

Physical activity may not be key to obesity epidemic

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A recent international study fails to support the common belief that the number of calories burned in physical activity is a key factor in rising rates of obesity.

Researchers from Loyola University Health System and other centers compared African American women in metropolitan Chicago with women in rural Nigeria. On average, the Chicago women weighed 184 pounds and the Nigerian women weighed 127 pounds.

Researchers had expected to find that the slimmer Nigerian women would be more physically active. To their surprise, they found no significant difference between the two groups in the amount of calories burned during physical activity.

"Decreased physical activity may not be the primary driver of the obesity epidemic," said Loyola nutritionist Amy Luke, Ph.D., corresponding author of the study in the September 2008 issue of the journal *Obesity*. Luke is an associate professor in the Department of Preventive Medicine and Epidemiology at Loyola University Chicago Stritch School of Medicine.

Physical activity is defined as anything that gets your body moving. U.S. government guidelines say that each week, adults need at least 2 ½ hours of moderate aerobic activity (such as brisk walking) or 75 minutes of vigorous activity (such as jogging). Adults also should do muscle-strengthening activities, such as weight-lifting or sit-ups, at least twice a

week.

Physical activity has many proven benefits. It strengthens bones and muscles, improves mental health and mood, lowers blood pressure, improves cholesterol levels and reduces the risk of cardiovascular disease, diabetes, breast cancer and colon cancer.

But Loyola research suggests that weight control might not be among the main benefits. People burn more calories when they exercise. But they compensate by eating more, said Richard Cooper, Ph.D., co-author of the study and chairman of the Department of Preventive Medicine and Epidemiology.

"We would love to say that physical activity has a positive effect on weight control, but that does not appear to be the case," Cooper said.

The recent study included 149 women from two rural Nigerian villages and 172 African American women from the west side of Chicago and suburban Maywood.

Adjusted for body size, the Chicago women burned an average of 760 calories per day in physical activity, while the Nigerian women burned 800 calories. This difference was not statistically significant.

Diet is a more likely explanation than physical activity expenditure for why Chicago women weigh more than Nigerian women, Luke said. She noted the Nigerian diet is high in fiber and carbohydrates and low in fat and animal protein. By contrast, the Chicago diet is 40 percent to 45 percent fat and high in processed foods.

Results of the new study are similar to those of a 2007 study of men and women in Jamaica. Researchers from Loyola and other centers found there was no association between weight gain and calories burned during

physical activity.

"Evidence is beginning to accumulate that dietary intake may be more important than energy expenditure level," Luke said. "Weight loss is not likely to happen without dietary restraint."

Source: Loyola University

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