

BENEFITS OF SPORT AND PHYSICAL ACTIVITY ON WELL-BEING OF WOMEN

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ABSTRACT. Among other factors, mass participation in sports, not exclusively on top professional level, is the basic requirement for physical and mental health of the population. Women, comprising a half of the population, and having a very important role in reproduction, should be equal, and most widely involved in physical activity, taking into account all specificities. Since the contemporary women experience equality in economic, political, cultural and professional field, being at the same time susceptible to stresogenic life events, sedentary lifestyle and other risk factors, it is very important to increase the involvement of women in physical exercise. The question of well-being, or the benefits of sport on women, is more important than the question of equality. The text recognized benefits for motor abilities, health and psychological benefits, among others. By physical activity, particularly by aerobic activities, calories are consumed, subcutaneous adipose tissue is reduced, body is shaped, muscles strengthened, self-satisfaction is achieved, thus attaining the balance of soul and body. Special benefit from the physical activity is evident in the domains that make a difference between women and men, which are: hormonal differences, menstrual cycle, pregnancy and specificities of women in the third age, including osteoporosis. Since a modern way of life and production (working) processes in the contemporary society increasingly exclude manual labor, progressively demanding mental work, as well as a number of other circumstances having negative impact, sports practice is also a psychological benefit for women.

Keywords: *women, sport, benefit, well-being*

INTRODUCTION

During the last century, there was a tendency to encourage a greater involvement of women in sport. This was a period rich in activities, declarations, but also in the results that established the importance and role of sport, and provided the guidelines for the integration of women into all sport segments. Although numerical equality was achieved, regarding the physical activity, as well as the participation on the Olympics, it is evident that there is a small number of female trainers, that female trainers only rarely train male athletes etc. [1]. Numerical equality is the result of openness of the Olympic Movement, attaching the utmost importance to the way of life of contemporary women, and the need for gender equality. But, the question of well-being, or the benefits of sport on women, is more important than the question of equality.

Female population is the basic biological reproduction contingent. More precisely, this refers related to women between 15 and 49 years of age (fertile period of women). Staying in good physical shape ensures the population to be physically and mentally healthy, and the women, comprising more than a half of the population, should be equal and selectively most widely involved in physical activity. Emphasizing certain, primarily biological characteristics of a female body, should, on the contrary, contribute to better understanding of specific qualities that could affect the motivation of women to take part in physical exercise. Mechanical

identification of men and women can cause more harm than good.

Since the contemporary women experience equality in economic, political, cultural and professional field, being at the same time susceptible to stresogenic life events, sedentary lifestyle and other risk factors, it is very important to increase the involvement of women in physical exercise.

After the age of 20 years, most women lose interest in exhaustive training and competitions. However, if the exercise habit have been formed, the biological need for movement will be easier to maintain. Nowadays, women try to adapt themselves in the easiest possible way to the contemporary way of life. Women begin with exercises in order to remove fatigue more quickly, to improve their psychophysical abilities, as well as to strive external beauty, which is characteristic to all women.

BENEFITS ON MOTOR ABILITIES

Female body is a sensitive biological – psychophysical organism. Physical exercise or sports activity of women has to be based on the knowledge of diversity and specificity - anatomical, physiological, psychological [2,3]. Morphological characteristics of female body contribute greatly to the ultimate sports capabilities.

Power of any muscle group in women is on average lower than in males of the same age, and the differences go up to 25% in absolute values, and 20% in relative units in relation to body mass. The average strength of women in the upper body is 25-55% of

the average strength of an average man. For lower-body strength the percentage is higher, 70-75% [4,5]. Due to increased demands for strength, speed and explosiveness at all levels of women sports, there is a need to strengthen and improve overall strength and endurance. Under the influence of sports training women can, owing to the light skeleton, develop their skeletal muscles, while at the same time still maintaining a relatively small body mass. This good feature is expressed in sports such as rhythmic and artistic gymnastics.

Although women exhibit less power than men, adaptation to strength training in women is not different than in men, so there is no reason for the female athletes not to apply the same training methods as men. There are some myths related to power exercise in women which experts have tried to break [6,7]. One of them is that the muscle mass shall increase too much, and that women limit their own advancement by refusing to implement certain training methods or training intensity.

During strength training, it is necessary to activate all available muscle fibers, which requires higher intensity, the use of certain bodybuilding techniques, in order to develop hypertrophy necessary for specific muscle groups, and to stimulate physical development of the entire muscular system [4].

Regular physical exercise and sports activity, especially in the domain of power exercise, could be beneficial for women, regarding the injury prevention. In general, research shows that ankle distortion, patellar dislocation, distortions and contusions of shoulder, elbow, fingers and knee, and injuries of hamstring muscles of thigh are most common among women. It is believed that the laxity of joints is the cause of injury in 40% of cases.

Plyometric training has a significant impact on the prevention of knee injury (anterior cruciate ligament) [8] and it is considered to be frequent in sport among women. Hewett, Myer and Ford [8] discuss the effects of plyometric training, strength, balance and „core stability“ trainings in the injury prevention among women. The same authors [8,9,10, 11] continue the research on reduction of potential risk of knee injury factors for female athletes, by the application of plyometric training and training of balance. The results of these studies support the hypothesis that a combination of different methods of training can maximally improve the efficiency of training for women in the prevention of injury, improvement of measured performances and mechanics of movement.

On the basis of the fact that women have more slowly than fast muscle fibers, Zatsiorsky & Kraemer

[7] concluded that more frequent strength training is necessary, especially in maintaining the achieved shape. Women who have higher levels of adrenal androgens have an advantage in the susceptibility to strength training. Only at the maximal and almost maximal intensities, the largest and fastest fibers in the muscle are triggered. Most women are afraid to train with heavy weights, but only by using much resistance it is possible to stimulate and activate the motor units that contain faster muscle fibers.

First appearances of women in a number of sports and sports disciplines on the Olympic Games program were recorded with certain time lag. Speaking of endurance sports, there was an opinion that „women should be spared from strenuous long running, especially from the inhuman torture such as marathon“ [12]. There is an opinion that a long-term effort and competition ruins the health of female competitors, and the competition and aggressive contacts (during sports games) negatively effect female body. Endurance type of physical exercises for women are determined by morpho-functional characteristics of female body. Smaller oxygen capacity, decreased red blood cell count, hemoglobin content, smaller content of iron in the blood, cause certain functional realignment. Women have lower maximal oxygen consumption than men by about 25 - 30%.

Sports trainings increase maximal oxygen consumption in women up to 30%, depending on age and training. Sports trainings enable women to run and achieve results in the long and the longest distance, as well as men. Research by Bam et al [13] has shown that differences are negligible in men and women equally trained for distances over 42.2 km, and for over 70km women have a slight advantage. It was previously confirmed by Speechy, Taylor, & Roger [14] by comparing the results at 90 km, and by Sparling, O'Donnel, & Snow [15] by observing the world's best results in running for the period 1980-1996. Coast, Blevins & Wilson [16] have confirmed that the differences decrease because of energy utilization, increased metabolism of fat and relative progress of women training at longer distances. Bam et al. [13] explained better results in women's running at distances longer than 42.2 km with greater glycogen savings based on increased fat oxidation. During 90-100 min of exercise on the treadmill at 65% VO_2 max, Tarnopolsky et al. [17] found a higher utilization of lipids in women, which was confirmed at 75% VO_2 max [18]. Riddell et al. [19] also found the confirmation of better aerobic capacity at 60% VO_2 max and use of stored glycogen. Greater

utilization of lipids was confirmed by Perreault, Lavelly, Kittelson, and Horton [20].

In fact, due to the morpho-functional transformation, women become physically capable for the achievement of better, even top sports results.

BENEFITS ON HEALTH

A increasing number of women worldwide participate in sports, either recreatively or on the sports-professional level. By physical activity, particularly by aerobic activities, calories are consumed, subcutaneous adipose tissue is reduced, body is shaped, muscles strengthened, self-satisfaction is achieved, thus attaining the balance of soul and body. That is what is necessary for every woman, living too fast nowadays.

Special benefit from the physical activity is evident in the domains that make a difference between women and men, which are: hormonal differences, menstrual cycle, pregnancy and specificities of women in the third age, including more frequent osteoporosis than in men.

Research on the connection of sports training and menstrual cycle has begun with the consideration if it is possible to exercise, train and compete during menstruation, but nowadays more subtle changes, occurring in different cycle phases during physical exercise, are subject of the research. Active female athletes have fewer problems with premenstrual pains and menstrual cramps. Olympic medals were won by female athletes during all phases of menstrual cycle. Participation in the training or competition during menstruation has no negative effect on the health. At the same time, care should be taken of the regularity of menstrual cycle, taking into account individual characteristics of female athletes, in order to training during menstruation.

Pregnant women participating in sports have fewer back pains, fewer problems with veins, less nausea, more rarely suffer from thrombosis or gestational diabetes compared to women that are not sports participants. The fact that the labor of female athletes, in general, is shorter and less painful, presents the main advantage. Pre-pregnancy body mass is reached earlier, and numerous studies show that sports in pregnancy have positive effects on child development. Acceptable level of activity of the mother-to-be depends on the pregnancy and her activity before pregnancy. The incidence of injury from physical activity during pregnancy is low [21]. If there are no complications of pregnancy, and pregnancy is not risky, experts recommend sports.

When discussing the socio-psychological and economic aspects of sports activities, it should be taken into account that the average life expectancy of

women is increased to about 70 years nowadays. Despite the increase in the average life expectancy, the phenomenon of "sudden" aging of women is becoming more prominent, i.e. there is an increased number of relatively young, physically inactive women having all the symptoms (characteristics) of old women, and early signs of aging, occurring already after 30 years of age, and becoming more evident after 45 years of age. At the end of this period, the appearance of old age characteristics become more prominent. For a women, it is the beginning of menopause with all the symptoms and changes, also including the signs of osteoporosis.

Passivity and old age combined together are a big risk factor for the development of a disease. Good functioning of a body in old age is more frequent among active persons, strongly indicating that chronic diseases related to aging depend in some measure on physical inactivity, rather than on aging. Functional ability of third age women depends on genetics, previous illnesses, as well as on physical and mental way of life. Physical activity is the deciding factor for quality lifestyle, preventing and diminishing at the same time various physical and mental changes related to aging. With age, women can significantly improve fitness, strength, balance, mobility. Physical activity may have positive effects on different psychological factors and quality of life of older persons, even on the prevention of dementia.

Sports training leads to an increase of muscle mass and muscle strength, and to a better functional ability regarding coordination, balance and flexibility, basically reducing the risk of fall-related injuries. [22]. Training with other people, in positive environment, contributes to positive impact on memory, initiative ability, mood and sensation of health. Body exercise increases the bone mass before the menopause and slows down the loss of bone structure after menopause. Walking, jogging, exercises with weights, tennis, various aerobic programs, are useful for the bones. Naturally, the load, length and frequency of exercise depend on person's health, while a competent physician or trainer have to be consulted.

In addition to training and programs lead by professional trainers, an independent and not very demanding exercise, including various recreational activities, even at home, may have positive effects on skeletal system. Women who took part in these programs gained not only a better muscle strength and higher bone density, but also a better lifestyle, essential in the fight against osteoporosis. Women, especially mothers and busy business women shall

have a better and healthier life, diminishing at the same time the risk of osteoporosis, and strengthening the musculoskeletal system, resulting in easier performing of daily duties, as well as in better and healthier life. The priority of this program is to present that recreational exercise of 2 or 3 times a week can be of great advantage to the body, and can lead to numerous health improvements. In addition to muscle building and improvement of endurance, exercise builds and maintains bone strength. Recommended exercise relates to: working with resistance, working on flexibility and exercise with your own body, walking, climbing stairs, dancing, aquatic, yoga.

In case of osteoporosis, assumed goals of fitness therapy are the following: stopping the progression of illness, strengthening of bones in order to diminish the risk of fractures, regulation of body mass (these persons having usually a low BMI), improvement of mobility and flexibility.

PSYCHOLOGICAL BENEFITS

Most »positive effects« are related to the improvement of health. However, since a modern way of life and production (working) processes in the contemporary society increasingly exclude manual labor, progressively demanding mental work (nervous strain – usually without mental creativity), as well as a number of other circumstances having negative impact on biological nature, sports practice is also a psychological benefit for women.

Sports activity, naturally with a good program and guidance, adapted to the capabilities of participants, provided that the importance of victory is not overestimated and the educational and social potentials are emphasized – contributes mostly to psychological health of individuals: by increasing self-confidence and pride, strengthening of self-esteem and positive relation to own social, intellectual and physical qualities, reducing symptoms of stress and depression, developing leadership skills, teaching teamwork, cooperation, fair play, developing virtues of good character, teaching people how to set goals, developing strong orientation on result, developing healthy competition, empathy, controlled aggression etc. [23].

Exercise is very important for adolescents, in order to improve body shape by training, that will have positive effect on their psychological state. They will have a better perception of own body, thus diminishing the possibility of various kinds of crises, depressions or eating disorders related to implementation of various "instant" diets.

Research confirms a new function of sports, specifically related to psychological well-being of

women, sport becoming the liberation factor of a woman from rigid sexual stereotypes, the factor that reduces or abolishes traditional differences in psychological characteristics of women and men, as well as the factor contributing to better integration, emotional maturity and shaping of stable identity of female athletes. In a range of studies, Bačanac et al. [24,25, 26, 27, 28] have come to a conclusion that participation in sports liberates women from the traditional concept of sexual stereotypes, abolishes the usual sexual differences and contributes to more pronounced formation of psychological maturity and integration.

Benefits for women increase with greater participation in competitions. On the last Olympic Games, women won more medals than ever before, the number of disciplines in which they competed was increased, there were more women in the managements of national teams, and the program of competition for women was enriched with new sports and sports disciplines.

CONCLUSION

At the beginning of 21st century, the consciousness of the problems and rights of women has outgrown the narrow limits of women's movement, becoming the global problem of the whole humanity. Despite huge changes in the way of life, in most contemporary societies there is a pronounced dominancy of men over women, as an essential feature of contemporary woman's status. Increased participation of women and girls in the classes of physical education and sport helps in building trust and promotion of social integration. The involvement of girls in sports activities together with boys may help in overcoming the prejudices which usually result in social exclusion of women and girls.

A starting point for the strategy of participation of women in sports today is based on the declarations which guarantee the rights of men, acceptance of differences, values and virtues of every individual. IOC expresses its attitude towards the participation of women in sports by assigning the annual trophy to individuals for their contribution to the programs supporting the participation of girls and women in sports.

Among other factors, mass participation in sports, not exclusively on top professional level, is the basic requirement for physical and mental health of the population. Women, comprising a half of the population, and having a very important role in reproduction, should be equal, and most widely involved in physical activity, taking into account all specificities. This is a necessity, an imperative of today. Knowing that women have won full

economic, political and cultural equality today (or are on track to do that), that they are respected experts, thus being susceptible to stresogenic life events, sedentary lifestyle and other risk factors, primarily of chronic diseases, their involvement in sport and sports activities should be on a massive scale, organized and largely supported by the society.

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