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## **Weight gain early in life leads to physical disabilities in older adults**

WINSTON-SALEM, N.C. – Carrying extra weight earlier in life increases the risk of developing problems with mobility in old age, even if the weight is eventually lost, according to new research out of the Sticht Center on Aging at Wake Forest University School of Medicine.

The study, funded by the National Institute on Aging and the Wake Forest University Claude D. Pepper Older Americans Independence Center, appears in the April 15 issue of the *American Journal of Epidemiology*.

"In both men and women, being overweight or obese put them at greater risk of developing mobility limitations in old age, and the longer they had been overweight or obese, the greater the risk," said lead investigator Denise Houston, Ph.D., R.D., an assistant professor of gerontology at the School of Medicine and an expert on aging and nutrition. "We also found that, if you were of normal weight in old age but had previously been overweight or obese, you were at greater risk for mobility limitations."

Houston added that dropping weight later in life can lead to problems with mobility because weight loss later in life is usually involuntary and the result of an underlying chronic condition.

The study is based on data collected in the Health, Aging and Body Composition study, which enrolled Medicare recipients in Pittsburgh, Pa., and Memphis, Tenn., between April 1997 and June 1998. Participants had to be well-functioning, living in the community, and free of life-threatening illness.

The researchers defined mobility limitation as difficulty walking a quarter-mile or climbing 10 steps. They analyzed information from 2,845 participants who were on average 74 years old. Participants reported no problems with mobility at the beginning of the study. Information on new mobility limitations was collected every six months over seven years of follow-up.

Using participants' body mass index (BMI), a measurement equal to a person's weight in kilograms divided by height in meters squared, at different age intervals, the researchers found that women who were overweight or obese (BMI of 25 or greater) from their mid-20s to their 70s were nearly three times more likely to develop mobility limitations than women who were normal weight throughout. The risk for men was slightly less – they were about 1.6 times more likely to develop mobility limitations, according to the study.

The study also found that women who were obese (BMI of 30 or greater) at age 50, but not in their 70s, were 2.7 times more likely to develop mobility limitations compared to women who were not obese throughout. Men who were obese at 50, but not in their 70s, were 1.8 times more likely to develop mobility limitations than men who never carried the extra weight.

Carrying extra weight can strain joints, hinder exercise and lead to chronic conditions, such as diabetes, arthritis and heart disease, that are directly related to the development of mobility limitations, Houston said.

The results are significant, Houston added, because the elderly population in the United States is growing, and is expected to double by the year 2030 to about 20 percent.

"Over the past couple of decades there has been a trend towards declining rates of physical disability in older adults," Houston said. "However, the dramatic increase in overweight and obesity in the United States may reverse these declines and may lead to an increase in physical disability among future generations of older adults. The data suggest that interventions to prevent overweight and obesity in young and middle-aged adults may be useful in preventing or delaying the onset of mobility limitations later in life."

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Co-authors on the study are Jingzhong Ding, Ph.D., Barbara J. Nicklas, Ph.D., and Stephen B. Kritchevsky, Ph.D., all of the School of Medicine's Sticht Center on Aging; Tamara B. Harris, M.D., M.S., of the National Institute on Aging; Jung Sun Lee, Ph.D., of the University of Georgia; Michael C. Nevitt, Ph.D. and Susan M. Rubin, M.P.H., of the University of California; and Frances A. Tylavsky, Ph.D., of the University of Tennessee Health Science Center.

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