

EDITORIAL

Moderate exercise vs. physical exercise addiction Efortul moderat vs. adicția de exercițiile fizice

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The increasing degree of civilization by industrialization, automation, informatization, which leads to a sedentary behavior at the workplace, along with new leisure possibilities and options for the young generation, which are also predominantly sedentary, require finding solutions for the correction of the lifestyle, including physical exercise, which are aimed at fighting increasingly sedentary behavior.

The entire literature relating to physical exercise and health recommends the systematic/regular practice of moderate physical activity, for the promotion of health. The category of moderate exercise includes walking and marching. One-two sessions per week of more intense effort such as jogging or swimming are also recommended. Regarding intensity, moderate physical exercise should be interpreted in the first place as aerobic effort, with heart rate values ranging between 120-180 beats/minute, depending on sex and age. In terms of volume, systematic moderate exercise refers to the duration of physical activity during the course of a day or a week. It is recommended to perform a physical exercise volume of 30-120 minutes per day, and no more than 10 hours of physical exercise per week. The two parameters of physical exercise, volume and intensity, should be limited because of the complications that may occur in the case of overtraining.

The intensity of exercise should not exceed 75-80% of the maximum value; the maximum value of the exercise pulse considered as a reference is 180 beats/minutes for the age of 20 years; thus, in order to attain the objective of maintaining an optimal health status in the elderly, a level of physical exercise raising the pulse to a value accepted by the following formula will be sufficient:

$$0.75 \times (220 - \text{age})$$

e.g. $0.75 \times (220 - 60 \text{ years}) = 120 \text{ beats/minute}$

The use of physical activity scales and self-evaluation scales for the young and the elderly, correlated with the exploration of physiological parameters, can provide data allowing to control the exercise parameters (Washburn et al., 1999, cited by Bocu, 2007).

Provided the indications for the practice of physical exercise recommended by specialists are respected, taking

into account the principles of intensity and volume, age and sex, its effects on all the systems of the body are exclusively beneficial. The systematic practice of physical activity has multiple advantages, preventing many morbidity and mortality causes: cardiovascular disease, arterial hypertension, diabetes mellitus, osteoporosis, etc. It has also been found that physical exercise can reduce stress, anxiety and depression (Paluska, 2000).

The individual practice of physical exercise, in addition to the practice of curricular physical activities, is frequently a personal decision, unassisted by a specialist; consequently, it is susceptible of not being rigorously monitored, particularly if this occurs in a fitness room, where exercise is practiced without a time limit. Thus, a volume of more than 15 hours of physical activity per week can be very easily reached.

Following the disregard of volume and intensity limits, after a relatively short time period, 5-6 months, an adolescent or young athlete may become addicted to physical exercise. The criteria characterizing body-building and fitness addiction include the following: training more than five times a week over a duration of several hours, training under mild disease or injury conditions, training to the detriment of social and/or family contacts, feeling guilty when missing training for objective reasons (Véléa, 2002; Valleur & Véléa, 2002; Mirescu et al. 2008).

Risks for the health of an individual may occur after a period of excessive physical exercise, during which the brain secretes excess endorphins and serotonin, substances that induce a permanent good mood. When excessive physical training can no longer be performed as a result of objective causes such as an accident or disease, these substances are no longer produced and the general state of the individual is altered, with the possible onset of depression.

In the case of high performance sport, the effort performed should be monitored by complex teams including specialists in various fields (trainers, doctors, psychologists, etc.). In high performance athletes, an impact occurs at the time of sports drop out or activity cessation because of a disease or at the end of sports career.

Since 1976, researchers have drawn attention to positive addictions such as sport, sex, shopping addiction.

This type of addiction was described for the first time in high performance athletes. Excessive physical exercise is a form of addiction. In athletes who practice excessive running, fitness, body-building, i.e. those who are addicted to physical exercise, a behavioral change occurs, in the sense that they consider training to be much more important than friends, family, health or career (Glaser, 1985 cited by Manea et al., 2014).

Scientists do not deny the benefits of sport, as long as exercise does not become a purpose in itself, but they draw attention to the practice of physical exercise in an obsessive way, in order to reduce body weight or increase muscle mass.

When practiced with moderation, physical exercise has unquestionable beneficial effects on health, and people should be encouraged to remain physically active.

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