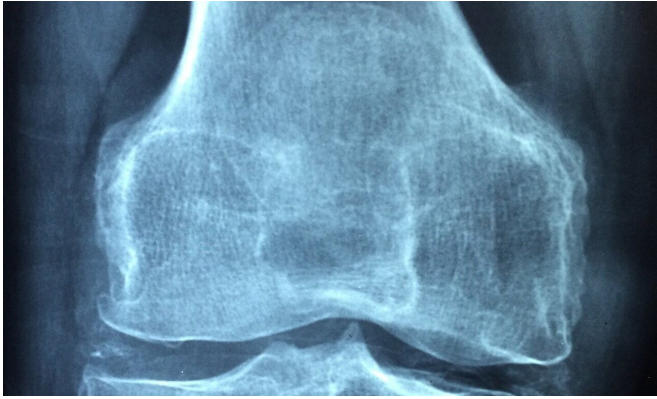


A quarter of arthritis cases linked to excess weight

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A new Boston University School of Public Health (BUSPH) study shows that weight loss between early adulthood and midlife lowers arthritis risk, and found no evidence of any persistent risk of arthritis for people who were heavier earlier in life and then lost weight.

The study, published in the journal *Arthritis Care & Research*, also estimates that nearly a quarter of arthritis cases in the U.S., corresponding to 2.7 million people, are attributable to excess [weight](#).

"Policies that address the social and structural factors that promote weight gain are urgently needed. Our findings suggest that such measures could have a significant impact on reducing the incidence of arthritis, a leading cause of disability and [chronic pain](#) in the US," says study corresponding author Dr. Andrew Stokes, assistant professor of global [health](#) at BUSPH.

"Although [weight loss](#) could represent a viable way to reduce arthritis risk at the individual level, we found that the best solution at the population level would be to prevent [weight gain](#)," says study lead author and BUSPH alumna Kaitlyn Berry, who was

a research fellow at BUSPH while working on the study and is now at the University of Minnesota School of Public Health.

The researchers used data from the National Health and Nutrition Examination Survey (NHANES) on adults 40-69 years old, to categorize individuals based on the changes in their body mass indices (BMI) from [early adulthood](#) to mid-life, and analyzed the association between these BMI trajectories and the risk of developing an arthritis condition within 10 years.

Of the 13,669 people in the study, 3,603 developed an arthritis condition. Compared with those who had a BMI in the "normal" range in both early adulthood and middle age, those who went from the "normal" range to the "overweight" or "obese" ranges, those who went from the "overweight" range to the "obese" range, and those whose BMIs were in the "obese" range at both points were all significantly more likely to develop arthritis conditions.

On the other hand, those whose BMIs went from the "obese" down to the "overweight" range had a significantly lower risk of developing arthritis compared to those whose BMI remained in the "obese" range. Additionally, those who lost weight had the same likelihood of developing [arthritis](#) as those whose BMIs stayed in the "overweight" range.

"These findings highlight the need for lifelong public health measures to prevent obesity at younger ages as an important step to curb later life musculoskeletal and joint health problems such as osteoarthritis. This is particularly important as musculoskeletal pain is a leading cause of disability globally," says study co-author Dr. Tuhina Neogi, professor of epidemiology at BUSPH, professor of medicine at the Boston University School of Medicine, and chief of rheumatology at Boston Medical Center.

More information: Kaitlyn M. Berry et al, Obesity Progression between Young Adulthood and Midlife and Incident Arthritis: A Retrospective Cohort Study of US Adults, *Arthritis Care & Research* (2020).

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