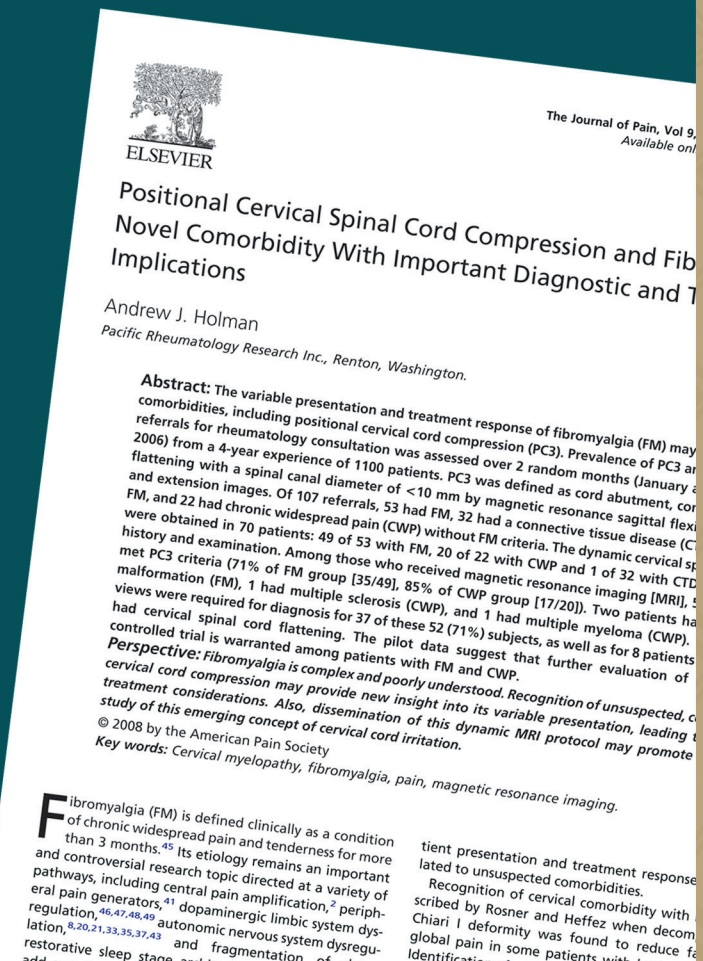
*If you or your patient suffers from pain caused by:*

CERVICAL DISK DISEASE
MIGRAINES
FIBROMYALGIA
WHIPLASH
OR CHRONIC WIDESPREAD PAIN,

*Then, you may benefit from this summary of a recent Journal of Pain Report about the proper diagnosis and treatment of PC3.*



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Positional Cervical Spinal Cord Compression and Fib
Novel Comorbidity With Important Diagnostic and T
Implications

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**Abstract:** The variable presentation and treatment response of fibromyalgia (FM) may
comorbidities, including positional cervical cord compression (PC3). Prevalence of PC3 ar
referrals for rheumatology consultation was assessed over 2 random months (January
2006) from a 4-year experience of 1100 patients. PC3 was defined as cord abutment, cor
flattening with a spinal canal diameter of <10 mm by magnetic resonance sagittal flexi
and extension images. Of 107 referrals, 53 had FM, 32 had a connective tissue disease (C
FM, and 22 had chronic widespread pain (CWP) without FM criteria. The dynamic cervical sp
were obtained in 70 patients: 49 of 53 with FM, 20 of 22 with CWP and 1 of 32 with CTD
history and examination. Among those who received magnetic resonance imaging [MRI], 5
met PC3 criteria (71% of FM group [35/49], 85% of CWP group [17/20]). Two patients ha
malformation (FM), 1 had multiple sclerosis (CWP), and 1 had multiple myeloma (CWP).
views were required for diagnosis for 37 of these 52 (71%) subjects, as well as for 8 patients
had cervical spinal cord flattening. The pilot data suggest that further evaluation of
controlled trial is warranted among patients with FM and CWP.
***Perspective:*** *Fibromyalgia is complex and poorly understood. Recognition of unsuspected, c*
*cervical cord compression may provide new insight into its variable presentation, leading t*
*treatment considerations. Also, dissemination of this dynamic MRI protocol may promote*
*study of this emerging concept of cervical cord irritation.*



***Key words:*** *Cervical myelopathy, fibromyalgia, pain, magnetic resonance imaging.*

Fibromyalgia (FM) is defined clinically as a condition of chronic widespread pain and tenderness for more than 3 months.[45] Its etiology remains an important and controversial research topic directed at a variety of pathways, including central pain amplification,[2] periph-eral pain generators,[41] dopaminergic limbic system dys-regulation,[46,47,48,49] autonomic nervous system dysregu-lation,[8,20,21,33,35,37,43] and fragmentation of restorative sleep stage

tient presentation and treatment response lated to unsuspected comorbidities.

Recognition of cervical comorbidity with scribed by Rosner and Heffez when decom Chiari I deformity was found to reduce fa global pain in some patients with

## MRI Facilities

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Call Lori at 425.235.9500 for an appointment with Dr. Holman at Pacific Rheumatology Associates

4300 Talbot Road South, Suite 101
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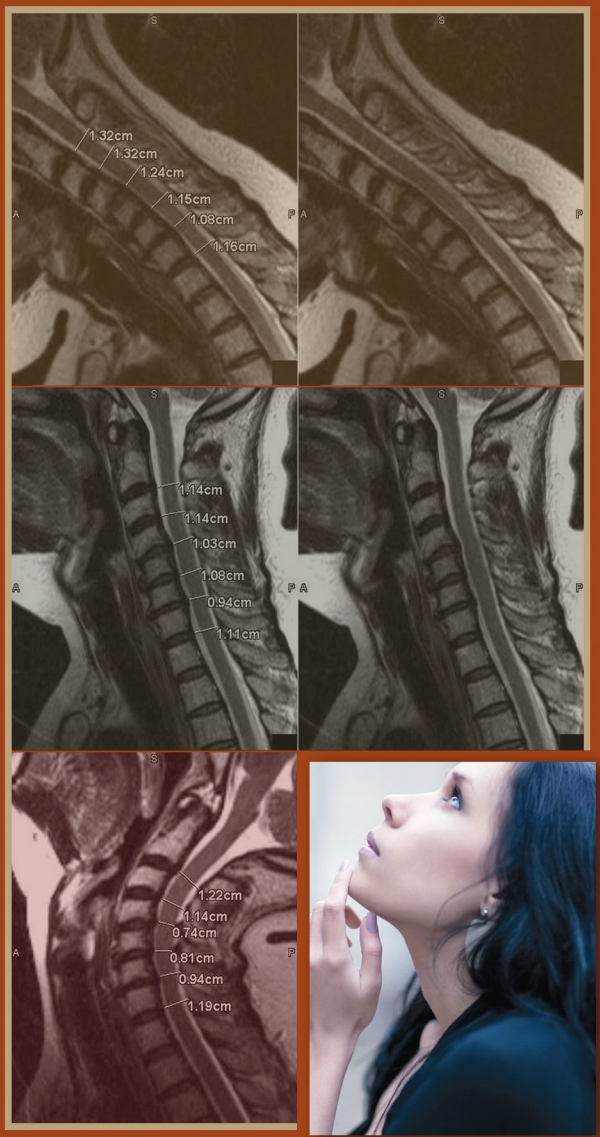
New Breakthroughs in Pain Research:

# *what you should know about PC3...*

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## What is PC3?

Positional cervical cord compression (PC3) was first described in 2002 by Milwaukee physician, Dr. Daniel Heffez, at the National Fibromyalgia Research Association Meeting in Portland, OR. He demonstrated that the cervical canal, the long bony tube that holds and protects the spinal cord in the neck, can change shape with movement. This may be of particular concern to patients with cervical disk disease, migraines, fibromyalgia (FM), chronic widespread pain or whiplash. Some may note pain positioned in a hairdresser's sink, a dentist's chair, riding a bicycle, viewing a computer screen over reading glasses or any other activity that requires looking up or bending the neck back.

## What are the effects of PC3?

PC3 can cause radiating pain in the head and anywhere cervical nerves eventually terminate, including the torso, arms and/or legs. In animal models, PC3 alters the autonomic nervous system – the important component of the central nervous system that controls housekeeping functions, such as temperature, sweating, sleep, heart rate, bowel and bladder function.

In 2008, the Journal of Pain reported that 71% of patients with FM had an unsuspected second problem: PC3. In Spain, 2010, researchers from the Oregon Health & Sciences University reported PC3 in 55% of FM patients. Its prevalence among patients with headache and other types of pain is under current investigation.

## How is PC3 diagnosed?

Diagnosis of PC3 requires a special MRI protocol available in Milwaukee, **Seattle** and most recently, Portland, OR. New and unique images of the neck, bent forward (flexion) or back (extension), are required to see this compression. Only 25% of patients with PC3 can be diagnosed with a traditional MRI. And, availability is limited, because only a handful of radiologists are willing to do these additional views without additional charge.

Since the new protocol is billed as a traditional MRI of the neck, insurance generally covers the cost.

## How is PC3 treated?

Treatment depends on the degree of narrowing. In over 2500 patients evaluated at Pacific Rheumatology Associates since 2003, only 10% have required surgery. In most patients, an innovative, new therapy program, **developed locally**, addresses this common, yet unexpected cause of pain. A variety of medications, some that might not otherwise be considered, can also provide relief following an accurate diagnosis of PC3.

## Where can I learn more?

Visit *PositionalCordCompression.com or PacificRheumatology.com* online, or call Lori at 425.235.9500 for an evaluation with Dr. Holman:

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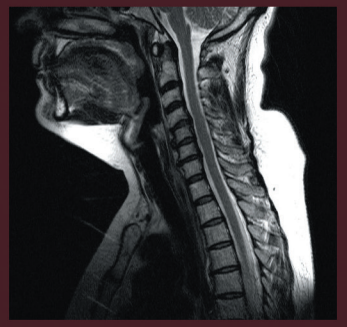
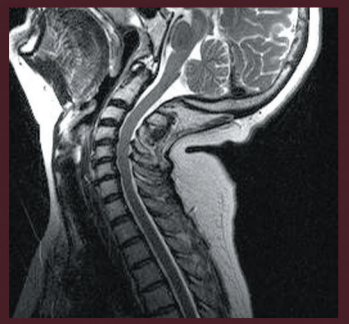
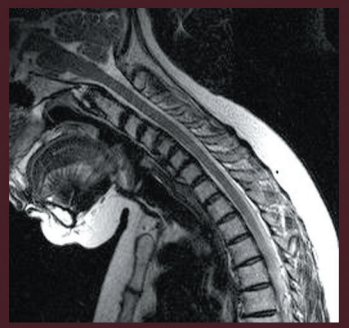
## PC3 as shown on an MRI:



*Traditional MRI view (neutral). Small, apparently inconsequential disk bulges identified at C4-5 and C6-7 without evidence of cord abutment.*



*New MRI view in extension demonstrates compression of the cervical spinal cord at C4-5 ad C5-6 not seen in neutral view.*



*New MRI view in flexion demonstrates complete resolution of cord compression.*

*Proper diagnosis and treatment of PC3 can make a real difference for many patients with chronic widespread pain, cervical disc disease, fibromyalgia, migraine and whiplash.*