Panousis

Basketball coach, Athletic department of Ellinogermaniki Agogi

For the design of the web-training program and in order to give a form to the theory of basketball the "Basketball playbook" from "Jes-soft" software was chosen. This software is an educational tool, which helped the trainees and the trainers to read and understand the training program, the specific basketball books as well as the international basketball language. The use of common signs in basketball bibliography is a significant assistance for reading and writing the drills the team tactic and the offensive or defensive plays. With this code everybody had the opportunity to give a depiction of a special basketball situation that has in mind.

Through "Basketball Playbook" software the training program was more functional for the user, more interesting and exciting by the use of this modern technology and modern way of communication.

That software was dedicated to the game of basketball it was a resource of basketball information for coaches, players and scientists.

There were the plays and drills collection all illustrated with animations or sketches

Below is a short description of the available facilities:

- The heart of this tool, the growing collection of animated plays and drills.
  Animation was a major help in understanding the flow of a play or drill.
  Each animation could be controlled with play, stop and pause buttons.

- Received plays and drills can become part of the database and might be published on this website.
- Storing of plays in a database order in categories you define.
- A design tool to sketch basketball plays and drills.
- A limited text editor to describe your plays and drills.
- An export and import function to exchange plays with other users of this program.
- Printing of graphics in high quality.

Basketball Playbook Software was free and could be downloaded from the web from everyone.

The latest version of the playbook contained a change, when compared to the previous ones. A new wheelchair symbol was designed by the editor of the software in order to serve the "Training for Life" project after the request of the consortium.

With Basketball playbook coaches and players will be able to sketch and describe basketball plays and drills. Sketching is done with an easy to use but power full drawing tool. Text can be formatted and changed in the text editor.

After making a drill it can be printed and distribute under the players and coaches.

The animation option will give you more information on the flow of a play and is also useful for presentations.
HOW YOU CAN USE THE BASKETBALL PLAYBOOK
To download and install the playbook program you can follow the following steps.

First go to the page:
http://www.jes-soft.com/playbook/download.html

Click on a download link, this will open a new window with a number (2) of places to download the program from.

Sometimes you have to right click on the link to be able to save the zip file.

As the program is placed in a zip file you will need an unzip program.

Start your unzip program and open the bplay.zip file which you downloaded.

Extract the contents to a (temporary) folder/directory, remember the place.

Go to the folder where you extracted the program and start the setup.exe program.

From here you should follow the points on the screen

Basketball Playbook has an open architecture, which served the intention for the structure of the web page. The use of the basketball playbook is describing from the following steps:

Creating a new play
To add a play go to the File menu and choose New Play. When in the Add Play window:
Start with choosing a type from the type dropdown list. Then choose a category from the dropdown list or to add a category by typing over the current category with a new category.

After choosing or adding a category fill in a new play-name, as this must be a unique name a list of all play-names currently in use is shown. Selecting one of the available courts and pressing the Ok button brings you back to the main window with the new play selected.

Edit drawing
With the edit drawing tab selected a sketch of the current drill can be edited. The players, balls and coaches can be selected and dragged and dropped over the court, with the main mouse button.

When a player is selected with the other mouse button, a player edit window is shown and depending on the player the colour, text or rotation can be altered.
The movement of players and balls can be drawn with the 5 different arrows. The ellipse and polygon can be used to give a part of the court a different colour.

See the symbols for an explanation of the different graphics.

If the previous position checkbox is checked the players of the previous sequence are drawn in light grey.
With the previous lines checkbox you can show or hide the lines of a previous sequence, if there are no lines in the previous sequence the sequences before that will be checked for lines.

If the Animation only checkbox is checked the current sequence will not be printed.
The Delete button will delete a selected player or movement line.
The Remove All button will remove all players and lines from the court sketch.
The Add Sequence button can be used to insert a new sequence after the current sequence. The maximum number of sequences per play is 75.
And the Delete Sequence button can be used to delete the current sequence.

Pressing the navigation buttons does clicking on the Court tab will enable you to choose a different court, browsing
through the different courts. By pressing the Ok button the court in the drawing is replaced by the selected.

With the category box categories within the play or drill section can be selected.
With the play-name box the different plays within the current category can be selected.
And finally with the sequence buttons you can navigate through the current play.

Selecting players and movement lines.
When none of the movement buttons is selected, you can select a player or a line by clicking it in the court window. A selected player or line will have big dots, showing it has been selected.
Players or lines that are selected can be deleted by pressing the Delete button on the Edit Drawing tab.
Selected players or lines can be unselected by clicking them again with the left mouse button.

Dragging and dropping
Selecting a player with the left mouse button does dragging and dropping of a player.
While keeping the left mouse button down the player can be moved to its (new) position.
When the mouse button is released and the player is above the court the player is dropped on the court.

Drawing lines
Pushing one of the movement buttons can draw lines.
If a movement button is pressed you can click with the left mouse button on the court, this will start the movement line.
Additional parts of the line can be added by clicking with the left mouse button on the court.
Clicking with the right mouse button will end the line.
You can draw a shot line by selecting the shot button and clicking with the left mouse button on the court on the start position of the shot.
The shot line ends by clicking with the right mouse button on the court.

Edit Text
When the text tab is selected the text can be edit, also the associated sketch is visible.
With the text edit buttons above the sketch the text can be formatted.
If the Animation only checkbox is checked the current sequence will not be printed.
The Add Sequence button can be used to insert a new sequence after the current sequence.
And the Delete Sequence button can be used to delete the current sequence.
With the category box categories within the play or drill section can be selected.
With the play-name box the different plays within the current category can be selected.
Change font
To change the font of the text, choose the Font option in the Option Menu.
With the Font option you can alter the font within a text. This option is only available for text editing.

Edit colours
To change the appearance of Basketball Playbook choose the Colours option in the Edit Menu.
With the court tab you can alter the court colours.
And with the players tab you can alter the colour and style of the players.

Change player and play appearance
You can change the current play from black & white to colour or vice versa by selecting the desired option.
By clicking on the fill solid checkboxes, you can alter between solid and transparent players. When checked the players will appear solid.
By clicking on one of the player icons (circle, triangle and cross) the player icon can be altered.
Pressing the OK button will store the new appearance of the players and bring you back to the main window.
The Cancel button will reset the appearance of the players to their previous values and bring you back to the main window.
The Default button will load the default values for the colours and appearance for both the play and the players.
The Reset button will reset the appearance of the players to their previous values.
Colours only appear when the court is not in black and white.

Animation
You can make players in a play move by clicking the Animation option in the Special menu.
When more than one sequence for the current play is available the program will calculate the movement of players and balls to their new position.
You can use the Play, Pause, Stop, Previous and Next button to navigate through the play.
Checking the sketch box will animate the play with sketches, the play will pause whenever a new sequence starts.
If the Loop box is checked the play will run continuously until Pause, Stop or Cancel is pressed.
The best results for an animation are obtained by using numbered players and not too many coaches and balls.
Also keep in mind that the program only calculates straight-line movement.
Pressing the Cancel button will let you leave the animation window and return to the main screen.
Full screen animation is achieved by pressing the maximize button on the top right corner of the animation window.
Next to the functions described above, a sketch function is available.

Sketching is done by pausing the play and holding down the left mouse button while moving over the play. The drawing colour can be altered by selecting a different colour in the drop down list of the remote control. Clicking with the left mouse button outside the play can clear the sketch.
The remote can be moved or brought back by clicking the right mouse button anywhere in the window; this will also clear the sketch.
Note that in high resolution you will need a fast computer to achieve good results with full screen colour animation.

Show all sequences
When selected all sequences of the play are shown, otherwise the sequences made to make the animation smoother (with the animation only checkbox checked) are skipped.
This option is only available in the overview mode.
Saving a play
To save a play go to the File menu and choose save. In the save menu plays can be saved in *.EBP files. The default file name is the play-name of the play. After saving the file can be distributed to other users of the program, for example as an attachment in E-mail.

Overview
When the overview tab is selected the sketch and the text of the current drill is visible. With the category box categories within the play or drill section can be selected. With the play-name box the different plays within the current category can be selected. And finally with the sequence buttons you can navigate through the current play.

New play name
In the New Play Name window a play can be given a new unique name so it can be loaded in the database. When a new play name is typed the play can be stored in the database by pressing the OK button. If the restore function is used you can choose to skip the current play and continue with the next play in the file by pressing the Skip button. To avoid pressing the Skip button all the time you can press the Skip All button, this will skip all play-names already in your database, but load all the other plays. It is also possible to replace the plays in the database by the plays being loaded by pressing the Replace button. As with the Skip All button there is also a Replace All button to avoid pressing the Replace button all the time. Pressing the Cancel button will end the loading of the file/play and all other plays in the file.
Common referring

Spiros Tsountsouras

Basketball referee, International Referee of Wheelchair basketball

The biggest problem in refereeing is uniformity. Also the biggest difference between team refereeing (e.g. football and basketball etc) and individual refereeing is the uniformity of refereeing during a game, as well as the uniformity of refereeing by the same person in different games. We can comprehend what components of refereeing need attention or corrections in order to achieve uniform refereeing. This happens through analysis of certain factors or rules that play an important role in contributing to a uniform or non-uniform refereeing.

The rules that will be discussed and that we believe are important in uniform refereeing are six (6).

1. Talent
This can be divided in:
- Personality
- Origin
- Education
- Appearance

It is obvious that the talent factor is non-existent and this has been scientifically proven. Talent can accommodate changes and improvement. It contributes to successful uniform referring with a fraction of 20%.

Personality
When we talk about people of 20 years or more, we have to understand that their personality has already been shaped but it can respond to small changes or corrections. This happens through a strong “shock” or with repeated performance intervals and examples.

Origin
By this we don’t just mean the “class” in which someone belongs in the society, although this may be of importance too. We mean the geographical origin of someone, which plays a role in that it shows whether the person in question has had athletic performances in the past and furthermore family origins, meaning that this person comes from a “sporty” or athletic family.

Education
Here we don’t only mean academic education, which might well be important. Mainly we are referring to the degree and speed of learning and receiving triggers from the surroundings, as well as the athletic education of someone. More specifically, we could take it to mean the person’s "basketball" education.

Appearance
This is, undoubtedly, an important factor. An overweight or very short person is the odd one out in an athletic group or team. Some factors such as the athletic appearance of the referee, the stance that the referee maintains during a game in the game court etc are very important. This is so because these factors could affect the ref's acceptance by the athletes, the trainers, and mostly by the fans that watch the game.

Self-confidence and sincerity are also very important. The health state/condition and the proper warm-up prior to a game are also important factors for the referee's presence in the game court.

The one thing that overrules anything though is that we must be humane. With a smile and a cheerful attitude we can overcome many obstacles during a game. A little joke could even ease out a difficult or uncomfortable situation, especially if you are familiar with the athletes in question.
Attention though, because there are no obvious limits so it could lead to a misunderstanding.

2. Knowledge
This rule is complicated, yet of paramount importance. This is so because this rule is one that can accept great changes and even greater improvements. Analyzing the knowledge factor we come across the following components:

Knowledge of the game
- We must know or be familiar with the game itself.
- We must be familiar with specific game situations.
- We must be familiar with the different factors that are important in a game.

Game philosophy
- We must be familiar with the game tactics
- We must also be familiar with the game rules.
- We must know about the basic game systems of defense-attack.
- We must be familiar with the game elements that athletes, trainers and fans know and accept in a game.

We must never interfere in the game philosophy and what's more we mustn't ruin the show.

Game prediction
Game prediction is the result of good and proper knowledge of the game in combination with knowledge of the game philosophy.

If you are in possession of knowledge on the latter two factors then you might be able to predict the evolution of the game. You might even be a game phase ahead in your own mind. But you need to whistle at what you see, what is happening at that given moment and not at what "might" happen or you think could happen. Only the action is valuable.

Regulation Knowledge
- We must be familiar with the regulations.
- We must be familiar with the philosophy behind the regulations.
- We must know about the special cases mentioned in the regulations.
- We must be familiar with faults and breaking of the regulations.
- We must know the general and special applications of these rules.
- Most importantly we need to make proper use of all regulations.

Control and game evaluation
- We must control the game for its whole duration, evaluate game phases and intervene when it is necessary.
- We must control the game with the least possible interruptions.
- We must maintain the game pulse or rhythm.
- We must maintain equal distances, and the same whistling to both sides.
- We must intervene when the game becomes unfair.
- We must code our response and make it automatic.

3. Education
This is something that relates to everyone. We are not just referring to general education but specific education. Education on any element or component that affects or could potentially affect a game. Education is never controlled by experience. It must be continuous and diverse. If we are not open towards education then we might be in danger of eliminating the knowledge component that we have acquired in the past.

4. Control - Reliability
Control can be differentiated and we refer to it separately since it contains different various components itself. We must control the game. Our attention needs to be focused on the game only. We must, at any given moment, if pos-
sible, know and control all the factors that contribute towards good game conduction. More importantly, all game components and participants must feel comfortable - athletes, trainers, fans and judges - that the ref sees and acknowledges everything and chooses the appropriate time of intervention in the game.

Reliability, on a small scale, is the result of appearance and personality of the ref. It's the aura that the person transmits. This is obviously applicable before the game starts. After, or during the game, reliability is based on the ref's performance and of course the acceptance of this performance based on the remarks and whistling during the whole game. The ref needs to be convincing about the whistle and the remarks that are pointed out during the game. Refs need to learn to "sell" their whistling properly.

5. Confidence
It's the most important factor that contributes to proper and uniform refereeing. We all know what it means to want or to be able to provide a proper, fair and uniform refereeing on a foreign game court, especially when all the fans are buzzing over your head. Because other factors come into this, we can understand the importance of the confidence factor.

As for the percentage that the factor confidence contributes to a uniform refereeing, in a normal situation, it is about 10%. This percentage can grow or shrink depending on external factors that relate to game conduction.

6. Professionalism
This is very important as far as uniform refereeing is concerned. What the ref does must be done consciously, sincerely, and with self-confidence, knowledge, and most significantly, with the attitude that always allows for the process of learning new things. Being a professional is made up by many trivial things such as:
- how you will appear in the court
- how you will present yourself in the games court
- how your special costume will show on yourself
- how you will use your whistle
- also including other complicated things like:
  - how sincere and serious you are
  - how humane you are
  - how you respond or react to the different game participants (athletes-trainers-judges) no matter what has happened
  - Also how you will communicate with your colleagues or sport and game participants.

A renowned colleague of mine once told me, that if you pay attention to the players of the weaker side and they realize that, then they would believe that you know what you are doing and they will believe in you. And this is what being professional means.

How to achieve this
- By applying precautional referring.
- Through the proper use of the advantage principal.
- By applying a uniform manner of controlling different games and different athletes.
- By acknowledging each game case or game phase during a game.
- By convincing athletes, trainers and fans of your appropriate whistling and the acceptance of it by all game participants.
- By talking with your colleagues before the start of the game
- By the submission of me (the ref) into we (all refs).

Where is it applicable
- One on one
- For the whole duration of a game
- Towards both teams
- In all games
- In all game components

Statistical percentages
- Talent 20%
- Professionalism 100%
- Knowledge - Education
• Judgment-Reaction 70%
• Control-Reliability
• Confidence 10%

Advice
Don't ever forget that the game is made for them, not you. In other words it is made for the athletes, the trainers, the fans and not the refs.

ST. DOUVIS
Refereeing success is mainly dependent on the ability of refs to hold the whistling until the final effort of the phase (shooting-penetration).

ST. DOUVIS
A good game phase or a good shot are always better than a good whistling.

YUGEBRAD
A fault can be the result of a misunderstood or improper previous decision of the ref.

K. RIGAS
When the ref reaches a point when he thinks or believes that he has nothing to gain from a bad or low standards game, with a big difference in game potential, then he must stop refereeing.
Playing Wheelchair Basketball

Garry Peel

Basketball player, Oldham Owls, U.K. National Team

Playing Wheelchair Basketball, my life...
At the age of 14, I was very good at sport within school and realised that I was good at football. I played for my school team but unfortunately while playing football I had an accident. For 18 months I was absent from school. I found it hard and boring being at home, I was then allowed to go back to my secondary school at the age of 15, but when it came to do the sports lessons I had to watch everybody.

At the age of 16 my parents introduced me to the Oldham Owls disabled sports club, who met every Sunday to do all types of sports. They introduced me to table tennis, archery, field events, etc. I was very quiet when I first started going, as I had never spoken to anyone in a wheelchair before. After a few months I was asked if I would like to sit in a wheelchair and try and play basketball, I loved it straight away and still play now at the age of 43.

In the early days of playing basketball, we were just disabled people playing sport and enjoying meeting every week. All of a sudden basketball changed for me as I was asked if I would go and train with the international squad, I thought I was a good player until I arrived to watch the other players.

The bad news came straight away; my disability class 3 was not allowed to play, so I carried on training with the team even though I knew I could never represent Great Britain at any major tournament. At the age of 26, 8 years later I was told class 3s were allowed to play for their country, and straight away I was picked to go to my first tournament in Australia, the world championships, where the best 12 teams in the world competed.

While in Australia I didn’t take things seriously, we were told that there was a curfew and you had to be in your rooms by 10.00pm, I could not believe that at 26 I was being told to go to bed. So I used to leave my wheelchair outside my room and walk to the pub on my crutches. While watching the tournament I saw some fantastic basketball, and some basketball players who were out of this world, I knew I was a good player but this tournament opened my eyes and made me realise that a lot of work and training was needed. When the tournament was over Great Britain came last out of 12 teams, what a disappointment and embarrassment that was.

So after returning home I decided to do something about it and started training seriously, I knew the Paralympics were 2 years away, so I set myself four goals,

My first goal was to get fit, so I used to push on the roads to go to work at 6.30am every morning and then back home again at 5.00pm.

My second goal was to be fundamentally better, which meant I had to be better doing the simple things well.

My third goal was to be the best player in my country, which I knew with a lot of hard work and full commitment to training I could achieve.

My fourth goal was to play for the best team in the world, to achieve this I had to show the rest of the team how seriously we all had to pull together.

I eventually played for Great Britain for 13 years which, when I look back, was a great time in my life, where I represented my country as a basketball player at 4 European championships where we won gold in Paris in 1991. I also went to 4 world championships, we were beaten in the final by the U.S.A. in 1994 in Canada, but 2nd in the world is a good feeling.

To top my career off I was to attend 3 Paralympics, in Seoul, Barcelona, and Atlanta, where we became silver medallists to Australia in 1996. What a great achievement
- if only I could do it all again, I would only change one thing and that would be to win the gold in Atlanta. The great things over the 13 years are that you meet a lot of new friends and also travel the world doing what you love most.

Now that I've retired from Great Britain, means all my attention goes to my own basketball team the Oldham Owls - we came 3rd in the Eurocup club championships 2003 which is the best club tournament in the world. I've also gone into coaching and teaching wheelchair basketball with the Great Britain's men's team and also the under 23 team. The men's team are ranked no 2 in the world after coming 2nd at the world championships in Japan 2002, and the under 23 came 1st in the European championships in Germany 2002, what a great year for Great Britain wheelchair basketball.

When I look at new players coming into the sport, I feel that there are 3 stages in playing wheelchair basketball:

- Enjoyment, fun, i.e. children.
- Learning new skills and enjoying the social life.
- Being an elite athlete, train to be the best.

You decide what level you want to achieve.

The future of the game is going semi-professional; most of the top players in the world are paid to train, which means if you are a new player coming into the sport it's going to be hard to compete but just remember where I first started from. Over the 27 years I've been playing, I started out as a disabled boy and ended up playing for one of the best teams in the world and also becoming one of the best players, I became an elite athlete not a disabled person. What I did when I was young was to overcome and accept my disability and to use this as a plus not a minus in my life and just think where it could take you.

If you want to be good at wheelchair basketball, then do the simple things well in training and don't wait for people to bring it to you, go out and do it for yourself, there are no obstacles if you want it bad enough.

What I would like to end with is ability not disability, what you put into training you get back in rewards on court, believe in yourself and in your own ability and whatever happens in life enjoy the best game in the world.
The Personal Computer in the Trainer's Service

The personal computer is a tool that helps coaches in programming and effectiveness of the training sessions. The programs that exist can be classified in 4 categories.

1. Video analysis
2. Statistics Recording.
3. Team Management
4. Training Organisation

Programs and instruments for the video analysis of the games

- They change analogue signal in digital, which is readable from the computer. When the information is given to the computer a video clip can be elaborated (e.g. the first side of the opponent team)
- They provide information from one or more games
- In each possession of the ball we can draw frames or write comments and print them and share to the team these forms.
- We can see and draw diagrams of each type of shot that we are interested of.
- We can analyze with details any situation that is interesting for us. In that way we can see the weak and the strong points of our or the opponent team.
- They can create video with team and individual plays in any sequence we want to watch. They can produce graphic and titles for the pages that are imported before the demonstration of the plays of the opponent team. We can create video with all the interesting pieces of upcoming opponent in 10 minutes.

Programs of recording the statistics during the game

- They automatically create predetermined reports of statistical elements.
- They record every action (2p shot, 3p shot and rates of successful shooting, assists, steals, rebound,) any player (place, time) in the basketball field.
- They can record also team statistics of the performance of five players in one or in a series of selected games.
- Of course in championships A1 and A2 national division the statistical services are offered by the particular statistical service that has convention with the organizing authority

Programs of team management

- We can store the opponents' offensive and defensive systems, or ours using half and full court diagrams.
- We can store information for each player such as: photo, height, weight, terms of contract, medical background, carrier details, dietary planning, best and worst technical abilities, evaluative tests and training programs.
- We still can store information for:
  - Referees (statistically, error points, reactions)
  - Basketball courts
  - Accommodations

Programs of educational and training organisation

- Help us to plan easily and fast our daily program of training.
- They store all the plans of training at date and number.
- We can create our own list of exercises
- We can create and store lists of the training and the game that provide us important information for how we must plan our next training sessions.
- Create and store lists of scouting reports of the opponents from which we are consulted for the planning of training and for our better preparation for the next
The rapid spread of computers and information technology in all the sectors of life is already a fact. The computers decrease the time and the quality of our work. Of course having knowledge of limited economic possibilities of several teams, I believe that imposes the existence of such an important training tool, particularly, in teams with pressure of time, because of the double games obligation in one week. I believe that also in individual level is useful such an economic investment and it something which I have done with my collaborators.

Choosing the Training Staff

Being a trainer in any level presents numerous challenges, predicaments and many times difficult situations. It is a job with very big interest, and publicity and sometimes also good economic achievements. For somebody that does not know and cannot imagine the difficulties, seems as one of the most attractive professions, if it is taken into consideration that basketball trainer combines the profession with the hobby, for many the basketball trainers are some from the luckiest workers. The uncertain nature of the profession, which is contributed with the reduction of the safety that the trainer feels regarding the maintenance of his job, is owed in factors that sometimes it is impossible to be controlled by the trainer. Some of these obstacles that trainers are called to exceed are:

- Injuries
- Referees
- The Media
- Pressure of fans
- Dissatisfied players
- Problems of collaboration and communication with the administration
- Economically problems

Nor the trainers of a leading level can have success in their work if they do not exceed these obstacles. Consequently one of the first and more important steps for a trainer is the right choice of his collaborators. The criteria to make this choice must be:

- The honesty
- The sincerity
- The integrity
- The hard work
- The love for the game
- The ability to organize
- The knowledge of the object
- The possibility of communication with the head coach.

The element "person" is the key for the choice of the training staff. As Randy Brown says, from the terminology of fishing, we would say that the good collaborator is as the good driver, that knows the lake, prepares the boat, prepares the gear and has a good planning of the route for the particular day. From this point the head coach the only thing that has to make is enter the boat and fish the fishes.

The Six Issues for Choosing the Staff

1. The size of the staff

The number of the collaborators that you allowed, by the conditions, to have determines the collaborators that you will select. If the conditions (and usually they depend from the economics) allow you to have only a collaborator this should be so much capable, experienced and with intense personality, so to have the ability to replace the head coach in case of absence. He should be very good in all the sectors of his work and must inspire the respect to the players of the team. If there is possibility to have as staff 2 or more assistants it is good to make your choices with the criterion of "specialisation" in:
• Trainers of peripheral or tall players
• Trainers for defence or offence
• Scouting trainers.

2. Experience
All trainers began their carrier from a certain point, with some persons who were based on them despite the lack of experience. Also there are coaches who do not work hardly every day as their youngest colleagues do. There is no substitute for enthusiasm, neither for experience. The difficult when a coach chooses collaborators is if he will prefer the enthusiasm from the experience or the opposite. Naturally, there is a chance of combination of both characteristics.

3. Personality
As long as the training process concerns collaboration between persons, the personality will be a very important factor in the performance of the team. Training requires intense and sincere relations between the persons of the team. A strong, intense personality can help considerably and this characteristic should be taken into serious consideration for candidate collaborators.

4. Recommendations
The choice of collaborators is usually determined by two factors:
• Personal relations
• Recommendations
To chose somebody you already know is the best choice for the training staff. Unfortunately because of objective difficulties, this method cannot be used every time at that point the recommendations have a major role. The questions where you suppose to make are:
• Which is his reputation?
• Has he morality?
• Can he be collaborative with administration, trainers, and players
• Which experience and abilities he has concerning the sector that he will undertake?
• Which were the reasons of he is not employed this moment?

5. Good character
The good character and the morality are essential elements for an assistant coach. In my opinion these characteristics constitute the major criteria that I will take into consideration at the choice of collaborators.
A good person and at extension good collaborator:
• Always works hard
• Is faithful
• Puts his ego under the ego of the team
• Behaves in all the circumstances with the best possible manner

6. Future considerations
Some of the questions that a coach should make first to himself are:
• You want somebody that he will be pleased being your assistant for the next 20 years?
• You want all your assistants to have ambition to become head coaches in the future
• Do you want assistants who want to learn progressively and progress professionally?

Finishing, the ideal training staff for me is constituted from:
• 1st Assistant: Substantially the person that can replace any time the head coach and simultaneously has increased and specialised abilities
• 2nd Assistant: Specialised abilities in the individual training.
• 3rd Assistant: Specialised abilities in scouting the next opponent and experienced in the planning of the team tactic for game
• Gymnast: From the most important collaborators, because of the development in force and speed of the sport.
Presentation of the Leonardo da Vinci: “Training for the Life” program

Dr. Sofoklis Sotiriou, George Tolias

Ellinogermaniki Agogi

"Training for Life" was an educational project, implemented under the framework of Leonardo Da Vinci Program, which was addressed to disabled persons who wished to enter the athletic labor market, incorporating equal opportunities as well as abilities which are based on the new technologies. The project was a response to the growing number of athletic initiatives and aimed to give an alternative solution to all the disabled athletes who are involved with wheelchair basketball and wanted to go on professionally in this area as coaches.

The implementation of the program was applied in four European countries and in different target groups, so that the reaction of different target groups towards the project could be clearly recorded and the different training methods could be studied.

The Needs

The project responded to the located needs which are numbered below and innovated by trying to respond to the raised demands that came out of them.

A. Absence of the athletic activities from the programs of the centres for training disabled persons, as a professional prospective.

The development of the project in the frame of the skill programs of carriers that participate, gave the possibility of professional activation in the athletic field to people that until then did not have this chance and reinforced the efforts of the athletic carriers and federals for the stimulation of the sensitivity of the public and for the combating of the exclusion of disabled persons from the field of sports.

B. The lack of scientifically and systematically approach to the training of disabled persons in athletic activities.

The creation of a school for coaches for wheelchair and running basketball through out the interaction of the scientific methodology and the practical application, as it was proposed by the "Training for Life" project has been the starting point for similar activities in other sports for disabled persons as well. It should be pointed out that the particularities of the field imposed the analytic research of all the parameters (psychology, pedagogy) that could influence the effectiveness of the project.

C. The development of the wheelchair basketball in European level. The sport of wheelchair basketball presented a progressive route the last years, as proved by the big participation of athletes in the recent Paralympics but also the intense presence of athletic unions of disabled persons in European and International level. It should though be noticed the fact that the essential and qualitative development of the sport is not possible without the necessary scientific and technical support. The teaching of coaching techniques is the base of every sport. In this frame the creation of the wheelchair and running basketball coaching school posed the bases for the major spread of the sport and for the thorough research of the labour market.

D. The lack of scientific material regarding the coaching of basketball.

The project's material which was developed through the web in the form of training theory and practise, but also the good practice guide and the DVD came to fill the lack of scientific material regarding the coaching of basketball.
Outcomes
The main outcome of the project was a training program for wheelchair and running basketball coaching. The emphasis on this program was given to the fact that these two formations of basketball was actually the same sport. Playing basketball has a common base and that was what the program described.
Wheelchair basketball has its particularities and these particularities were mentioned in the first part of the training program. There was an escalation from the beginner's skills and abilities to those of an advanced player. The movement characteristics of the wheelchair, the stability of the athlete, the new rules and the classification were explicitly explained in that part.
In the second part there was the running basketball coaching theory constructed with the same philosophy, from the beginner to the advanced. The fundamentals of basketball, individual skills and team tactic are mentioned here with a proposed teaching methodology and some drills to complete the presentation.
In the end of the training program were the athletic sciences a very useful tool to every well educated basketball coach.

Innovation
The "Training for Life" project contributed importantly the combating of the exclusion of the disabled persons from the field of athleticism, encouraged them to the procedure of training with the application at the programs of the European centres of training, by trying to stimulate the public towards the issue, by implementing new advanced methods of training (Open and distance education) which reassured the best possible performance and spread of the plan. It was also aimed at the acquaintance of new abilities from disabled persons with the supply of the necessary qualifications for activation in the athletic field.
The "Training for Life" aimed at the development of a model European program for the professional training of disabled persons in the athletic field. The main goal of the plan was the integration of activities that were related to the athleticism - basketball coaching in this situation as an application - in the training program of the organizations that had as their primary goal the professional restitution of disabled persons and their integration in the labor market.
The offer of business training to disabled persons is an important part of every developed society. It was also proved that the athleticism is an issue of great importance for the disabled persons, as it is one of the most effective ways for them to be integrated in society.
The athletic activities of disabled persons were faced basically as entertainment and not as professional occupation. Maybe, the most remarkable and spread innovation in the athleticism of disabled persons is the wheelchair basketball, which developed dynamically during the last years, but still remains in the level of an amusing activity as it was a discovery that there was lack in scientific approaches for the professional training of the disabled persons in athleticism. The object of this proposition was the development of a model program of training in the wheelchair basketball coaching and its integration to the programs of the training centers for disabled persons so as to pose the basis for the advancement of the sport from an entertaining activity to a professional prospective.
The wheelchair basketball for women did not present the evolution that the same sport for men did. In any case the analytic coach program that has been developed as a basic product of the project considered the training of all disabled persons without being interested in the sex, reassuring the equal distribution of chances.

Organizational Approach
The development of the "Training for Life" project by nature presented a series of particularities and demanded a more systematic scientific approach bearing in mind all those factors which at particular application could play a radical part (i.e.: psychology, pedagogy, sports medicine). By having in mind the need of reinforcement of the integration effort of disabled persons in the athletic field, and the lack of scientific approach to this issue, the project
proposed to upgrade the sport from an entertaining activity to a professional prospective with the integration to the training program of the carriers responsible for the professional restitution of disabled persons the wheelchair basketball coaching, through a factual scientific methodology. Two were the primary axis of the design of the program: The localization of the needs of the wheelchair basketball particularities and the scientific formation of the program. It was necessary for the training program to come out as a product of mutual reaction of these two coordinates. The participation of 2 training and rehabilitation centers for disabled persons and two wheelchair basketball clubs reassured the first objective, but also reinforced the European dimension of the program as they derived from different countries (Greece, France, Slovenia and England), by bringing along the local particularities of the issue.

The participation of the Sports University of Cologne (Deutsche Sporthochschule Koeln, Institut fuer Rehabilitation und Behindertensport) determined the scientific approach of the issue by planning and evaluating the application of the training program. It was essential to be pointed out that this program was implemented in Greece and in France to people that were occupied with wheelchair basketball as an entertaining activity and wanted to be occupied professionally with the sport as coaches, while in England and Slovenia to basketball athletes who had the chance to continue their occupation with basketball from the coach’s place.

The target of the research on many different populations was to record their reaction to the project. Considering that the program had to cover everyone that was involved in sports for disabled persons as well as the biggest possible participation of European training centres, was addressed to organizations with different objectives and level of trainees. The French and Greek trainees represented the low level of experience and capability regarding the wheelchair basketball, the Slovenians a medium level and the British the advanced, professional one. The Greek and French trainees did their theoretical courses in classrooms of the training institutes, while the British and the Slovenians did them in the training field. That had as a result the existence of different ways of approaching the training media (notes, books etc) and of evaluating the material on the web. Additionally, Greeks were taught personally by a group of experienced teachers - coaches while the English athletes who had already enough experience on the theoretical and practical issues of wheelchair basketball, as well as French and Slovenians, were taught the coaching methodology through open and distance training and through the internet material.

The practical courses were made on basketball fields with the guidance of the four teams’ coaches and were based on the coaching program that was equal to the level of their athletic capabilities. The subject contents of the training program (theory and action) consisted of all the maters that were comprehended in the analytic program of the coaching schools: coaching, athletic psychology, sociology, sports medicine, pedagogy, referee regulations, classification regulations, direction and organisation of a team). The specialization of the scientific group of the Sports University of Cologne fully covered the needs of training through an analytic program.

The training material, in its first approach which was given to the trainees at the beginning of the training program, was formed according to the application in such a way so as to be included in all these subjects that would be derived in action. The participation of the trainees in the formation of the material and of the whole program was extremely critical because the final product had to cover most of the needs and the particularities. The mutual reaction of the designers of the program and of the trainees over the final form of the product was the basic principal of the design of the project.
The Target Groups

The target groups of the "Training for life" project are presented below:

A. The European training centres for disabled persons that want to integrate in their programs the wheelchair basketball coaching training and generally the training in the athletic field.

B. The European Federations of wheelchair basketball.

C. The National Unions of Coaches of basketball for disabled persons or not which organize coaching schools.

D. The European athletic unions, which have or will have department of wheelchair basketball.

E. The European University Institutions which are specialised in the athletic field and want to put training programs for disabled persons in their own program will have the possibility to use the results of the project as a basic reference.

Ending the material that was produced at the frames of the program could be used from each private owner, person with disabilities that was interested in being occupied either professionally or in amateur way with the wheelchair basketball sport.

The easy form of the dissemination of the data of the project made them very useful and easily transferred to various carriers, organizations or persons. The sum of the material was presented in electronic form in the internet, enabling the training by distance and its constant renewal. Furthermore the material was designed in such a way so as to cover the needs of the groups like coaches, people that are into the field of sports of disabled persons, sports medics, and psychologists.

The Implementation

The "Training for Life" project consortium was responsible for the general management of the project. Its main responsibilities were to assure the continuing communication among the partners, the early diagnosis of problems that may come up during the flow of the project, the preparation of an effective and flexible mechanism of decision - making, the control of the quality, the effective methodology and technical support as well as the programming of expenses relevant to the project.

Main target of the partnership was also the production of training products (methodology, conventional and electronic tools) that had to respond to the high requirements that were set by the modern information society. The participation of the International Center of Documentation and Research for Basketball Pedro Ferrandiz in the final formation of the outcomes of the Project, aimed at ensuring the high quality of the outcomes of the suggested project.

The "Training for Life" project consortium planned the development of a scientific training program addressed to wheelchair and running basketball coaches with conventional and electronic training material, as well as the development of the website of the program which constituted the bridge of communication between the trainees, the trainers and the organizations involved. The development of the scientific framework according to the needs of the trainees was the fundamental issue of the suggested implementation. The training material included training manuals, web material with the application of multimedia and DVD.

The website of the "Training for Life" project, apart from the training seminars included useful information about wheelchair basketball, glossary, bulletin boards for comments and remarks among the trainees and the trainers. The website also had an area where the answers to the more frequently asked questions (FAQ) concerning training matters are provided. The website of the project was developed at the beginning of the Project and followed the development of the project, so it was continuously updated with the presentation of the training material and with the activities of the Project.

The scientific basis of the project was another critical element concerning the scientific training for Wheelchair and Running Basketball coaches. The two main objectives of the planning were:

A. The identification of the needs and the particularities of Wheelchair Basketball and
B. The scientific structure of the project.

It was necessary that the training program had to be the outcome of the interaction of these two parameters. The participation of the two vocational training and rehabilitation centers, for disabled persons, one Association of Paraplegics and the Sports Association of Wheelchair Basketball secured the first objective. The scientific team of the Sports University of Cologne (Deutsche Sporthochschule Koeln, Institut fuer Rehabilitation und Behindertensport) formed the scientific approach of the subject, by evaluating the application of the training program.

The program was structured with all these scientific subjects that were included in the modern education of Basketball Coaches (Coaching, Sport Psychology, Sociology, Sport Medicine, Ergometry, Pedagogic, Arbitration Rules, Management and Organization) adapted to the particularity of disabled persons. The subject units, (theory and practice), were presented by scientists and trainers who are specialized in this field. It was planned so that the training program will equip the participants with all the necessary knowledge that was required to work as coaches in wheelchair or running basketball teams. The program that was presented in the Internet provided the opportunity for distance learning; it was based on the use of multi-media application and included apart from the theoretical parts, a long series of exercises, and presentation of tactics and methods of coaching. The goal of the consortium was the creation of training material that was friendly to the user. It was created in such a way so that it allows any further additions and improvements.

The focus was the implementation of the training program in four European countries and in different target groups, so that the reaction of specific target groups towards the project could be clearly recorded and evaluated and the different training methods (combination of theory and practice, distance-training) could be studied. Another goal was the direct involvement of trainees in the implementation of the training program from the very beginning of its development, through the adoption of a user-centered approach.

The implementation of the program aimed at its assessment and validation in real conditions. It had to be flexible, since it was implemented at the same time in two training centers for disabled persons in Greece and in France and it was tested by the athletes of the champion team of U.K. Oldham Owls and by the national team of Slovenia aiming at the identification of the particularities and needs of the sport and at the creation of a training tool that is friendly towards the user.

The combination of theory and practice constituted a very important element in the development of the training program. The practical part of the program was designed by the Department of Physical Education and Sports of Ellinogermaniki Agogi. The contribution of the athletes of the two associations (Oldham Owls and Slovenian national team) was of great significance in the final planning of the practical part of the training program.

In order to equip the trainees with the necessary knowledge concerning basketball and coaching, the theoretical part was accompanied with a long series of practical exercises on location, so that the trainees will be ready to meet the market needs.

The implementation of the program was decided to be done in two sessions.

In both sessions the training program was divided in two parts a theoretical and a practical one.

In the first session the training material referred mostly to beginners and intermediate level athletes, in order to understand the mechanism of the sport and to introduce the amateurs to the theoretical part of professional training.

The scientific team had to decide which must be the necessary improvements to be done in order the second session with the advanced level could more user friendly, more attractive and meaningful.

Another goal is the production of a sample DVD which will be a guideline for the final outcome.
The content of the DVD analytically described the scientific approach of the subject, the series of seminars focusing to the visual material (interactive video) and with useful references and reports on the existing internet material and a whole series of practical lessons. In that phase of development of the training material the DVD was developed on a pilot basis and it was used in the second session of the implementation of the program. The objective of the co-operation was to give the chance to the trainees to contribute drastically to the formation of the content, so that the final outcome has to be more functional and will be closer to their needs.
Wheelchair basketball is the only team sport - in adapted physical activity - that exists in Greece. It has been importantly active the last seven years, and even more so the last three. This is due to the efforts of the Hellenic Wheelchair Basketball Federation (HWBF), which works on the development of the sport, in Greece and Europe. The financial part of the sport has the most important role and that is why HWBF tries to activate local authorities (a & b degree), in order for the sport clubs to thrive and survive, for economical and material help.

The sponsorship each athletic club receives from the General Secretary of Sports (GSS) is unable to create opportunities let alone the conservation of athletic clubs. When a wheelchair basketball costs around 3,000 euros, it is very hard for athletic clubs to approach new athletes and for the federation itself to do its job. The organization of national and European championships on the part of the federation is at a high level, giving that HWBF has five international referees and that each year it organizes international referee seminars. In the area of the classification it has a team of four persons (medical - paramedical) and by the end of 2003 we will have one gold level classifier and one silver one.

The participation of the Nation team (men & youth) is a fact, furthermore training sessions are divided in north & south, during periods of no championship or cup.

The head coach of the Hellenic wheelchair basketball team is Dutch and considered in the top five in the world. From 2003 we have the cooperation of the Department of physical education of Athens, for ergonomic control of the athletes with a specialized apparatus and trained staff. National championships and cups are held every year with success and furthermore HWBF through exhibition games and tournaments in different cities all over Greece, and especially in schools, try to promote the sport.

The federation has a website since 2002 (www.osekk.gr) in order for information to be available throughout the internet.

This European congress ends a three years program, which HWBF started in 2000, having in mind the social aspect of the game in order for people with disabilities to have more opportunities. We believe that the government will support us more in this effort and that our image will improve on a daily basis.
Moments of the Workshop

Practical course during the pre conference workshop from the coach of the Greek National Wheelchair Basketball team, Mr Wim Van Ek
Scenes from the Conference with Gary Peel (above) and Mrs Maureen Orchard (below)