

EDITORIAL**PHYSICAL ACTIVITY, EXERCISE, AND FITNESS IN THE PUBLIC HEALTH FIELD****Yolanda Escalante**

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People's body is prepared for movement, even more so, it needs to move. Despite this need however, the actual practice of physical activity in the population is shrinking, especially in children¹. The average levels of physical activity of much of the population are so low that they can simply be categorized as sedentary. This, together with far from appropriate eating habits, has led to an alarming increase in various pathologies (obesity, cardiovascular disease, metabolic syndrome, ...), some of which have become a real public health problem. One paper published in this issue² concludes that there are high levels of prevalence of hypertension in the adult population of the Community of Madrid (29% overall, 35% in men and 24% in women). To combat the increasing prevalence of these disorders, international institutions, and national and regional governments have articulated a variety of strategies. One of the commonest of these is to support, promote, and pursue an increase in the practice of physical activity³. In a classical definition, physical activity is "any bodily movement

produced by skeletal muscles that results in energy expenditure"⁴. With this definition in mind, one finds that weekly physical activity recommendations have changed over the last few decades. The current recommendations may be summarized as follows³:

- Children aged between 5 and 17 years should accumulate at least 60 minutes of daily moderate or vigorous physical activity, mainly aerobic. Also advisable is a minimum of three times a week doing activities that strengthen the musculoskeletal system.
- Adults aged 18 to 64 years should accumulate at least 150 minutes per week of moderate aerobic physical activity, or 75 minutes per week of vigorous aerobic physical activity (or an equivalent combination of the two). For greater health benefits, these figures should rise to 300 and 150 minutes of moderate or vigorous aerobic activity, respectively. Also advisable is a minimum of two to three times per week doing activities that strengthen the musculoskeletal system.
- Adults over 65 should add to the recommendations indicated for adults aged 18 to 64 years the practice three times a week of activities to improve balance and prevent falls.

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There are different methodological approaches to the evaluation of the practice of physical activity during a given time period.

One of the commonest is the questionnaire. This indirect measurement instrument uses the subject's responses to estimate the physical activity he or she has performed. The main advantages of the questionnaire are that it is non-invasive, and that it can be applied to large, representative samples. Its main disadvantages are that it depends largely on memory, and that its accuracy depends on the self-responses given by the subject. There are different physical activity estimation questionnaires which have been validated in their Spanish versions, both for specific populations (adolescents⁵ and the elderly⁶) and for the general adult population⁷. One of the most frequently used questionnaires in recent years has been the International Physical Activity Questionnaire (IPAQ)⁸, validated in several languages. This has derived into the Global Physical Activity Questionnaire (GPAQ)⁹ which provides information about the intensity, frequency, and duration of the activities performed during a week. What matters about a questionnaire, however, is how well it allows one to situate the study population relative to some baseline or to physical activity recommendations. In this sense, GPAQ is clearly a good option. There have been very recent studies^{10,11} which use either the original or a revised version of this instrument. In this issue of the *Revista*, there is an interesting paper¹² which uses GPAQ, and concludes that 20% of the population (15–74 years) of the Community of Madrid do not meet the minimum recommendations for physical activity, and that this proportion reaches 69% if the physical activity is taken to relate exclusively to leisure time. It is also necessary to note that there exist other types of questionnaire that assess different constructs related to physical activity – the intention to be physically active¹³, the intensity of the habit of performing physical activities¹⁴, and self-efficacy in physical activity¹⁵. The Spa-

nish versions of the questionnaires that evaluate these last two constructs are validated in this issue of the *Revista Española de Salud Pública*^{14,15}.

There are other, more accurate and objective methods of assessing physical activity, such as pedometers and accelerometers. Pedometers are small devices that record vertical accelerations. Their main advantage is that they are discreet and easy to use, while their disadvantage is that they do not distinguish the intensity of the activity¹⁶. Accelerometers, however, measure physical activity performed on one or more axes. Their main advantage is that they allow precise evaluations over several days, analyzing the different intensities used. Their disadvantages are their cost and the lack of standardization of their use¹⁷. There has been a rapidly growing number of studies using these devices in recent years, especially in children¹⁸.

Closely related to the context of physical activity and public health is physical exercise. This is defined as "a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective the improvement or maintenance of physical fitness"¹⁴. A physical exercise program thus requires the intensity, volume, and type of physical activity to be planned and structured¹⁹. For its part, health-related physical fitness was defined in the Toronto Model of Physical Fitness, Physical Activity and Health²⁰ as a dynamic state of energy and vitality that allows people to perform the routine tasks of their everyday life, enjoy an active leisure time, and deal with potential unforeseen emergencies without undue fatigue, while helping them to avoid hypokinetic diseases and develop their intellectual capacity to its greatest extent, experiencing to the full the joy of living. Physical activity in itself has an influence on improving health-related fitness, and physical exercise even more so. Nevertheless, some studies have reflected the importance of optimal overall levels of health-related fitness as against just

the regular practice of physical activity by itself^{21,22}. In this regard, the practice of physical exercise programs would clearly seem to be the best way to improve health-related fitness. Sometimes, however, the programs that actually reach the public are far from having the required planning and structuring, or they have no basis on clear scientific evidence. For example, there have been only very few studies on such fashionable approaches as aquaerobic²³ or Pilates²⁴ based exercise programs. In sum, from the perspective of the field of Public Health it would seem necessary to foster the practice of well planned physical exercise programs designed to improve health-related fitness.

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