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Extra Pounds at Midlife May Boost Dementia Risk Later

HealthDay
May 03, 2011

Being merely overweight in middle age raised risk by 70% compared to normal-weight peers, experts find

Being overweight during middle age may increase your risk of developing dementia later on, a new Swedish study suggests.

Several studies have already linked obesity in middle age to dementia in later life, but it was unclear whether merely carrying some extra pounds in midlife was a risk factor. The new research suggests that even being overweight -- defined as having a body mass index (BMI) of 25 to 30 -- is linked with a higher risk of dementia.

"Being overweight at midlife increased the risk of dementia in late life by more than 70 percent," said lead study author Dr. Weili Xu, a postdoctoral researcher at Karolinska Institute in Stockholm.

Being obese raised the risk even more, to nearly fourfold.

"Although the effect of midlife overweight on dementia is not as substantial as that of obesity, its impact on public health is significant," Xu said, noting that 1.6 billion adults worldwide are obese or overweight, including 50 percent of adults in the United States and Europe.

The study is published in the May 3 issue of *Neurology*.

In her study, Xu analyzed information from the Swedish Twin Registry. It included data on 8,534 twins aged 65 and older. Of those, 350 were diagnosed with dementia and 114 with possible dementia.

Thirty years earlier, the participants had provided what then must have seemed like mundane data: their height and weight.

That data would prove invaluable as Xu grouped them according to their BMIs, from underweight to obese (having a BMI higher than 30). Nearly 30 percent, she found, were either overweight or obese during midlife.

Further analysis showed that being overweight or obese in midlife independently increased the risk of later dementia, including Alzheimer's and vascular dementia.

About 26 percent of participants without dementia had been overweight at midlife, compared to 36 percent of those with possible dementia and 39 percent with diagnosed dementia.

And although 2.7 percent of seniors without dementia had been obese at midlife, 6.9 percent of those with dementia had been obese, as well as 5.3 percent of those with possible dementia.

When Xu analyzed twin pairs in which one had dementia in later life and one did not, she found the link to weight no longer significant, suggesting early environment and genetics also play roles in dementia.

Why the weight-dementia link? Several mechanisms could explain it, Xu said. A higher BMI is linked with diabetes and vascular disease, which is in turn related to the risk of dementia. Higher weight at midlife may reflect a long period of exposure to higher inflammation throughout the body, which has been linked with lower cognitive function.

Xu and her colleagues noted several study limitations, including the notion that BMI may not be the perfect measure of body fat composition.

They also noted that in terms of lowering dementia risk, it's never too late to start reducing body fat.

The study has a number of strengths, including the large number of people studied, according to Dr. Gary Kennedy, director of geriatric psychiatry at Montefiore Medical Center and professor of psychiatry and behavioral science at Albert Einstein College of Medicine in the Bronx.

Although the study finds a link between being overweight in midlife and dementia risk, it does not prove cause-and-effect, he said. Still, there is evidence that fatty tissue secretes inflammatory cytokines and other chemicals. These may have a direct effect on the brain, he said, inflicting damage to the neurons.

Dr. Gisele Wolf-Klein, director of geriatric education at the North Shore-Long Island Jewish Health System in Hyde Park, N.Y., said the study "is of great relevance in view of the growing epidemic of obesity in both the United States and Europe."

More information

- To learn more about body mass index, visit the U.S. National Heart, Lung, and Blood Institute.

SOURCES: Weili Xu, M.D., Ph.D., postdoctoral researcher, Karolinska Institute, Stockholm, Sweden and associate professor, Tianjin Medical University, Tianjin, China; Gary Kennedy, M.D., director of geriatric psychiatry, Montefiore Medical Center and professor of psychiatry and behavioral sciences, Albert Einstein College of Medicine, Bronx, N.Y.; Gisele Wolf-Klein, M.D., director of geriatric education, North Shore-LIJ Health System, New Hyde Park, N.Y.; May 3, 2011, *Neurology*