

# Osteoarthritis could be prevented with good diet and exercise

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Osteoarthritis can potentially be prevented with a good diet and regular exercise, a new expert review published in the *Nature Reviews Rheumatology* reports.

During the expert review, researchers from the University of Surrey identified a crucial link between metabolism and [osteoarthritis](#). Metabolic changes, caused by a poor diet and a [sedentary lifestyle](#), trigger's the [genetic reprogramming](#) of cells in the body and joints.

Such metabolic changes impact upon the cells ability to produce energy, forcing it to generate alternative sources to function. The stress this places on cells leads to the overproduction of glucose, which when not used for energy transforms into lactic acid, which is difficult for the body to flush out. Abnormal levels of this acid in the body leads to the inflammation of the joint's cartilage which impedes on movement and causes pain.

By identifying [metabolic changes](#) in cells, it is potentially possible to control or significantly slow down the symptoms of osteoarthritis, alleviating the suffering of millions of people.

Osteoarthritis is the most common form of arthritis in the United Kingdom with 8.75million people seeking medical advice for the condition. This debilitating condition disproportionately affects post-menopausal women who are more pre-disposed to the condition because of biology, genetics and hormones. Currently there is no effective

treatment for this painful ailment, with only painkillers available to treat symptoms and no known cure.

Lead author Professor Ali Mobasheri, Professor of Musculoskeletal Physiology at the University of Surrey, said:

"For too long osteoarthritis has been known as the 'wear and tear disease' and it has been assumed that it is part and parcel of getting older. However, this is not the case and what we have learnt is that we can control and prevent the onset of this painful condition.

"It is important never to underestimate the significance of a healthy diet and lifestyle as not only does it impact upon our general wellbeing but can alter the metabolic behaviour of our [cells](#), tissues and organs leading to serious illnesses."

**More information:** Ali Mobasheri et al. The role of metabolism in the pathogenesis of osteoarthritis, *Nature Reviews Rheumatology* (2017).  
[DOI: 10.1038/nrrheum.2017.50](https://doi.org/10.1038/nrrheum.2017.50)

Provided by University of Surrey

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