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Sweat off chance of getting diabetes

By Ira Dreyfuss
The Associated Press

WORKING UP a sweat can lower your odds of developing diabetes.

Experts say exercise reduces the risk of getting the most common form of the disease, adult-onset diabetes.

Men and women who keep active reduced their risk by about one-third, says Dr. Jo Ann Manson, a researcher at Harvard Medical School and Boston's Brigham and Women's Hospital, which is affiliated with the school.

Researchers are not sure how much exercise or which type works best, but the benefit seems to rise with more effort, she says.

In a study of more than 27,000 male physicians across North America, those active enough to sweat at least five times a week had a 42 per cent reduction in diabetes risk, she says. The rate dropped to 38 per cent for those active two to four times a week, and 23 per cent for those who were active only once a week.

The overall benefit for men was a 36 per cent reduction, she says.

A similar study involving more than 87,000 nurses found overall risk of diabetes dropped about one-third for those who exercised at least once a week, Manson says.

The women studied did not parallel men in seeing greater risk reductions with more exercise, but the researcher says this may be more a problem with the data than a real lack of benefit.

"I don't think there was a true biological difference," she says.

Exercise reduces the size of fat cells, and obesity is a major risk factor for diabetes, says Dr. Walter Willett, an epidemiologist and a colleague of Manson's.

But exercise also seems to have a separate benefit in making cells more sensitive to insulin and thereby better able to process sugar, he adds.

In adult-onset diabetes, cells' receptors for the hormone insulin malfunction. Because the receptors tell cells to absorb the sugar glucose, their loss cuts the ability of muscles to draw in glucose for fuel, he says. This leaves excess glucose in the blood.

When you exercise, Willett says your mus-

cles somehow become better at getting glucose, which lowers the excess blood sugar, and if you exercise regularly, you build muscle which adds to the effect.

One good workout can increase insulin sensitivity for 24 to 36 hours, but the benefit fades afterward, says researcher Karen Segal of Cornell University Medical Center at New York Hospital in New York City. She thinks the lingering value of exercise is in reducing fat.

Segal and her colleagues had 10 normal lean men, 10 normal obese men and six obese diabetic men exercise vigorously for one hour a day, four days a week, for 12 weeks. The researchers kept the men's weight steady by making sure they ate as many extra calories as the exercise burned off.

At the end, the men were, on average, 27 per cent more physically fit, but none had a greater sensitivity to insulin that remained longer than the typical 36 hours, she says.

"If you want to exercise," Segal says, "the objective should not merely be to increase fitness but it should be performed regularly, so you are always in the post-exercise state."

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