

Weight loss: Can additional exercising help to keep the weight off?



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A lot of people are unhappy with their weight and would like to lose weight and keep it off. Many diets and other strategies are claimed to help people lose weight, but such claims are often based on short-term success stories or the experiences of people who were particularly enthusiastic about a certain method. This means that we do not know how common it is for people to put on weight again once they stop following their weight-loss program. It is often difficult to keep weight off in the long term.

A lot of different factors can influence whether people lose or gain weight, so it is difficult to say which weight-loss strategy is most suitable. The best way to find out for sure whether a certain approach works or not is with randomized controlled trials.

When researchers carry out a trial like this on weight loss, they look for people who would like to lose weight and who volunteer to follow a program or approach which is chosen for them, rather than choosing a weight-loss strategy themselves. The participants are then divided into groups. For example, one group tries to lose weight by doing exercise and dieting, and another group is the comparison or control group. The people in this group are asked, for example, to only go on a diet, or not to change their lifestyles at all.

This means that the only difference between the people who do exercise as well as going on a diet and the other participants is that they are asked to do a special program. So, for example, they are not any more motivated than others to do exercise. If they lose more weight than other participants, it is likely that this approach would also work for other people.

Research on weight loss in overweight adults

Combining a diet and exercise is probably the most commonly recommended way to lose weight. Researchers at the University of Rio de Janeiro (Brazil) wanted to find out if there is a reliably proven difference between only dieting and both dieting and doing exercise in long-term weight loss. The researchers looked for relevant trials in which the participants were followed up one year after the

actual study had finished. The participants had to be over 18 years old and overweight. In other words, they had to have a body mass index (BMI) above 25.

The BMI is a measure which describes the relationship between body weight and height. A BMI above 25 indicates that the person is overweight, and with a BMI over 30 someone is considered to be obese.

The researchers found 33 trials in total, but only six of these compared dieting alone with dieting and exercise. Still, this was enough to help answer the question of whether exercise makes a difference. The trials were carried out in Finland and the USA. Only slightly more than 400 people took part in the trials altogether. This means that better and larger trials are still needed to be able to say what kind of weight-loss program is most likely to lead to long-term weight loss.

Another problem with these trials was that they reported how much weight the participants had lost, but did not report how many of the participants had lost weight. This means that the researchers were not able to say how likely it is that people will lose weight if they only go on a diet or also do exercise. However, they were still able to draw some clear conclusions. The participants who both dieted and did exercise lost about 30% more weight (3 kg on average). The amount of weight that each person lost varied greatly, and depended on factors like how much they had weighed to start off with.

After one year, people who did exercise still weighed less than the ones who did not

After one year all participants on average had gained half of the weight they had lost, regardless of whether they had also done exercise or only dieted. But because those who had also done exercise had lost more weight on average, they still weighed less one year after the weight-loss program had finished. According to the researchers, the trials show that the people who lost the most weight were also more likely to put on weight again. It appears to be easier to keep off weight in the long term if you lose less weight.

Since then, another group of researchers also wanted to find out whether diet alone or diet in combination with physical exercise is more helpful for losing weight and keeping it off. Studies done by researchers at Harvard University and the University of Cincinnati (U.S.) show the same trend: people who followed a diet and did

exercise at the same time were able to reduce considerably more weight than people who only followed a diet.

So what can we conclude? People lose more weight if they do exercise in addition to dieting, but are not more likely to keep the weight off than people who only diet. Still, the weight loss is greater overall because they lost more weight to start off with.

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Glossary**BMI**

The Body Mass Index (BMI) is a measurement used to assess body weight. It describes the relationship between a person's weight and height and is calculated using the following formula: $BMI = \text{weight (kg)} / \text{height (m)}^2$. For example, if you are 1.70 m tall and weigh 60 kg, you would calculate your BMI like this: $60 / (1.70 \times 1.70) = 20.76$. So this would mean that you have a BMI of around 21. People who have a BMI between 18.5 and 24.9 are considered to have a normal weight. A BMI below 18.5 is considered to be underweight, and a BMI between 25 and 29.9 is considered to be overweight. People who have a BMI over 30 are considered to be obese. The BMI only says something about people's total body weight, though, and nothing about their body fat. Two people could have the same BMI but a different amount of fat in their bodies. So a bodybuilder who has a lot of muscle tissue and little fat could have the same BMI as a person who has little muscle tissue and a lot of fat. Still, a BMI over 30 is usually a sign of a high percentage of body fat.

Sources

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Curioni CC, Lourenço PM. Long-term weight loss after diet and exercise: a systematic review. *Int J Obes* 2005; 29: 1168-1174. [Summary (URL: <http://www.ncbi.nlm.nih.gov/pubmed/15925949>)]

Wu T, Gao X, Chen M, van Dam RM. Long-term effectiveness of diet-plus-exercise interventions vs. diet-only interventions for weight loss: a meta-analysis. *Obes Rev* 2009; 10: 313-323. [Summary (URL: <http://www.ncbi.nlm.nih.gov/pubmed/19175510>)]

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