

Poor thigh muscle strength may increase women's risk of knee osteoarthritis

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A new study has found that poor strength in the thigh muscles may increase the risk of knee osteoarthritis in women but not men. This relationship was confounded by body mass index (BMI), which itself is known as a risk factor for knee osteoarthritis.

The study's investigators noted that there may be more contractile tissue (and strength) present in men with greater BMI and more non-contractile (fat) tissue in women with greater BMI. The sex-specific relationship between muscle strength and BMI provides a possible explanation for why women with muscle strength deficits typically have a poorer prognosis than men with similar deficits.

"Our results highlight the importance of maintaining thigh [muscle strength](#) to reduce the risk of knee osteoarthritis development, particularly in women," said Dr. Adam Culvenor, lead author of the *Arthritis Care & Research* study. "The different relationships we observed between muscle weakness, muscle size, BMI and knee osteoarthritis development in men and women suggest that the mechanism by which BMI increases the risk of [knee osteoarthritis](#) is sex-specific and may require distinct treatment approaches."

More information: Adam G. Culvenor et al, Thigh muscle specific strength and the risk of incident knee osteoarthritis: The influence of sex and greater body mass index, *Arthritis Care & Research* (2016). [DOI: 10.1002/acr.23182](https://doi.org/10.1002/acr.23182)

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