

Strength training, the forgotten component when prescribing physical exercise for health

La fuerza, la olvidada en la prescripción del ejercicio físico para la salud

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The condition of being new in order to accept or reject a paradigm, is two sides of the same counterfeit coin.

Some 9 years have passed since the WHO published its recommendations on physical activity for health, offering the general public some minimum recommended targets for daily physical activity. The main new feature of this guide is the inclusion of the recommendation to perform muscle-strengthening activities (musculoskeletal strengthening) at least two or three times a week, regardless of age (in fact from 5 years upwards)¹. Even so, these recommendations are all too frequently not included in the general exercise guidelines provided by medical practitioners.

And it is even more disturbing to see how old beliefs, that are now known to be false, are still being maintained and conveyed, with regard to “how strength training for children is a bad thing” as it affects the growth cartilage, or produces myocardial hypertrophy ... or “strengthening activities are really bad for those with high blood pressure or heart conditions” etc. Numerous studies that demonstrate the safety and benefits of exercises of this type on healthy children²⁻⁴, obese individuals⁵, or with heart diseases⁶, have been published. However, despite all this scientific and professional evidence, it has not been possible to do away with these misconceptions.

Luckily for the health of the general public, physical exercise is currently being recommended for patients affected by most chronic or degenerative disorders. However, medical practitioners are still not clearly recommending muscle-strengthening activities and, in some cases, they are even expressly advising against such exercises. This point can be illustrated by a survey conducted on 272,887 non-hypertensive and 179,789 hypertensive Americans. The respondents were asked whether, during their visit to the doctor, they had been recommended

to exercise and, if so, whether they were recommended to do only aerobic exercises, solely strengthening exercises or a combination of the two⁷. 36.9% of the healthy respondents had not been advised to exercise, neither had 45.7% of the hypertensive respondents. Of those who had been advised to exercise, 23.1% and 15% were recommended to do combined exercises and 9.5% and 7.3% solely strengthening exercises, for healthy and hypertensive respondents respectively. And this is despite the consensus agreements on exercise published by the various medical specialty or patient welfare societies. Even so, unfortunately it is not uncommon for patients suffering from a chronic disease or with after-effects to be advised against strengthening exercises. This is despite the evidence to the contrary found in scientific publications, showing how important and safe it is to do strengthening exercises, either on their own or together with the traditional aerobic exercises. Such is the case for patients suffering from ischemic heart disease^{8,9}, hypertension¹⁰, diabetes¹¹, arthritis¹², osteoporosis¹³, multiple sclerosis¹⁴, cancer survivors in general¹⁵ and breast cancer survivors in particular^{16,17}, chronic obstructive pulmonary disease^{18,19}, chronic kidney disease²⁰... and a long list of other diseases and disorders.

Due to the discrepancy between what is known through science and what is recommended by medical practitioners, there are reduced possibilities of functional improvement and an improvement in the quality of life of the healthy population and infirm population alike. It would be advisable for those in sports medicine to intensify their pedagogical efforts towards general and specialty medicine with regard to the prescription of strengthening exercises. There are sufficient scientific consensuses, stances and recommendations to make it possible to correctly prescribe strength training in the healthcare context, for the general public^{21,22}, children²³, and cardiac patients²⁴.

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Although it is true that the benefits of exercise on health are related to the duration, intensity and frequency of the exercises, it is no less true that there is a relationship between the amount of strength training and its benefits on health. Not every exercise in which a resistance is successively overcome can be considered to be suitable strength training or a beneficial exercise to improve strength.

Strength training or exercises are not contraindicated. However poor training (incorrect load selection, incorrect load progression, incorrect technical execution, inadequate and unsafe means, etc.) is contraindicated.

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