

# Leptin may mediate knee-related osteoarthritis

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suggest that the leptin effect on the relationship between BMI and knee OA may be statistically significant.

"We found that almost half of the association between elevated BMI and [knee](#) OA could be explained by the inflammatory adipokine leptin," the authors write.

**More information:** [Abstract](#)  
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(HealthDay)—The inflammatory adipokine leptin may have a mediating effect on the relationship between body weight and knee osteoarthritis (OA) in older adults, according to research published in the January issue of *Arthritis & Rheumatology*.

Angela Fowler-Brown, M.D., M.P.H., of the Beth Israel Deaconess Medical Center in Boston, and colleagues analyzed baseline data for 653 participants, aged 70 years or older, enrolled in the population-based Maintenance of Balance, Independent Living, Intellect, and Zest in the Elderly Boston Study. The effect of leptin on the [relationship](#) between body mass index (BMI) and knee OA was assessed.

The researchers found that the prevalence of knee OA among the participants was 24.7 percent; average BMI was 27.5 kg/m<sup>2</sup> and average leptin level was 589 pM. A 5 kg/m<sup>2</sup> increase in BMI was associated with a 32 percent increase in risk of knee OA. A 200 pM increase in serum leptin levels was associated with an 11 percent increase in risk of knee OA. Calculations of the ratio of the standardized coefficients for the indirect:total effect using the product-of-coefficients method indicate that about one-half of the total effect of BMI on knee OA may be mediated by the serum leptin level. Estimates of the 95 percent confidence intervals for this effect and mediation analysis

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