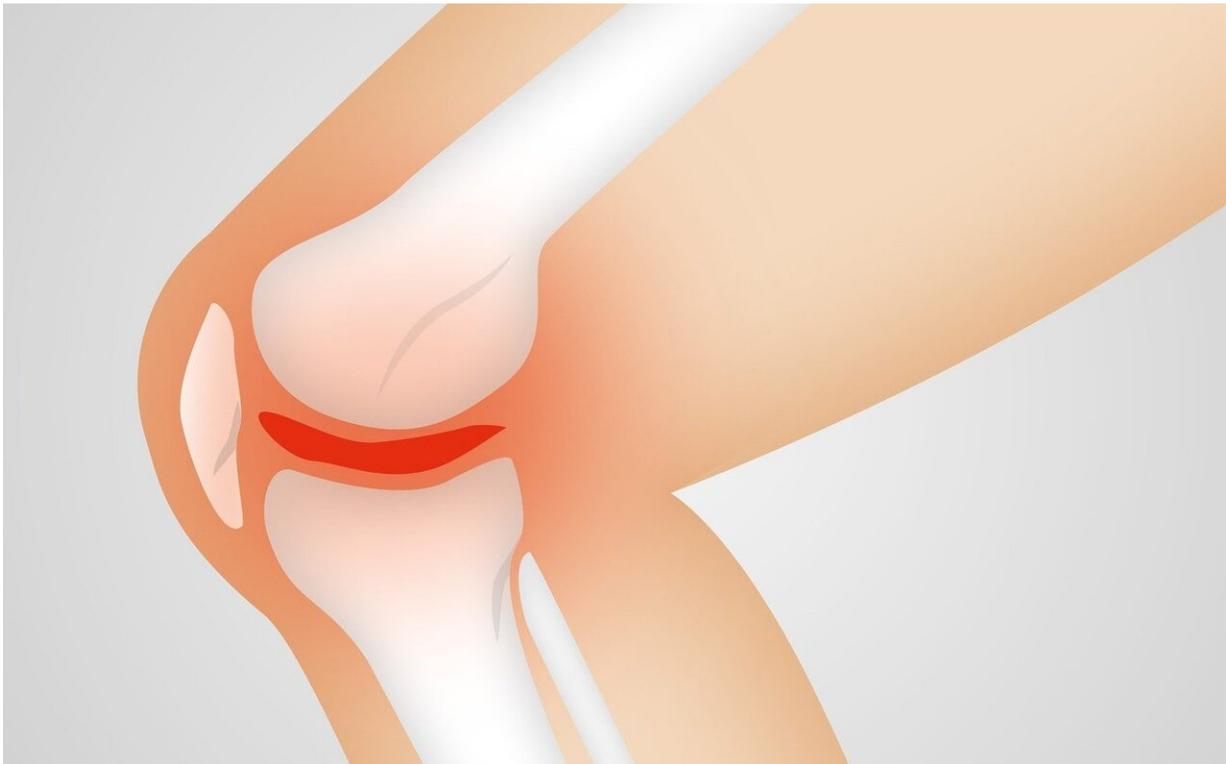


Many risk factors contribute to worsening of quality of life in people with knee OA

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A new study from the University of Eastern Finland shows that the health-related quality of life of most people who have had or have a higher risk of knee osteoarthritis remained unchanged over an eight-year trajectory. Worsening of quality of life was associated with several risk

factors, such as obesity and smoking, and it also reflected the patient's need for treatment. Published in *PLOS ONE*, the findings can help to identify patients who will benefit from early treatment.

Osteoarthritis (OA) is the most common type of arthritis and one of the most disabling diseases. While the root cause of [osteoarthritis](#) remains unknown, ageing, obesity and joint injuries have been found to be major risk factors. It is estimated that [knee](#) osteoarthritis affects more than 10% of individuals aged over 60 years. The societal burden is made up of different costs, for example, joint replacement surgeries, sickness benefits and disability pensions. At an individual level, [joint pain](#), activity limitations and worsening of [quality of life](#) are major consequences of knee osteoarthritis. Health-related quality of life refers to subjective experience of one's health.

Several international studies have identified distinctive subgroups in the evolution of knee pain and also in the functional limitations experienced by persons with knee OA. The newly published study focused on changes in the health-related quality of life in individuals with mild or moderate knee OA as well as in individuals at an increased risk of knee OA. The researchers used group-based trajectory modelling to identify patient subgroups with similar change patterns in their quality of life. The study participants were classified into groups on the basis of changes occurring in their quality of life during an eight-year follow-up. The researchers also used statistical modelling to explore the associations of patient-specific [risk factors](#), joint replacement surgeries and pain medication use with the health-related quality of life trajectory.

Four health-related quality of life trajectory groups were identified. 62.9% of the study participants belonged in the "no change" group that experienced no worsening in their quality of life. The quality of life worsened "slowly" in 17.1% of the study participants and "rapidly" in 9.5%, while 10.4% experienced their quality of life as "improving".

Female gender, higher body mass index, smoking, knee pain and [lower income](#) at baseline were associated with rapidly worsening quality of life. During the follow-up, 8.2% of the study participants in the rapidly worsening group, and 4.8% in the slowly worsening group underwent joint replacement surgery. In the "no change" group, the percentage was as low as 1.4%.

Furthermore, the use of pain medications was lowest in the "no change" group, where 22-32% of the participants reported pain medication use. In other groups, 29-45% of the participants reported [pain](#) medication use.

The findings show that the health-related quality of life trajectory in people with knee osteoarthritis varies from one patient group to the next, and that the patient's subjective experience of quality of life reflects their need for treatment. These observations can help to identify patients with knee OA who are at risk of worsening quality of life and who could benefit from early treatment. The findings can also provide insight for surveys addressing health care resources. According to the researchers, increasing attention should be paid on patients' subjective experience of their health-related quality of life. In the case of chronic diseases, measuring the patient's quality of life provides valuable information on the efficacy of different treatments, among other things.

Data used in the study were obtained from the Osteoarthritis Initiative (OAI) database. The OAI is a longitudinal cohort study on knee OA, hosted by the US National Institutes of Health: data-archive.nimh.nih.gov/oai/.

More information: Soili Törmälehto et al, Eight-year trajectories of changes in health-related quality of life in knee osteoarthritis: Data from the Osteoarthritis Initiative (OAI), *PLOS ONE* (2019). [DOI: 10.1371/journal.pone.0219902](https://doi.org/10.1371/journal.pone.0219902)

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