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Exercise helps us to eat a healthy diet

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Many questions arise when trying to lose weight. Would it be better to start on a diet and then do exercise, or the other way around? And how much does one compensate the other?

"Understanding the interaction between exercise and a healthy diet could improve preventative and therapeutic measures against obesity by

strengthening current approaches and treatments," explains Miguel Alonso Alonso, researcher at Harvard University (USA) who has published a bibliographical compilation on the subject, to SINC.

The data from epidemiological studies suggest that tendencies towards a healthy diet and the right amount of physical exercise often come hand in hand. Furthermore, an increase in physical activity is usually linked to a parallel improvement in diet quality.

Exercise also brings benefits such as an increase in sensitivity to physiological signs of fullness. This not only means that appetite can be controlled better but it also modifies hedonic responses to food stimuli. Therefore, benefits can be classified as those that occur in the short term (of metabolic predominance) and those that are seen in the long term (of behavioural predominance).

According to Alonso Alonso, "physical exercise seems to encourage a healthy diet. In fact, when exercise is added to a weight-loss diet, treatment of obesity is more successful and the diet is adhered to in the long run."

The authors of the study state how important it is for social policy to encourage and facilitate sport and physical exercise amongst the population. This should be present in both schools and our urban environment or daily lives through the use of public transport or availability of pedestrianised areas and sports facilities.

Eating and physical activity are behaviours and are therefore influenced by cognitive processes that are a result of activity in different areas of the brain. Previous studies have already assessed changes in the brain and cognitive functions in relation to exercise: regular physical exercise causes changes in the working and structure of the brain.

The experts point out that these changes seem to have a certain specificity. The Harvard researcher supports the notion that "regular exercise improves output in tests that measure the state of the brain's executive functions and increases the amount of grey matter and prefrontal connections."

Inhibitory control is one of the executive functions of the brain and is basically the ability to suppress inadequate and non-conforming answers to an aim (the opposite of this would be impulsiveness), which makes modification or self-regulations of a behaviour possible.

With regards to losing weight and sustaining weight loss in the long run, various recent studies suggest that executive functions such as inhibitory control and optimal functioning of the brain's prefrontal areas could be the key to success. This success is mainly the fruit of a behavioural change. Inhibitory control could also help to prevent weight gain in healthy people.

The researcher outlines that "in time, exercise produces a potentiating effect of executive functions including the ability for inhibitory control, which can help us to resist the many temptations that we are faced with everyday in a society where food, especially hypercaloric food, is more and more omnipresent."

More information: R. J. Joseph, M. Alonso-Alonso, D. S. Bond, A. Pascual-Leone y G. L. Blackburn. "The neurocognitive connection between physical activity and eating behavior". *Obesity Reviews* 12, 800 octubre de 2011.

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