

# The prescription of physical exercise. We all need to row together in the same direction

## *La prescripción de ejercicio físico. En este barco remamos todos*

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It is now a year since the Digitalization Plan for the Sports Sector (Resolution of 4 July 2022 of the Presidency of the Supreme Council for Sports) was set in motion. A plan which, among other objectives, proposes establishing a common strategy for the prescription of physical exercise and activity. Although we should congratulate ourselves, this plan is not something new in Spain, given that a number of autonomous communities have had physical exercise prescription (PEP) programmes in place for many years now, whereby medical personnel prescribe physical exercise based on standardised guidelines. These prescriptions are a primary therapeutic tool and form part of the healthcare strategies for patients suffering from a chronic disease.

Specifically, the Regional Centre for Sports Medicine of Castilla y León (CEREMEDE) already has extensive experience in PEP. Since 2015, we have been treating patients with different chronic pathologies and we aim to pass on our experience and knowledge to other healthcare centres, particularly with regard to the design and development of protocols, healthcare guides and forms that facilitate the implementation of PEP in the surgeries of other specialties, and in the area of primary healthcare in particular.

Moreover, at the end of 2021, in point 28 of the Conclusions of the European Council and of the representatives of the Governments of the Member States, meeting within the Council, on lifelong physical activity (OJEU of 13/12/2021), there is strong insistence on the need to "strengthen collaboration, where possible, with the health sector in providing exercise prescription and counselling given by healthcare and specialised professionals".

And the fact is that there are increasingly more scientific publications in the area of physical exercise and its contribution to health. Molecular biology has helped to clarify some of the mechanisms by

which physical exercise represents a beneficial intervention not only for the prevention but also for the treatment of the most common metabolic, musculoskeletal, cardiovascular disorders and, in general, chronic non-communicable diseases (CNCDs). Given that many of these diseases are among the main reasons for using the healthcare services, they are one of the most decisive factors in healthcare spending as a whole, as well as being a major factor in the loss of years and quality of life. In parallel, over the last few decades, medicine and nutrition have endeavoured to reduce the prevalence of excess weight and obesity as well as the problems resulting from these conditions (diabetes, high cholesterol, high blood pressure, etc.). However, the prevalence of many of the CNCDs has progressively increased in the different age segments and in both sexes.

We are aware that physical inactivity is one of the major preventable causes of mortality with a greater relative risk of 30-50% as opposed to active individuals. Despite the fact that the strong relationship existing between physical activity and health is well documented, a considerable percentage of the population is either not sufficiently active or is completely inactive. This normalization of a lack of physical activity in our society has led to the conclusion that physical exercise is a necessary intervention at all levels: social, political, healthcare, educational... and medical.

We are continuing to take as a basis the criteria of the WHO, which define an active individual as one who does more than 150 minutes of moderate physical activity a week or more than 75 minutes of intense physical activity a week, or an equivalent combination throughout the week; while the amount of time dedicated to sedentary activities should also be limited. However, if we persist in considering that any level of physical activity is positive (even if the quantity and quality are below

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the proposed thresholds), given that the benefits of physical activity are dose dependant, we are not prescribing physical exercise but are recommending physical exercise which, although it is a first step towards resolving this situation, is not sufficient.

We are aware that disease alters and reduces the quality of life of individuals. Progress in healthcare has extended life expectancy, thereby increasing the prevalence of chronic diseases. An improvement in lifestyle is one of the key tools available to us, in order to intervene in the prevention and treatment of numerous chronic diseases.

The outcomes of investigations show us that interventions with physical exercise, if correctly designed, are safe and meet the prevention and treatment objectives of CNCDs.

PEP must be understood to be a therapeutic tool and the recommended way to provide exercise instructions, given that it delivers greater benefits as opposed to generic, non-specific recommendations. In the same way as for the prescription of medicines, PEP is a structured practice in which we systematically indicate on an individual basis, a dose of exercise for the purpose of benefiting the patient's health.

The prescription must contemplate a dose (intensity), frequency, duration, etc., all dependent on the patient's clinical condition, physical capabilities and tastes. Likewise, consideration must be given to any contraindications and side effects.

Physical exercise has a clear beneficial effect on the prevention of multiple pathologies and it is also a useful tool in many stages of disease, reducing the appearance of treatment-related complications and side effects. Furthermore, it clearly improves the psychological aspects relating to the disease, and also enhances vitality, level of functionality and the functioning of the cardiovascular, respiratory, muscular and immunological systems.

We are in no way proposing to medicalize physical exercise, but to obtain results, to prevent and treat diseases and, to do so, as in any medical practice, we need to diagnose and establish a prescription, in this case, for physical exercise. To prescribe and train ourselves. To train ourselves to prescribe. Diagnosis and treatment are part of our very essence, and in this case as well.