

# PAIN MANAGEMENT

## SPECIAL INTEREST GROUP

### PRESIDENT'S MESSAGE

John E. Garzione, PT, DPT, DAAPM

This summer seems to have flown by faster than normal with all of my good intentions of moving programs forward remaining as intentions. If I present these to you, the members, I will not be able to hide behind the ideas and have to get acting on them.

- (1) The Independent Study Course in Pain Management is in the planning stages.
- (2) The PMSIG member profile page should be expanded to provide visitors to the Web page, a listing of member's treatment interests.
- (3) Encourage more PMSIG articles to be published in *Orthopaedic Physical Therapy Practice*.

Well, that's enough soul searching for me at this time; I better get busy.

The Combined Sections Meeting is in "sunny" Chicago this February and the PMSIG programming entitled "Chronic Pain: Myths, Measures, and Management" by D. Dailey and K. Sluka is slated for Friday, February 10. More information will follow in the next issue of *Orthopaedic Practice*.

With the variations in summer weather, I have recently wondered why some people seem to have more "weather related" symptoms than others. A study published in the *Annals of Rheumatologic Diseases* in 2002 reported that a statistically significant relationship between fibromyalgic pain and the weather was not found in their sample either on the same day or on the previous day. They did however find that those with < 10 years of fibromyalgia experienced significantly greater weather sensitivity to pain than those with longer illness.<sup>1</sup>

A 2003 Japanese study published in the *International Journal of Biometeorology* found that there was a direct connection between low pressure, low temperatures, and joint pain in rats. In the first documented animal behavioral study of weather effects on joint pain, scientists artificially produced chronic inflammation of the rat's foot, which was analogous to clinical features of human neuropathic pain. When the rats were placed in a low-pressure, low-temperature environment, they exhibited signs of foot joint pain that were not seen in control rats.<sup>2</sup>

Some people are sometimes described as "weather sensitive." They speak of "feeling under the weather" and "my aches and pains speak of coming rains." Their ailments appear to be aggravated by certain weather conditions such as damp, chilly conditions, rising humidity, rapidly changing barometric pressure, and gusty winds. These particular conditions may cause swelling of the joints and it may be that the swelling irritates the nerves around the joints that sense the pain. It is likely that the joints' membranes act as a barometer and expand as the air pressure drops. This in turn can cause increased pressure in the synovial fluid. More resistance to movement is then offered and it increases the pains in the joints already affected.

The change in barometric pressure--the pressure that air exerts on the environment--may cause a transient "disequilibrium" in body pressure to sensitize the nerve endings, which would account for the increased pain preceding humidity and temperature changes. The joint receptors, such as the Ruffini and (to a lesser extent) Paciniform endings, can sense pressure changes. Heat and cold can affect how people feel, but I think with achy joints, it has more to do with pressure. Interestingly the Web site [www.weather.com](http://www.weather.com) has an aches and pains index based on local weather. Whether (excuse the pun) this occurs or not, still reminds us of the individual differences in all of our patients.

Happy Fall,  
John

#### REFERENCES

1. Fors E, Sexton H. Weather and pain in fibromyalgia: are they related? *Ann Rheum Dis*. 2002;61(3):247-250.
2. Sato J. Weather change and pain: a behavioral animal study of the influences of simulated meteorological changes on chronic pain. *Int J Biometeorol*. 2003;47(2):55-61.

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Join us Friday, February 10  
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Chronic Pain:  
Myths, Measures  
& Management

D. Dailey & K. Sluka

