

TENNIS AS SPORT FOR DISABLED PERSONS

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Abstract:

All forms of tennis for disabled persons are developing on the plain of the adapted physical activity where move is used as an assisting and improving motor centre. Its important component is adapted sport created with thought about individual, special needs of disabled persons. Thanks to many alterations tennis became even more available for disabled persons. Tennis on the professional or amateur level can lead to positive changes in physiological rates and a mental state.

INTRODUCTION

The role of sport in the process of activation and rehabilitation of disabled persons have changed in the course of many years, at first it helped in functional of persons with diseases of motor organs, however later developed into professional sport, and in its area Paralympic move where are competing the best in the world disabled athletes. Nowadays professional sport constitutes a lot of formed under the formal account form of physical activity by disabled persons. Changes of the sport equipment caused the development of sport activity in the recreational form, that's why more disabled persons can actively spend their leisure time. Nowadays all forms of sport for disabled persons are developing on the plain of the adapted physical activity which is exploiting experience associated with move as an adjuvant and improving source [Koper Tasiemski, 2013].

Adapted Physical Activity (AAF) is an interdisciplinary field of science directed at recognizing and explaining individual differences in the physical activity. It underline and support the attitude of disability, being in favour of an universal access to sport and an active lifestyle. It popularize solutions and plans associated with the physical activity, creating comprehensive programs and systems of support [Tasiemski, Koper 2013]. Crucial element of AAF is adapted sport, sport modified or created with thought about individual, special needs of disabled persons, and thanks to alterations, which in its frames were suggested rules of many disciplines, sports for disabled persons became even more available. Also many disciplines were dedicated exclusively for disabled persons, e.g. amputbol, whether goalball for blinds persons [Koper, Tasiemski, 2013].

WHEELCHAIR TENNIS

One of sport disciplines allocated for disabled persons is wheelchair tennis. Wheelchair is a sport discipline for disabled competitors, playing on a typical tennis court which at present is one of the most develop sport on quad in the world. Championships are being played in four categories: junior, women, men and quad in single in double competitions. Competitors are playing in the court on special wheelchairs with adjusted backrest and seat to increase their comfort during the game and to exploit their maximum scope of torso

movement. Competitors are using rockets with maximum length limited by ITF (International Tennis Federation), with big heads [ITF Wheelchair Tennis Regulations, 2014].

Regulations of wheelchair tennis are identical like in the tennis without the point letting competitors for deflecting the ball after the second goat. The players who have got a problem with service, can serve from the bottom. Additionally, quad is treated, as the part of body who during shoot must to sit on it. Also using legs or prostheses to stopping quad while service or deflecting the ball is forbidden. One condition of admission of the competitor to wheelchair tennis competition is medically diagnosed, long-lasting, physical disability which can take the neurological deficit up on the level of spinal S1 root or serious hypertrophic arthritis of pond or in the bottom half of the body, amputation of every lower limb or functional disability of lower limbs. [ITF Wheelchair Tennis Regulations, 2014; Goosey-Tolfrey, 2010].

Brad Parks who in 1977 started to promote wheelchair tennis on the West Coast of the United States of America through sequence of camps and displays. In the same year in Parks City and Recreation Department in Los Angeles was played the first in history wheelchair tennis championship which in it, took part 20 competitors. In 1980 has started it functioning National Foundation of Wheelchair Tennis (NFWT) as well as the first championships were organized as US Open series. In 1981 under NFWT auspices, affiliate The Wheelchair Tennis Players Association. One year later France became the first European country in which have started the school curriculum for quad tennis. In 1985 has being organized Team World Cup in which 6 male teams have started in this inaugural event. The first official French Open took part in 1986 and in October 1988 is coming into existence International Wheelchair Tennis Federation which have accedes: Australia, Canada, France, Great Britain, Israel, Japan and USA. In 1989 was played Australian Wheelchair Tennis Open on courts of the Nationalist Tennis Centre in Flinders Park in Melbourne [www.itftennis.com/wheelchair].

International Tennis Federation from the beginning with big attention kept up with the pioneers of new sport. The ITF position encouraged nationalist associations to work for Wheelchair Tennis and in 40 countries came into existence associations or clubs of tennis players for disabled persons. In some associations were created Royal Commissions. In 1992 IWFT have signed three-year contract with the sponsor who has guaranteed the considerable financial assistance. These subsidies enabled to realize programme of wheelchair tennis promotion, training for coaches and instructors, establishing "tennis clinics" and demonstration matches. Thanks to that program, tennis quad were in 70 countries in the world. Valuable initiative supported financially by ITF were summer camps for disabled children and teenagers. In 1992 ITF on the general meeting gave consent in participating for disabled competitors during championships for health players, moreover the rules of tennis game of should be included in official regulations of tennis. From 1994 NEC games are also run modeled on the Association of Tennis Professionals (ATP) and Women's Tennis Association (WTA) calendar. It includes 30 Championships Super Series and Championships Series and also about 60 Satellite Championships, in which it is possible to have classification points. Computer classification lists are being kept similar to ATP. [www.itftennis.com/wheelchair].

Wheelchair Tennis made its debut on the Paralympic Olympics, as the show-competition in Seoul, in 1988, paving the way to the full integration during Olympics Games in Barcelona, in 1992, which was an important growth factor of its popularity among players and spectators from the entire world. After the huge success of the Paralympic Olympics in 1992 in Barcelona, expectations of organizers and competitors for Paralympics in Atlanta in 1996 were equally high, because seventy two competitors from 24 countries fought for a Paralympic gold medal. However during Paralympics in Rio 2016 took part one hundred participants from 29 countries in six competitions. [www.itftennis.com/wheelchair].

QUAD TENNIS

Quad tennis is a sport discipline for persons suffering on quadriplegia (paralyzing). Competitors in this sport class have got an impairment of both upper limbs and bottom and their possibility of quad and tennis racquet control is more limited than in "traditional" wheelchair tennis. Players can tape racquet to their hand and can use wheelchairs with the electric propulsion. [Paralympic Games - Wheelchair Tennis Qualification Criteria, 2016]. 1985 year was a time of the championship debut for Quad Tennis in the United States. This sport discipline was for the first time at the schedule of Paralympic Games in Athens, 2004 in single as well in doubles, in both competition together were started women and men. During Paralympic Games in Rio de Janeiro 32 players took part in the singles, and 6 couples took part in doubles. [www.rio.itftennis.com/paralympics/draws].

BLIND TENNIS

In the world tennis for blind or visually handicapped persons is more and more popular. This sport discipline is called blind tennis or soundball. The adaptation of this sport discipline for blind persons made in 1984, Japanese, Miyoshi Takei. The first competition for the title of the best blind tennis player was held in Japan in 1990. International Blind Tennis Association appointed in 2014 dealt with propagating this sport discipline. This sport officially is being practiced in 30 countries all over the world [www.ibta-takei.com/blind-tennis-history].

The rule adaptation is regarding to tennis ball, it is bigger than traditional, made of spongy material in contrast color and inside it there is a plastic capsule with metal pellets ringing during every hit. Such construction guarantees the slower flight of the ball as well as is easy to hit it by the player. Competitors of blind tennis are divided into three classes on account to the ranking of the International Blind Sports Federation (IBSA) [ibta-takei.com/game-rules]. B1 - blind persons and B2 and B3 - persons with very much poor eyesight. Regulations of blind tennis let in the group of people entirely unseeing for three ball reflections from court surface before their hit, for visually handicapped players only for two reflections of ball from the court. Dimensions of court for the category B1 is a rectangle with 12.80 m on 6.10 m with tactile lines on all lines except for bulletin penalties, the net height is 83 cm, however court for B2 and B3 category is a rectangle with 18.28 m to 8.23 m, but the net height is 90 cm [A Guide to Visually Impaired Tennis, 2016]. Children's rockets are being used for the game with lower weight and length (B1 - maximum to 23 inches, B2 and B3 - maximum to 25 inches). The last alteration of new regulations is about service and checking position on the court, where both, serving player, as well as returning player can ask the judge or the person who is passing balls to inform the player about the position on the court. Before beginning the service move, serving player have to say "ready" and wait as their opponent will say "yes", after that he has got 5 seconds for make a serve, without changing his position on court and shout "play" before making serve.

From 25 years Wheelchair Tennis is a Paralympic sport discipline, and thanks to many activities for dissemination and promotion blind tennis in the world, this sport discipline will be among show - disciplines during the Paralympics Games in Tokyo, 2020.

SUMMARY

The sport activity can perform role of motor streamlining, exploiting natural forms of human move. Through health function directed to improvement of physical fitness, sport helps compensate many dysfunctions of our organism. Sport can also be the source of positive experiences in various areas of its functioning. It can recover self-service, correct self-assessment, shape positive character traits and support in social integration. Additionally sport can identify the real damaged of our organism. [Koper, Tasiemski, 2013].

Wheelchair Tennis on the professional and amateur level can lead to positive changes in our bodies, for example, in weight loss and body composition, risk of lowering bone mineral density [Miyahara, 2008]. The Intensive tennis training causes positive changes in physiological rates, such as profile and lactate economy [Diaper, 2009]. Many researches shown, that wheelchair tennis is sport discipline which requires efforts with typically aerobic as well as anaerobic character with changeable intensity. [Croft, 2010]. Sports results are awarding competitors who during the match are working on the highest scope of intensity [Sindall, 2013].

Rivalry in tennis for disabled persons have got an influence on their mental state, reducing emotional states such as: tension, anger, depression and psychological tiredness [Greenwood, 1990; Stănescu, 2014]. Positive impact on health, raise the quality of life, possibility of interaction in team and pleasure from the game can convince disabled and blind persons to sport disciplines.

LITERATURE

1. Croft L., Harrison P., Dybrus S., Lenton J., Goosey-Tolfrey V. (2010), A comparison of the physiological demands of wheelchair basketball and wheelchair tennis, *International Journal Of Sports Physiology And Performance*, Sep; Vol. 5 (3), pp. 301-15.
2. Diaper N., Goosey-Tolfrey, V. (2009), A physiological case study of a paralympic wheelchair tennis player: reflective practice, *Journal of Sports Science & Medicine*. Jun, Vol. 8 Issue 2, p. 300-307.
3. Goosey-Tolfrey V. (2010). *Wheelchair sport: a complete guide for athletes, coaches, and teachers*. Champaign, Illinois: Human Kinetics. p. 22.
4. Greenwood, C., Dziewaltowski D., French R. (1990), Self-efficacy and psychological well-being of wheelchair tennis participants and wheelchair nontennis participants. *Adapted Physical Activity Quarterly*, January, Volume 7, Issue 1, 12-21.
5. ITF (2014), *Wheelchair Tennis Regulations*.
6. Koper M., Tasiemski T., (2013), Niepełnosprawność – zagadnienia, problemy, rozwiązania. Nr III/2013 (8).
7. Miyahara K, Wang D., Mori K., Takahashi K., Miyatake N., Wang B., Takigawa T., Takaki J., Ogino K. (2008), Effect of sports activity on bone mineral density in wheelchair athletes, *Journal of Bone and Mineral Metabolism*, January, Volume 26, Issue 1, pp 101-106.
8. *Paralympic Games, Wheelchair Tennis Qualification Criteria*, 2016.
9. Sindall P., Lenton J., Tolfrey K., Cooper R., Oyster M., Goosey-Tolfrey V. (2013), Wheelchair tennis match play demands: effect of player rank and result, *International Journal of Sports Physiology and Performance*, Jan; Vol. 8 (1), pp. 28-37.
10. Stănescu R.(2014), Wheelchair Tennis – An Opportunity for Social Integration of the People with Disabilities Original Research Article, *Procedia - Social and Behavioral Sciences*, Volume 149, 5 September, Pages 906-910.
11. www.ibta-takei.com/blind-tennis-history
12. www.itftennis.com/wheelchair.
13. www.metroblindsport.org, A Guide-to-Visually-Impaired-Tennis, 2016.
14. www.rio.itftennis.com/paralympics/history.