

PTSD raises risk for obesity in women

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Women with post-traumatic stress disorder (PTSD) gain weight more rapidly and are more likely to be overweight or obese than women without the disorder, find researchers at Columbia University's Mailman School of Public Health and Harvard School of Public Health. It is the first study to look at the relationship between PTSD and obesity over time. Results appear online in *JAMA Psychiatry*.

One in nine [women](#) will have PTSD at sometime over the course of their lifetime—twice as often as men. Women are also more likely to experience extreme traumatic events like rape that carry a high risk for the disorder.

"PTSD is not just a mental health issue," says study senior author Karestan Koenen, PhD, Mailman School associate professor of Epidemiology. "Along with cardiovascular disease and diabetes, we can now add [obesity](#) to the list of known health risks of PTSD."

"The good news from the study is that it appears that when PTSD [symptoms](#) abate, risk of becoming overweight or obese is also significantly reduced," says first author Laura D. Kubzansky, PhD, Professor of Social and Behavioral Sciences at Harvard School of Public Health. However, despite the growing evidence of potential far-reaching problems associated with PTSD, it's estimated that only half of women in the United States with the disorder are ever treated. "Hopefully, wider recognition that PTSD can also influence physical health will improve this statistic, leading to better screening and treatments, including those to prevent obesity," says Dr. Kubzansky.

While it's known that women with PTSD have high rates of obesity, it has been unclear whether PTSD was actually driving the [weight gain](#). To explore the issue, the researchers analyzed data collected from 50,504 women, aged 22-44 years, taking part in the Nurses' Health Study II between 1989 and 2009. Participants were asked about the worst trauma they experienced and if they had related post-traumatic [stress symptoms](#). The threshold for PTSD was the persistence of four or more symptoms over a month or longer. Common symptoms include re-experiencing the traumatic event, feeling under threat, social avoidance, and numbness.

Normal-weight women who developed PTSD during the study period had 36% increased odds of becoming overweight or obese compared with women who experienced trauma but had no symptoms of PTSD. The higher risk was evident even for women with sub-threshold symptoms levels and remained after adjusting for depression, which has also been proposed as a major risk factor for obesity. In women with PTSD that began prior to the study period, body mass index increased at a more rapid pace than women without PTSD.

The observed effect of PTSD on obesity is likely stronger in the general population of women than in nurses, notes Dr. Koenen. "Nurses are great for studies because they report health measures like BMI with a high degree of accuracy. But they are also more health conscious and probably less likely to become obese than most of us, which makes these results more conservative than they would otherwise be."

Symptoms of PTSD rather than the trauma itself seemed to be behind the weight gain. "We looked at the women who developed PTSD and compared them to women who experienced trauma but did not develop PTSD. On the whole, before their symptoms emerged, the rate of change in BMI was the same as the women who never experienced trauma or did experience trauma but never developed symptoms," says Dr. Kubzansky.

How exactly does PTSD lead to weight gain? The biological pathway is unknown, but scientists have a number of guesses. One is through the over-activation of stress hormones. PTSD may lead to disturbances in functioning of the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system, each of which are involved in regulating a broad range of body processes, including metabolism. Another is through unhealthy behavior patterns that may be used to cope with stress. Ongoing research is looking at whether PTSD increases women's preference for processed foods and decreases their likelihood of exercising.

Provided by Columbia University's Mailman School of Public Health

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