

# Duration of adulthood overweight and obesity linked to cancer risk in US women

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The duration of overweight and obesity in women's adult lives is associated with cancer risk, according to a longitudinal study published in *PLOS Medicine*. The study, led by Melina Arnold of the International Agency for Research on Cancer (IARC), the specialized cancer agency of the WHO, in Lyon, France, and Professor Hoda Anton-Culver at the University of California, Irvine, uses United States Women's Health Initiative (WHI) data to identify dose-response relationships between duration of high body mass index (BMI) and the risk of developing several types of cancer.

To date, most studies exploring the relationship between excess weight and [cancer risk](#) looked at cross-sectional information on overweight and obesity. Using multiple BMI measurements over time from approximately 74,000 women (with over 6,000 cancers diagnosed during the 12.6-year mean follow-up), Arnold and colleagues examined the association between duration of overweight, obesity and cancer risk, taking into account other factors related to obesity, such as physical activity, diet, smoking, hormone use, and diabetes. They found every ten-year increase in adulthood overweight duration was associated with a 7% (95% confidence interval 6%-9%) increase in the risk of all obesity-related cancers, 5% (3%-7%) increase in risk of postmenopausal breast cancer, and 17% (12%-22%) increase in the risk of developing endometrial cancer. After adjusting for the intensity of overweight, these figures rose to 8% (5%-12%) for postmenopausal breast cancer and 37% (29%-46%) for endometrial cancer.

BMI is not an ideal measure for body fat, and the WHI cohort is dominated by non-Hispanic white women. While these aspects of study design limit generalizability of the findings, the large scale of the study and longitudinal BMI data provide compelling evidence that overweight duration is an important risk factor for cancer. The authors state, "*f this is true, health care teams should recognize the potential of [obesity](#) management in cancer*

*prevention and that excess body weight in women is important to manage regardless of the age of the patient."*

**More information:** Arnold M, Jiang L, Stefanick ML, Johnson KC, Lane DS, LeBlanc ES, et al. (2016) Duration of Adulthood Overweight, Obesity, and Cancer Risk in the Women's Health Initiative: A Longitudinal Study from the United States. *PLoS Med* 13(8): e1002081. [DOI: 10.1371/journal.pmed.1002081](#)

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