

Bisphosphonates could offer effective pain relief in osteoarthritis, research finds

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St George's, University of London research has found that a drug normally given to osteoporosis sufferers could provide effective pain relief to patients with knee and hip osteoarthritis.

Bisphosphonates are a group of drugs known to change the structure of bone and are most often prescribed to patients with osteoporosis, a condition characterised by [fragile bones](#).

It is unknown, however, whether these drugs could be used to reduce pain and discomfort for patients with the joint condition [osteoarthritis](#), which causes [cartilage damage](#), bony growths and sore tissue.

The researchers used existing studies to assess the effectiveness of a variety of bisphosphonates in patients suffering from osteoarthritis of the hand, knee, spine and hips.

Of 3832 patients studied, in most cases these drugs showed limited pain relief. However, a few studies did show benefit; the bisphosphonate alendronate was found to be more effective for patients with hip osteoarthritis than existing pain relieving drugs. Moreover, the use of zoledronate and alendronate, specific forms of bisphosphonates, improved pain in patients with knee and hip osteoarthritis at six months—but longer term studies are needed.

Dr Nidhi Sofat, lead researcher, said:

"Osteoarthritis is the most common form of arthritis worldwide. It causes damage to bone and cartilage in the joints of affected people. Most treatment is focused around [pain relief](#), as no robust treatments have been discovered that slow down the progression of the disease.

"Our study looked at whether there were any [bisphosphonate drugs](#) that have been shown to influence pain and/or [disease progression](#) that could be used in osteoarthritis treatment.

"We found that, generally, bisphosphonates are ineffective at managing pain associated with osteoarthritis. But zoledronate and alendronate, which are specific forms of [bisphosphonates](#), do show the potential for effective pain management specifically in patients with knee and hip osteoarthritis.

"More research needs to be carried out to determine which patients could benefit most from this type of intervention. Osteoarthritis is a long term chronic condition, so it's essential that we work to understand whether the use of these medicines in the long term could be tolerated."

The research is published in full in the *PLOS ONE* journal.

More information: Davis, A. et al. (2013), Are Bisphosphonates Effective in the Treatment of Osteoarthritis Pain? A Meta-Analysis and Systematic Review, *Plos One*. www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0072714

Provided by St. George's University of London

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