

The Integration of Health Promotion and Injuries Prevention on the Physical Exercise Dynamics



A Integração da Promoção da Saúde e da Prevenção das Lesões na Dinâmica do Exercício Físico

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Acta Med Port 2013 Jan-Feb;26(1):3-4

Keywords: Exercise; Health Promotion; Wounds and Injuries/prevention and control.

Palavras-Chave: Exercício; Promoção da Saúde; Lesões/ prevenção e controlo.

Regular practice of exercise is considered crucial for disease prevention and health promotion. This concept, although highly obvious and even simplistic, is paradoxically ignored. People are aware of this cause-effect relationship but do not have the knowledge in terms of adopting a specific behaviour, an action or a reaction towards adopting an adequate lifestyle. Epidemiological studies reveal that throughout adolescence there is a reduction of physical activity and exercise. There is, as well, a high percentage of sedentary adults, stubbornly sedentary, as physical activity is the therapeutic basis for their chronic pathology. There are many examples of physical activity as a non-pharmacological therapeutic intervention for diabetes, osteoporosis, digestive, cardiovascular and other disorders.

The example addressed by Romeu Mendes in this Congress refers to type 2 diabetes mellitus, a disease with which he is highly familiar from a scientific and practical perspective, as he has been organizing exercise sessions for diabetic patients, in which he includes aerobic resistance, muscular reinforcement and flexibility exercises. He underlined the importance of prescribing exercise, which is equivalent to prescribing medication for injury prevention and ensuring a sustainable form of adhesion to the program. Nevertheless, exercise is not exempt of risks in this population, and hypoglycaemia is one of the most important. Medical supervision for chronic diabetic complications and adequate training instructor care make the diabetic patient happy and risk-free.

A limited perspective of physical exercise a few times per week may be dangerous, as it may induce in error a more distracted or less informed patient. The fact is that 30 minutes of moderate intensity exercise performed in the majority of days of the week is not enough to answer this issue. It is more important, actually one should say even far more important to carry out daily spontaneous physical activity such as walking or even carrying shopping bags. On the other hand, the exercise done at the gym should not reassure one's mind away from the harmful effects of a big food party among friends.

Health promotion concept is important, but equally important is the individual's functional situation, defined as the capacity for accomplishing daily (climbing stairs, running to catch a bus, holding and carrying a gas bottle, etc.), professional (working several hours at the counter, maintaining physical performance during the day when teaching) or mental (being able to write reports at the end of the day or studying some texts, etc.) tasks. It does not deal with prevention for the future, rather allowing for survival to the present time with reasonable satisfaction and level of fatigue.

Clearly, functional capacities decrease from the third decade of life, for genetic and medical reasons, but also from disuse due to physical inactivity.

The loss of muscle mass which is associated to this ageing process is one of most "annoying" processes of human physiology (pathology). This is because it is not just an inevitability, it depends on the individual and is easily preventable. One of the Speakers mentioned that about one third of the muscular mass is lost between the age of 50 and 70. This fact has wider implications when one considers that at the age of 50, a huge quantity of muscle mass has been already lost. From the age of 50 onwards, muscle gain is much more difficult to obtain and therefore the only correct path is a prevention strategy, the very same which is explained for osteoporosis: store at a young age to minimize the decline that inevitably follows.

Social costs are enormous and as examples we just need to mention those that arise from accidental falls. As the author of the text refers, prevention includes nutritional aspects (more protein) and physical exercise. Intense muscle atrophy and deconditioning create the conditions for dysfunction, with the potential for tendinopathy of the elderly patient's shoulder, with or without chronic or repetitive overloading. These conditions have been a target for symptomatic and functional treatment, where muscular rehabilitation is fundamental, although difficult to achieve. However, as Nelson Sousa refers, programs should be adequate and individualised, with safe equipment, careful

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Recebido: 16 de Fevereiro de 2013 - Aceite: 16 de Fevereiro de 2013 | Copyright © Ordem dos Médicos 2013

heating, correct range of motion and with progressive training intensity, allowing the final result to be a rehabilitated and non painful shoulder, the latter resulting in an obviously discouraged and non-compliant patient.

Individual specificity is the main tool for injury prevention. Physical exercise and more precisely sport may has some negative consequences. Sport injuries are the most common consequence, although functional diseases or complications may arise. André Moreira drew attention to exercise-induced bronchospasm (EIB) in patients with or without asthma, as well as to the increase in upper respiratory infection prevalence due to a form of immunosuppression induced by intense continuous exercise, in the absence of adequate recovery periods. As hearsay, from this perspective, “a well trained athlete is an ill athlete”. The presence of EIB is an alert for the physical aptitude medical exam importance, the objective of which is not just to identify eventual causes of sudden death. At the first evaluation, a bronchial provocation test should be performed because it is efficient and provides an essential tool for detection of the susceptible athlete, especially one with a suggestive personal or family history.

There are several examples of athletes that consider exercise-induced respiratory dyspnoea as normal, when in fact they suffer from asthma. Injury prevention and functional capacity improvement depend on adequate

exercise performance, and its practice, in order to reach these goals, is referred to as a structuring action. The spine is the main pillar of the body which is stabilized by the muscle groups that surround it. Any exercises that safely and efficiently improve its functional condition and avoid pain are welcome. These are important measures in prevention as we know that back pain is the main cause of work, domestic and sport disability. Clinical and sport psychology involvement, as well as social support in back pain prevention and management, and also in other injuries is an invaluable contribution, although frequently ignored by patients and therapists. Support improves capacity to deal with injury, in a process that includes reducing injury-related stress, but also sharing and transferring negative feelings. However, most of us agree that the needs and social support patterns preferred by athletes must be taken into consideration.

This Congress has been very interesting and enriching. The discussion that arose between Portuguese and International speakers have been enriching and held an attentive audience. We hope to repeat the experience during the current year, recommending Portuguese as the official language and including more objective and practical subjects in an effort to answer the educational expectations of participants.

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