

Senescence with more time and better

Senescência com mais tempo e melhor

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“The biological clock keeps ticking, but exercise may turn it back”¹ encourages everyone, indiscriminately, because it leads us to a strong archetype of our collective unconsciousness² (concept used by the famous Swiss psychiatrist, father of analytical psychology Carl Gustav Jung). The possibility of increasing our survival with quality, maintaining our usefulness, regardless of time or place (dogma), paradigms or cultures, receiving feedback, the remoter dream of humanity and our archetype of the hero Hercules, in Greek mythology, who after being victorious over the twelve labors acquired as Olympic award the epic (heroic hermeneutics par excellence) that mirrors the cosmological paradigm of human adventure, the immortality³.

The text starts with the sages Hippocratic teachings of the ancient Greek medicine, in 460 b.C., on the intimate relationship between good health and the practice of physical activity and regular power supply; and includes many centuries later, today's scientists corroborate this teaching, showing the strong correlation between high levels of physical capacity and low levels of risk factors for all causes of mortality, especially cardiovascular diseases' prophylaxis, such as metabolic diseases, and degenerative processes commonly seen in the elderly (sarcopenia⁴, brain atrophy and osteoporosis). Some studies show that the practice of exercises develop the aerobic-type metabolic conditioning, and strength conditioning capacity significantly interfere in cardiopulmonary systems and skeletal muscle, with an increase in body mass and bone density. In addition, it includes recent research into the influence of exercises on neuropsychological and immunobiological systems, promoting increase of cognitive and behavioral functions through angiogenesis and neuronal plasticity.

Features, also studies the average expectation of physiological decline process (30% of the functional capacity of individuals older than 60 years) as a result of the natural aging process (decrease in the production of new cells and hormones, and self-regulatory capacity), and that is exponentially greater in the presence of nosological processes, but is minimized with the practice of physical exercises. In conclusion, therefore, those are undeniable positive effects of exercises on physical health presented in studies produced over the past 20 years.

In medical practice, we have seen that the incidence of chronic diseases of the nervous system, particularly Alzheimer's disease and Parkinson's disease, inevitably increases with age. Thus, we expected people over 95 years, often called “the oldest old” to be our weaker patients. We have personally detected, however, that “the oldest old” are often the healthier and agile elderly, in better shape than thought. This phenomenon can be explained by selective survival, related to the so-called longevity genes (protective against the development of diseases) and changes in daily activities, with the inclusion of exercises.

However, due to the limited number of studies on this subject, there is not a consensus in the literature on the effects of the practice of exercises in mental health. Some studies have shown the effects of some types of physical exercises on the reaction time of active seniors; other studies have shown improvement in cognitive functions related to memory and executive function, supported by the considerable increase in the hippocampal volume, plasticity and better activation of frontal and parietal areas associated with cognitive functions, in addition to the improvement of humor, sense of control, personal effectiveness and greater resilience, but there was no effect on social interaction with third parties.

Infers, even if the appropriate intensity of exercises is necessary for hemodynamic functional adaptations, hormonal, and neurobiological occur, i.e. the determinants of physical activity (not structured activities incorporated into daily life) and exercise (structured, planned,

directed and repetitive activities) it is necessary to effectively promote active lifestyle⁵. The World Health Organization (WHO) recommends 150-minute practice of exercise weekly for health benefits, including aerobic exercises, training of muscle strength, joint flexibility, and those which stimulate the capacity constraints: dynamic balance and motor coordination.

But the problem pointed in the study, which reported that 80% of elderly Brazilians are sedentary, is an important alert health professionals about the need for new strategies in the planning of services and health plans in the promotion of health and prevention of diseases that include transdisciplinary programs of integrative care to the population. Guidance strategies, prescription and conducting therapeutic physical exercises specific practices of weekly routine, minimizing the sedentary lifestyle appear not to have been sufficient for the adhesion of the Brazilian elderly population

to an active lifestyle, unlike what has been observed in countries of Eastern culture, whose traditional medicines in force are based on the paradigm that health is strongly and also influenced by all the dimensions that make up or interact with the man: Physics, psychic, social and environmental and espiritual^{6,7}.

The inclusion of ecological models with activities of transdisciplinary teams including professionals, particularly outside the health sector, such as those involved in urban planning, transportation systems, activities and physical exercises in parks and social clubs may be promising because studies show that a broad vision about the causation of health behavior is related to the physical and social environments, and they significantly influence the healthy lifestyle, because practice or non-activity or exercise is directly associated with sex, age, state of health, self-efficacy, and intrinsic motivation and self-determination⁸.

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