

## Your Joints, Pain & The Weather

**If your knees ache every time it starts to rain, you're not imagining it.**

**Research shows that the weather does influence pain.**

By Bob Barnett



Can you feel it? There's a storm coming. If you have arthritis, you may believe you can predict the weather — and that you can feel this frigid winter in your bones. In [polls](http://arthritis.about.com/gi/pages/poll.htm?poll_id=5517129240&linkback=) ([http://arthritis.about.com/gi/pages/poll.htm?poll\\_id=5517129240&linkback=](http://arthritis.about.com/gi/pages/poll.htm?poll_id=5517129240&linkback=)), about 3 out of 4 people say that weather makes their pain worse.

"We've had a particularly cold winter here in Washington, D.C., this year, and my patients have been more achy," says rheumatologist [David Borenstein, MD](http://arthritis.about.com/gi/pages/poll.htm?poll_id=5517129240&linkback=) ([http://arthritis.about.com/gi/pages/poll.htm?poll\\_id=5517129240&linkback=](http://arthritis.about.com/gi/pages/poll.htm?poll_id=5517129240&linkback=)), clinical professor of medicine at the George Washington University Medical Center. He treats patients with rheumatoid arthritis, an autoimmune disease, and osteoarthritis, the more common form of wear-and-tear arthritis.

Several medical studies—although not all—back up these suspicions. As early as the 1960s, a [University of Pennsylvania physician](http://www.rush.edu/rumc/page-1285684886471.html) (<http://www.rush.edu/rumc/page-1285684886471.html>) put people with arthritis into a weather chamber and found that falling barometric pressure and increased humidity increased the perception of pain. In 2007, [Tufts researchers](http://www.ncbi.nlm.nih.gov/pubmed/17466654) (<http://www.ncbi.nlm.nih.gov/pubmed/17466654>) studied 200 people with knee arthritis and found that both barometric pressure and cold affected pain. In January of 2014, [Dutch researchers](http://www.ncbi.nlm.nih.gov/pubmed/24462921) (<http://www.ncbi.nlm.nih.gov/pubmed/24462921>) found that in people with severe hip arthritis, barometric pressure and humidity had a modest effect on pain perception. (Weather can have other painful effects, too: There's evidence that lightning can trigger [migraine headaches](http://www.healthnews.uc.edu/news/?/21819/) (<http://www.healthnews.uc.edu/news/?/21819/>), for example.)

Because so many people believe in the weather effect, it's possible that it's exaggerated. It

starts to rain, and you think, “Yes, I did feel a twinge yesterday.” But since several studies have found that it’s a real thing, let’s ask two questions: “Why might this happen?” and “What can I do about it?”

## How Your Body Feels Weather

Why would your achy joints feel worse when the mercury drops? “Neurophysiologists have a theory,” says Dr. Borenstein, who has an online radio show called [“Speaking of Health with Dr. B.”](http://www.drborstein.com/programs/) (<http://www.drborstein.com/programs/>) When your body gets cold, it slows down the transmission of “fast” nerves that tell you where you are in space, and that lets “slow” nerves “send their message more,” says Dr. Borenstein. Those slow nerve fibers help our bodies experience pain. “People tend to be more sensitized to pain when the weather turns cold.”

The drop is barometric pressure before a storm makes joints ache in another way. When it drops, your body expands — literally. There’s less pressure on your body to keep fluids compressed. Most people don’t notice this. But if a joint is inflamed, and the fluid around it expands, even that little extra pressure on those sensitized nerves may hurt. “When a hurricane is coming, and there’s low pressure, patients notice that,” says Dr. Borenstein.

One thing that’s not getting worse: your arthritis. Weather changes may make you more sensitive to pain but they are not eroding your cartilage or making your condition worse. It just feels that way.

## What Can You Do?

Here’s what won’t work: Moving to a different part of the country. “Climate is not weather,” says Dr. Borenstein. While day-to-day weather changes affect how you feel, once you adjust to a new climate, you’ll still have arthritis. “People think that they can move to Arizona where it’s dry and that will take care of their arthritis,” he says, but they base their experience on vacation, when they’re relaxed, not doing chores, moving more, eating out, and having a grand time. Then they move permanently and find that arthritis moves with them. “My rheumatologist friends in Arizona are quite busy,” says Dr. Borenstein, adding, “Whether the climate is moist or dry, hot or cold, if you have arthritis, the changes in cartilage are still happening.”

What living in a more temperate climate might help you do, however, is move more. And exercise is a key to minimizing arthritis pain — wherever you live. “Exercise has short term benefits but if you do it consistently there are long term benefits, too,” says Dr. Borenstein. “If you exercise your limbs, the fluid that accumulates around them flows back into your system.” So you feel less pain. In the long-term, regular exercise, especially strengthening exercises, helps your muscles “support your joints better,” he says. “The whole system works better.”

It’s also important to see your doctor regularly and watch your weight to take pressure off the joints. NSAIDS help with pain and inflammation. But you can also target your activities to reduce the pain your joints predict.

Big storm coming? Try to get to the gym before the rains, so you help minimize joint inflammation before the barometric pressure plummets. “If you have joints that are prone to

swelling, you want to use ace wraps around them to support them,” suggests Dr. Borenstein.  
“It’s a non-invasive way to help joints work better.”

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