

# Uric acid may increase likelihood of severe osteoarthritis

January 18 2011

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(PhysOrg.com) -- The amount of uric acid in one's joints may increase the likelihood of severe osteoarthritis, the most common form of arthritis worldwide, according to researchers at Duke University Medical Center.

Osteoarthritis is a debilitating joint degeneration for which no drug has been proven to slow or halt its progression. Physicians can only offer to treat the symptoms associated with osteoarthritis, and people with the condition are often subject to a reduced quality of life.

"Finding a way to treat the degenerating joints of people with osteoarthritis would be a tremendous breakthrough," said Virginia Byers Kraus, M.D., Ph.D., professor of medicine at Duke University in the Division of Rheumatology and Immunology and senior author of the study. "This research is a step towards identifying [uric acid](#) as a risk factor for osteoarthritis."

The researchers looked at 159 people, who had [knee osteoarthritis](#) but no history of gout, a type of arthritis triggered by uric acid crystals in the joints. The researchers found the severity of osteoarthritis in their knees to be strongly correlated with the amount of uric acid in their knees. The results, which are published online in *PNAS*, show, despite the lack of gout history, above normal uric acid levels in 39 percent of the study population, and evidence of the form of inflammation in the joints that is typically triggered by uric acid crystals.

"In a non-gout population, this provides some of the very first evidence that uric acid level is a potential cause of inflammatory events and joint degeneration in osteoarthritis," Kraus said.

But there are many drugs available for lowering uric acid. "So the next question would be, if you are able to lower uric acid levels in an osteoarthritis sufferer, could you actually slow down the progression of their osteoarthritis and bring about a meaningful change in the course of their disease," Kraus said.

There are a lot of different markers for osteoarthritis that are indicative of disease severity, according to Kraus. "This is presumably a marker that is also a mediator of the disease process, not just a marker of the amount of disease you have," she said.

Kraus and her colleagues believe this to be true because the uric acid was so strongly associated with the severity of disease and linked to disease progression over time.

Kraus called the results extremely exciting. "I haven't been this excited about anything I've ever done," she said. "It's so innately treatable."

Current treatment for people with high uric acid levels and symptoms of gout involves uric acid-lowering drugs.

"We've always thought of uric acid as the agent for gout, but it may be a much more general agent," Kraus said.

There's even an emerging interest in uric acid as a mediator of other types of disease, like chronic kidney disease and coronary artery disease, Kraus said.

"Duke has great strengths in gout disease and osteoarthritis, so we think

it's the perfect situation for pursuing evaluations of the interface between the two, trying to determine whether uric acid should be lowered to help prevent the onset or progression of [osteoarthritis](#)," she said.

Provided by Duke University

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