

# Genetic score predicts individuals' risk of needing knee and hip replacements

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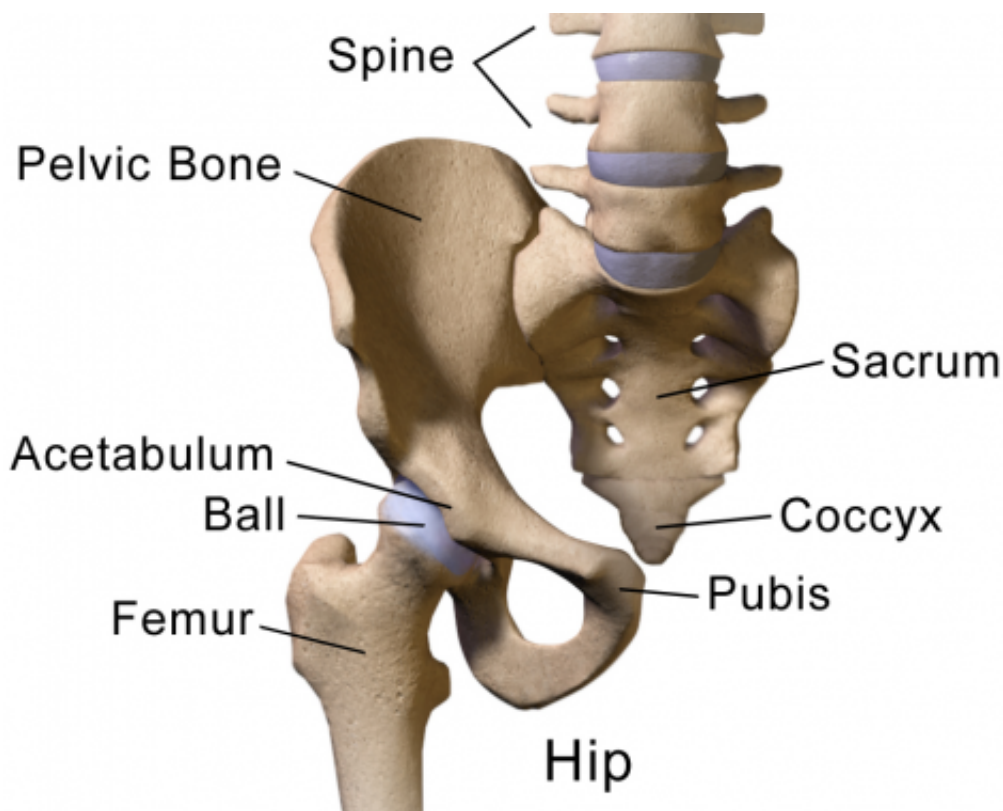


Illustration of Hip (Frontal view). Credit: Wikipedia

A research team has developed a risk score based on individuals' genetic data to predict their likelihood of needing hip or knee replacement surgery for osteoarthritis. The score's predictive ability was validated in a study published in *Arthritis & Rheumatology*.

The score incorporates 10 genetic sequence variants for predicting a person's risk of needing [knee replacement surgery](#) and 37 genetic sequence variants for predicting the risk of needing hip replacement surgery.

Among 12,093 individuals of European genetic descent aged  $\geq 70$  years, 1,422 (11.8%) had knee replacements and 1,297 (10.7%) had hip replacements. Participants with high risk scores had a 1.44-times higher odds of knee replacement and a 1.88-times higher odds of hip replacement, compared with those with low risk scores.

"Genetic scores, such as the one we developed, do not change over a person's life. They provide an individual with further information about their risk of severe osteoarthritis in later life and have the potential to improve prevention of severe knee and hip osteoarthritis by identifying those who may benefit from early intervention," said senior author Flavia Cicuttini, Ph.D., of Monash University, in Australia.

**More information:** Genomic risk score for advanced osteoarthritis in older adults, *Arthritis & Rheumatology* (2022). [DOI: 10.1002/art.42156](https://doi.org/10.1002/art.42156)

Provided by Wiley

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