



### Exercise can help dilute adult diabetes

The numbers are soaring and sobering. About one out of 10 people in Hawaii has diabetes. An estimated additional one out of 20 has undiagnosed diabetes. Along with being overweight, a major reason for this high incidence of diabetes is too little exercise.

**Question:** Why is exercise recommended for the prevention and treatment of diabetes?

**Answer:** First, we need to emphasize that this answer is only for those with type 2 diabetes, sometimes called mid-life or adult-onset diabetes. This type accounts for about 95 percent of all diabetes cases.

In type 2 diabetes, blood glucose (blood sugar) is too high most of the time and especially after eating foods high in sugar or starch.

Normally, the hormone insulin stimulates cells in the body to take up glucose from the blood and return blood glucose to its normal level

about two hours after a meal. With type 2 diabetes, either the cells don't respond normally to insulin, or the person does not produce enough insulin. Consequently, glucose remains in the blood and stays elevated for too long.

Physical activity has both short-term and long-term benefits. Light - to moderate-intensity exercise has an insulinlike effect of lowering blood glucose during exercise. Also, for 12 to 24 hours after the exercise, cells are more responsive to insulin's effects. Fitness-related effects of regular physical activity enhance long-term control of blood glucose even more.

**Q:** What are the usual exercise guidelines for those with type 2 diabetes?

**A:** The American College of Sports Medicine, which considers adequate physical activity to be essential for treating diabetes, has these recommendations:

>> Strive to accumulate at least 1,000 calories of physical activity each week (at least 30 minutes of light-to-moderate activity for a minimum of five days a week). This can be done in multiple 10-minute segments throughout the day.

>> If you are out of shape, take it easy at first, with exercise of fairly light intensity. If the exercise feels somewhat hard, you should ease up.

>> Those who have developed complications of diabetes must be cautious. The exercises they select should not be difficult nor aggravate their complications.

If you have diabetes, work with your physician to find the best level and type of activity for you. Also, ask to visit a certified diabetes educator to learn how to balance exercise with diet and lifestyle. For further dietary guidance, consider meeting with a dietitian specializing in medical nutrition therapy for diabetes.

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