

Arthritis Pain Does Reflect Weather, Study Says

BY TIMOTHY F. KIRN
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SAN ANTONIO — Physicians tend to be skeptical of arthritis patients' claims that they can feel bad weather coming on, but maybe they shouldn't be, Timothy E. McAlindon, M.D., said at the annual meeting of the American College of Rheumatology.

Findings from a study conducted by Dr. McAlindon and his colleagues at Tufts-New England Medical Center, Boston, suggest that persons with knee osteoarthritis do indeed have greater pain when there are changes in barometric pressure.

Previous studies probably have failed to document this phenomenon because they have not been able to be as precise in their weather measurements as this study, surmised Dr. McAlindon, chief of the division of rheumatology at Tufts.

The investigators collected data on 205 patients with arthritis who took part in a 3-month trial of glucosamine. The study tracked patients using the Internet, which enabled them to be from a variety of regions within the U.S. The participants in the trial lived in 41 different states, which meant that almost all of them experienced very different weather.

A strong association exists between pain and change in barometric pressure; this association was more pronounced with lower temperatures.

During the initial study, which found no positive effect from glucosamine, subjects completed Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index pain questionnaires every 2 weeks.

Corresponding weather data were collected from the National Oceanic and Atmospheric Administration stations, which in some instances were less than a mile from the subject's house, Dr. McAlindon said.

In all, the investigators identified more than 900 pain reports that correlated with weather.

The data indicated that there was no significant association between pain scores and either the dew point or precipitation, which is perhaps another reason previous studies have been confounded, Dr. McAlindon said.

The researchers did, however, find a weak but consistent association between pain and temperature, such that each degree (Fahrenheit) drop was associated with a 1-degree increase in pain on the WOMAC scale.

Similarly, the investigators found that a strong association exists between pain and change in barometric pressure; this association was more pronounced with lower temperatures.

Arthritis patients, anecdotally, have always tended to say that they experience

greater pain before the weather changes. It is not uncommon for patients with arthritis to use the phrase, "feel it in your bones" to describe changes in weather.

In keeping with this the pain, barometric pressure association did not occur so much with the drop in barometric pressure that accompanies a change in weather, but rather, it was associated with the increase in barometric pressure that generally precedes a change in weather.

Patients with arthritis also often re-

ported feeling better after a rain, which again is consistent with the fact that barometric pressure drops once a storm arrives, he added.

In a related report comparing 42 control subjects with 92 rheumatic disease patients, 80 of whom had osteoarthritis and 12 of whom had rheumatoid arthritis, José Vergés, M.D., from Bioiberica SA, a pharmaceutical company in Barcelona, Spain, found that patients with osteoarthritis, in particular, experienced in-

creases in joint pain when atmospheric pressure was low.

Dr. Vergés concluded that "it may be possible to modulate pharmacological and nonpharmacological treatments for some osteoarthritic patients, depending on the predictable weather conditions in order to avoid, as much as possible, the disease-associated joint pain and functional incapacity, thus improving patients' quality of life" (Proc. West Pharmacol. Soc. 2004;47:134-6). ■

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