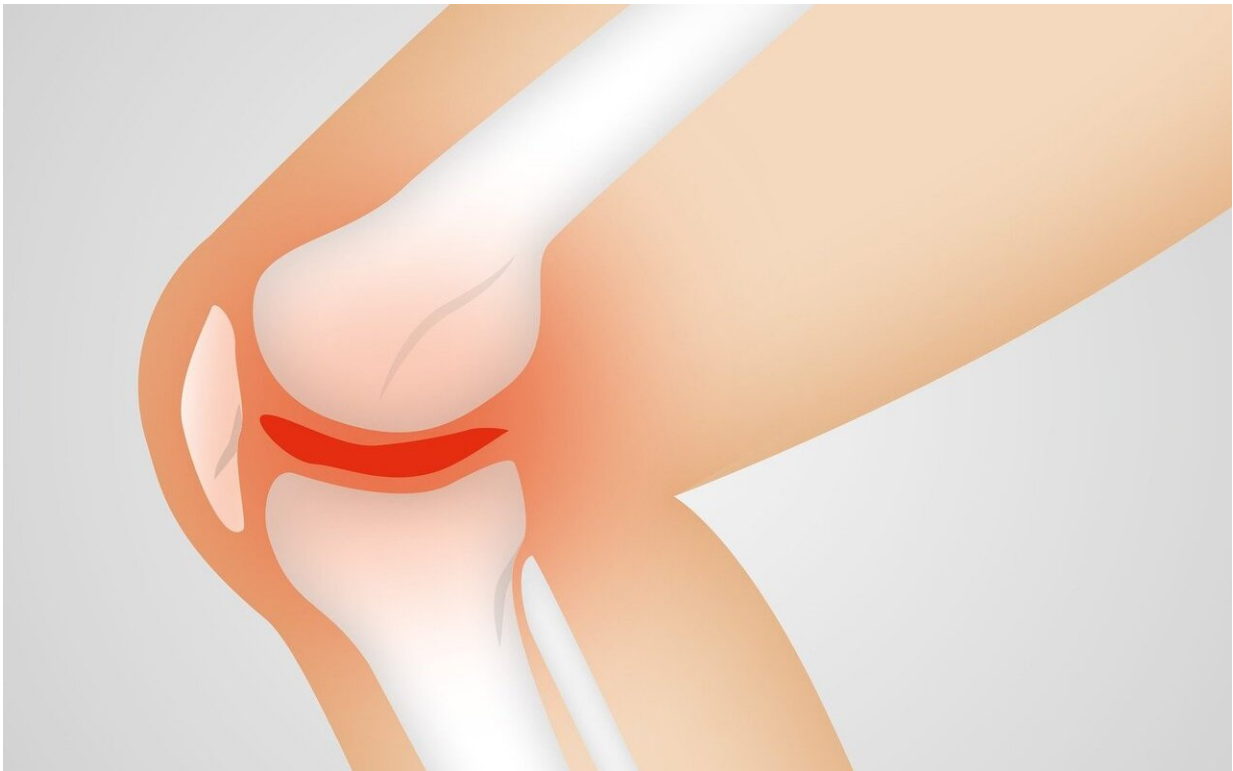


We are getting older and heavier, and osteoarthritis is increasing

August 8 2023



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The number of patients with osteoarthritis has increased dramatically since the 1950s. Along with diabetes, the illness is now one of the fastest-growing endemic diseases in the world. Andrea Dell'Isola, an associate professor at the Department of Clinical Sciences at Lund University in

Sweden, investigating the connection between osteoarthritis and metabolic diseases in a new research project.

About 10% of the population in Sweden is thought to have [osteoarthritis](#) in at least one joint. Among those 65 and over, as many as one in three suffer from the disease, with the most common symptoms being pain in the knees, hips, hands and feet. In patients with osteoarthritis, the joints can swell and might also feel stiff, causing reduced mobility. A diagnosis of osteoarthritis affects quality of life and increases the risk of depression and cardiovascular disease. However, despite its increasing incidence, understanding of the disease remains limited.

"People often consider it an ordinary part of aging, that it is normal for one to experience pain in the knees, hips, or hands when they are 60 or 70 years old—it is an illness and a big problem that is going to get even bigger. People who have pain in their joints are sometimes unable to work or do ordinary daily tasks such as shopping for groceries. When you are less active and have a less healthy lifestyle, other illnesses can sneak up on you," says Dell'Isola, associate professor at the Department of Clinical Sciences at Lund University.

Osteoarthritis is increasing

Figures show that the number of patients in Sweden diagnosed with osteoarthritis has risen by 45% since 1990. Several factors are likely to be behind this development. We are getting older and heavier, and becoming less active while at the same time eating more unhealthy food. The increase is also partly a result of joint injuries earlier in life.

Dell'Isola, who started out as a physiotherapist, began to take an interest in osteoarthritis while working with patients at a hospital in Novara, in his native Italy. He treated people with more complex problems, often multimorbid patients.

"When we look at osteoarthritis patients, 67% have at least one other illness besides arthritis osteoarthritis—this is 20% more than in people of the same age but without osteoarthritis. However, the guidelines for the [treatment](#) of osteoarthritis do not take into account with the presence of other illnesses leaving clinicians without guidance when treating these more complex cases.

Treating diseases separately means that patients often need to see several different health care professionals and keep track of lots of things, including their medication. We then risk losing people who do not have relatives or others who can help. There are lots of problems in treating illnesses separately and giving everyone the same treatment. One size does not fit all. Understanding whether there are specific combinations of illnesses that might affect treatment is especially important in order for us to start treating them more effectively."

New research project

In his [doctoral thesis](#), Dell'Isola studied various groups of patients with osteoarthritis but with different clinical characteristics. Among these, he identified a group of patients with metabolic diseases such as diabetes, obesity and high blood pressure. The Swedish Research Council awarded SEK 6 million to a recently approved large research project in which he will continue to study this same group. The aim is to see how having metabolic condition affect osteoarthritis development, progression and management.

In Sweden today, three stages of treatment for joint disorders are recommended: first-line treatment in the shape of physical activity combined with training and [weight loss](#) when required, supplementary treatments that includes analgesics and aids like insoles and crutches that may complement basic treatments, and lastly prosthetic joint surgery.

"I want to understand how the various illnesses interact with one another. Whether they increase the risk of developing osteoarthritis but also how they affect treatment when you do develop the disease. Does exercise work in the same way if the patient suffers both from osteoarthritis and [metabolic diseases](#)? Is the time it takes to develop osteoarthritis to the point that surgery is required shorter in such cases? Might it be that patients who have several conditions do not get access to surgery since doctors do not want to operate?" says Dell'Isola.

The prescribing of medication is another aspect he will study. When osteoarthritis patients do not see the expected effects of exercise, the likelihood of them being prescribed strong painkillers such as opiates increases.

"Opiates are highly effective in treating short-term acute pain like the one experienced after surgery but less effective when a patient needs pain relief over a longer period. With longer treatment periods, the risks of side effects and dependency increase.

Various diseases linked

A major part of the research project has been concerned with collecting data from several Swedish health care registers to create two [data sets](#) through which it is possible to follow osteoarthritis patients through all stages of treatment. Dell'Isola describes the combination of these data sets as the most comprehensive resource for the study of osteoarthritis and metabolic disease in the world today.

He is currently analyzing data from 80,000 osteoarthritis patients who have been treated with exercise. How does that treatment affect patients with high blood pressure, diabetes or obesity? Does the pain after an exercise session differ if the patient is overweight or has diabetes?

"The aim is to see how the various diseases are linked. Once we know that, we can predict what may happen and propose a suitable treatment.

What do he hope to achieve with this study? "My hope is that the project will lead to improved prevention and better care for the millions of people who currently suffer from osteoarthritis. I also hope that people will understand how important multimorbidity is, and stop thinking 'one [disease](#) one treatment.' This is urgent, because today, almost everyone has more than one illness, and this will become even more commonplace in the future."

Provided by Lund University

Citation: We are getting older and heavier, and osteoarthritis is increasing (2023, August 8) retrieved 17 May 2024 from <https://medicalxpress.com/news/2023-08-older-heavier-osteoarthritis.html>

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