

# Study shows garlic could protect against hip osteoarthritis

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Researchers at King's College London and the University of East Anglia have discovered that women who consume a diet high in allium vegetables, such as garlic, onions and leeks, have lower levels of hip osteoarthritis.

The findings, published in the *BMC Musculoskeletal Disorders* journal, not only highlight the possible effects of diet in protecting against [osteoarthritis](#), but also show the potential for using compounds found in [garlic](#) to develop treatments for the condition.

A relationship between body weight and osteoarthritis was previously recognised, although it is not yet completely understood. This study is the first of its kind to delve deeper into the dietary patterns and influences that could impact on development and prevention of the condition.

Osteoarthritis is the most common form of arthritis in adults, affecting around 8 million people in the UK, and women are more likely to develop it than men. It causes pain and disability by affecting the hip, knees and spine in the middle-aged and elderly population. Currently there is no effective treatment other than pain relief and, ultimately, joint replacement.

The study, funded by Arthritis Research UK, the Wellcome Trust and Dunhill Medical Trust, looked at over 1,000 healthy female twins, many of whom had no symptoms of arthritis.

The team carried out a detailed assessment of the diet patterns of the twins and analysed these alongside x-ray images, which captured the extent of early osteoarthritis in the participants' hips, knees and spine.

They found that in those who consumed a healthy diet with a high intake of fruit and vegetables, particularly alliums such as garlic, there was less evidence of early osteoarthritis in the hip joint.

To investigate the potential protective effect of alliums further, researchers studied the compounds found in garlic. They found that that a compound called diallyl disulphide limits the amount of cartilage-damaging enzymes when introduced to a human cartilage cell-line in the laboratory.

Dr Frances Williams, lead author from the Department of Twin Research at King's College London, says: "While we don't yet know if eating garlic will lead to high levels of this component in the joint, these findings may point the way towards future treatments and prevention of hip osteoarthritis.

"It has been known for a long time that there is a link between body weight and osteoarthritis. Many researchers have tried to find dietary components influencing the condition, but this is the first large scale study of diet in twins. If our results are confirmed by follow-up studies, this will point the way towards dietary intervention or targeted drug therapy for people with osteoarthritis."

Professor Ian Clark of the University of East Anglia said: "Osteoarthritis is a major health issue and this exciting study shows the potential for diet to influence the course of the disease. With further work to confirm and extend these early findings, this may open up the possibility of using diet or dietary supplements in the future treatment osteoarthritis."

**More information:** The paper, 'Dietary garlic and hip osteoarthritis: evidence of a protective effect and putative mechanism of action' published in BMC Musculoskeletal Disorders can be found here: [www.biomedcentral.com/1471-2474/11/280/abstract](http://www.biomedcentral.com/1471-2474/11/280/abstract)

Provided by King's College London

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