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Health Options

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Exercise helps even if genes foster obesity

A study published yesterday in the Archives of Pediatric and Adolescent Medicine reported that moderate to vigorous exercise for at least an hour per day appeared to block the effects of a known genetic predisposition to obesity in a group of teenagers.

What made this study different from similar studies is that the participants in the study wore physical activity monitors for a week to determine the amount and intensity of their daily physical activity. Those who registered at least 60 minutes of exercise per day had normal levels of body fat despite their genetic propensity for obesity. In comparison, teens with the obesity gene and less than 60 minutes of exercise per day had significantly more body fat, as expected.

Question: Does this study prove that exercise can prevent obesity?

Answer: Unfortunately, the study design can only support the conclusion that teens with this specific obesity gene are less likely to be obese if they exercise for at least an hour a day. To really prove that exercise can prevent fat gain in teens would require dividing teenagers with the obesity gene into active and inactive groups and studying them over time to see whether the active group develops less body fat.

On the positive side, these results are encouraging because they support the physical activity guidelines for youth, released in 2008 by the U.S. Department of Health and Human Services.

However, there are at least 17 human "obesity gene" alterations identified to date, and likely many more will be found. This study considered only the "FTO" gene alteration, thought to be one of the more powerful gene forms that predisposes humans to obesity. But with so many genetic factors involved, there is a complex dance going on among genetics, dietary factors and physical activity.

Q: How strong is the role of genetics in obesity?

A: Obesity researcher Dr. Claude Bouchard estimates that about 5 percent of obese people are purely genetically obese. They will be obese even with a lifestyle that would not lead to obesity in most people. For the other 95 percent, obese individuals appear to range from those with a strong genetic predisposition toward obesity to those who simply eat too much and/or move too little.

Q: Should overweight teens be encouraged to exercise to reduce their risk of obesity?

A: Definitely yes! Maintaining a healthful body weight is only one potential benefit of staying physically active. The state of fitness promotes many aspects of health regardless of the level of body fat. Research has shown that it is possible to be fit and fat. In fact, some studies even indicate that a fit overweight person can have much lower risk factors for chronic disease than a thin sedentary person.

Q: What types of physical activity are recommended for youth?

A: Virtually any type of exercise that significantly increases breathing and heart rate can provide the benefits that lead to fitness.

The most well-rounded type of fitness comes from engaging in a wide variety of activities, including those that involve aerobic or endurance exercise, strength building, coordination and flexibility. By having more than one type of exercise activity, people also are less likely to suffer from overuse injuries and are more likely to be able to stay in shape when they do experience an injury related to one of their activities.

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