

Obesity might slow you down at work

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(HealthDay News)—People who are obese and work in manufacturing jobs may have significantly less endurance than those who weigh less, a new research suggests.

In a study of 32 people—half were obese, half were of normal weight—people who were not obese had endurance times that were about 60 percent longer. Obesity also was associated with less strength, increased discomfort and declines in task performance.

Being older—50 to 65 years of age—neither improved nor reduced a person's ability to perform tasks based on weight.

The research suggests that ergonomic guidelines for today's workplace are probably not effective in a society that, by and large, has a wider waistline, said Lora Cavuoto, lead author of the study, and assistant professor in the department of industrial and systems engineering at the University at Buffalo, State University of New York.

"We have been relying on models that have been around 40 to 50 years, based on a normal population, and they don't take [obesity](#)-related requirements into account," said Cavuoto. "The differences in endurance that we found were significant because we use endurance a lot in defining work and determining how much rest people will need."

When it comes to having less endurance, it is unclear which comes first: difficulty moving and exercising—which can contribute to significant weight gain—or obesity, which tends to reduce one's ability to be active,

noted Cavuoto. "We can't prove causality in the study; we're just saying there is a relationship between the two.

Worldwide, there are more than 1.5 billion adults who are classified as overweight, and the prevalence of obesity has more than doubled over the past 30 years, according to the researchers.

Obesity can affect the way muscles work, decreasing blood flow and thus reducing the amount of oxygen and energy that reaches the muscles, the authors explained. When contracting muscles for a sustained period of time, people who are obese can experience muscle fatigue sooner than others.

The research applies most to industrial environments where the tasks are repetitive and controlled, explained Cavuoto. In other jobs that require physical stamina, such as nursing, police and fire jobs, or even postal and delivery work, people typically perform a wider range of activities, so problems may be less noticeable. "But there will still be some effects," she said.

Today's workers who are obese may need more mini-breaks, explained Cavuoto. "Short periods of rest can have a big impact in getting the muscle back to its full capacity." While the amount of time a person might need to rest depends on the activity, even a few seconds of rest can help a muscle recover, she added.

The research is in the September issue of *Journal of Occupational and Environmental Hygiene*.

For the study, the participants were divided into four groups of eight people each, based on age and obesity level: non-obese young, obese young, non-obese older, and obese older. Young people were defined as between 18 and 25 years of age, and older people were between 50 and

65 years of age. Obesity level was based on BMI, a number that estimates a person's body mass that's calculated from a person's weight and height.

The participants did three different tasks that involved squeezing an object, flexing their shoulders, and assembling small metal pieces into a pegboard. They were asked to continue until they felt they could no longer perform the task. After they stopped they reported their level of discomfort on a 10-point scale.

While the researchers took into account whether the participants had any previous injuries that might affect the completion of their tasks, they did not note whether the participants had [high blood pressure](#) or diabetes, health issues sometimes associated with obesity.

Gary Hunter, a professor and director of the physical activity lab at the Nutritional Obesity Research Center at the University of Alabama, in Birmingham, said the decreased [endurance](#) the researchers found among obese participants is probably caused by both difficulty exercising and the obesity itself.

"Obese people probably have a little more difficulty doing things, especially things that require them to move their body or their arms."

Hunter said that he has found that some people who are overweight are prone to "overperceiving," that is, sensing fatigue and the need to slow down long before others might feel that way.

Hunter said the only way to solve the problem—whether it is obesity causing the fatigue or fatigue contributing to the obesity—is through strength training, also called resistance training. "You don't necessarily have to do a large amount of exercise. We're talking about 30 minutes twice a week," he said.

Gradually, people will get stronger, use less energy to do tasks, function better on the job, and feel less discomfort, he explained.

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