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The practitioner's resource for chronic pain management.

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Dear Colleague:

A few weeks ago, a nagging pain in my right lower jaw awakened me in the middle of the night. Half asleep, my initial thought was that I had just had a bad dream. After a brief period of time I fell back asleep, reassuring myself that things would be better in the morning as sometimes the slumbering drifts have a healing effect. To my dismay the painful sensation persisted upon awakening and all morning long, aggravated by biting down and jaw movements.

Contorting in front of the bathroom mirror, I could not detect any swelling, redness, or tenderness in my mouth or on my face for that matter. My teeth were not sensitive to heat, cold, or percussion, and the pain was rather diffuse, poorly localized, and very difficult to describe. How often do my patients tell me that they really cannot describe the pain? Sometimes, any movement of the painful area can trigger a pain sensation in a different area altogether. Sometimes, the pain quality is almost impossible to describe. And how often have I heard: "Doctor, I really can't tell where the pain is located exactly." Long live the plasticity of the central nervous system!

Now I was facing a similar conversation with my dentist, this time as a rather helpless patient. I couldn't help but wear the pain specialist's cap that morning; what if my dentist couldn't find anything wrong and the pain became chronic or what if the treatment he suggested was not successful? The idea of living with chronic pain can be frightening. That same afternoon I went to see William Kropa, DMD, my long time dentist extraordinaire, and he reassured me that I was not crazy and my symptoms were real. (An excellent first step in pain management!)

Although the x-rays he took were normal, he examined me carefully and thoroughly. A gentle tap on my wisdom tooth seemed to produce a slight discomfort, enough to guide him toward the next step: change an old filling. Miraculously, the next morning the pain was completely gone, and it remained gone.

One such episode in my own life reaffirms once more my deep belief that any medical specialty that is guided by pain as the only presenting symptom is a true art form.

Thank you for your ongoing trust and support,

Julien Vaisman MD

in this issue:

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Comprehensive Assessment of the Knee

Scott Braje PT, MPT, CIMT

It is imperative that when we assess a patient's pain, we look not only to the site of pain, but to the surrounding joints, muscles, soft tissue, and fascia. A common statement used among manual therapists is that "pain is a liar." As providers, if we get tunnel-vision and look only at the painful area, we may miss the precise cause of that pain. Assessing the knee is a great example of using a comprehensive approach.

The knee is an "in-between" joint, commonly abused by the hip and pelvis above and/or the ankle and foot joints below. There are some physical therapists who believe that, short of traumatic injury, knee pain's root is almost always outside of the knee joint. Though an extreme statement, it is probably more true than most of us realize.

Consider these facts:

- Almost all muscles that have an origin or insertion in or around the knee have their respective origin or insertion points well above (pelvis/hip) or well below (foot/ankle) the knee.
- The knee joint primarily works in the sagittal plane, however the common dysfunction of foot over-pronation puts excessive transverse plane forces through the knee increasing chances for undue stress to the joint surfaces, menisci, and muscles.
- Knee mechanics rely heavily on proper ankle mechanics, specifically, ankle dorsiflexion. Patients need to have proper joint mechanics at the proximal tibia-fibula, distal tibia-fibula, and talo-crural joints to ensure adequate motion is present for dorsiflexion.

> "...the knee is heavily reliant on the ankle, foot, hip, and pelvis."

- Proper function of the knee joint also depends upon correct hip alignment and mechanics. If a patient exhibits weakness or inhibition of the gluteus medius, among other muscles, the patient's hip will have less control for hip internal rotation forces causing increased rotary forces to the knee.
- The pelvis commonly exhibits anterior or posterior positional faults causing increased and/or decreased length-tension relationships to all of the muscles originating at the pelvis and inserting in and around the knee.

The points above illustrate that the knee is heavily reliant on the ankle, foot, hip, and pelvis. Patients commonly want to speak of different pains or dysfunctions at each of these specific joints when, in fact, it is well-accepted that dysfunction at one area can affect another area. It is our job as health professionals to explain to patients that many of their pains are interdependent. A great analogy is that our joints are like the gears of a clock. If one gear gets stuck it will certainly affect the others.

Scott Braje PT, MPT, CIMT is the Director of Physical Therapy at Pain and Wellness Center.

No Pain, No Gain

Adil Ali, MD

While the adage "no pain, no gain" is not entirely accurate regarding pain rehabilitation, the importance of exercise and movement cannot be understated. Exercise helps improve mood, manage weight, boost energy levels, promote sleep, and combat numerous chronic diseases, particularly chronic pain processes.

The goal of pain rehabilitation is to alleviate pain and improve function. This often cannot be achieved in many chronic pain processes with passive medications, modalities, and procedures alone. The patient must be involved both physically and psychologically in the rehabilitation process.

Bed rest has proved to be a deleterious recovery method for low back pain. Experts recommend that patients with low back pain continue their activities and gradually increase specific exercises as tolerated. A 2005 meta-analysis showed that exercise therapy is beneficial for chronic low back pain. Individually designed programs, including trunk stabilization and strength training with supervision, have been shown to decrease pain and improve function. In particular, high-intensity active programs appear to be better than low intensity passive treatment.

In patients with myofascial pain, exercise is an important aspect of rehabilitation through an increase in muscle range of motion, tissue oxygenation, as well as cortical effects, including a rise in endorphins and serotonin. Rehabilitation programs of active and passive movement, along with posture correction and relaxation techniques have proven to be effective in improving pain and function in patients with myofascial pain. Importantly, in this population exercise should be introduced slowly to reduce post-exercise pain flare, central sensitization, and patient hesitancy. A randomized clinical trial of a comprehensive exercise program for chronic whiplash is already underway.

Exercise, particularly aerobic activity, has been shown to decrease the symptoms of fibromyalgia. In this population gentle, graded exercise is indicated as over exertion can exacerbate symptoms. Severe post-exercise pain is often cited as a reason patients do not exercise. Therefore, exploring ways to motivate patients, development of pacing skills, and education on the benefits of exercise provide the best long-term success.

Choosing an appropriate exercise regimen and physical therapy program depends upon the nature of the pain process as well as a patient's experiences and preferences. After a course of physical therapy, some patients may experience discomfort after using muscles in a different way to improve strength, endurance, coordination, range of motion, and biomechanics. While health-care practitioners do not want to induce more pain, we must stress the importance of maintaining and improving physical fitness in our patients and clearly communicate that these therapeutic exercises may mean a different kind of discomfort or pain that is good for overall health.

The new American Medical Association "Exercise is Medicine" campaign states that physical activity and exercise should be a standard part of a disease prevention and medical treatment. It is easy to lose site of a patient's functional well being by merely treating a pain score with passive measures. Pain management healthcare professionals must continue to assess and review patients' physical activity regimens at every visit.

References:

1. Abenhaim L, Rossignol M, Valat JP, Nordin M, Avouac B, Blotman F, Charlot J, Dreiser RL, Legrand E, Rozenberg S, Vautravers P. The role of activity in the therapeutic management of back pain. Report of the International Paris Task Force on Back Pain. *Spine* (Phila Pa 1976). 2000 Feb 15;25(4 Suppl):1S-33S.

2. Hayden JA, van Tulder MW, Malmivaara AV, Koes BW. Meta-analysis: exercise therapy for nonspecific low back pain. *Ann Intern Med.* 2005 May 3;142(9):765-75.

3. Michaleff ZA, Maher CG, Jull G, Latimer J, Connelly LB, Lin CW, Rebbeck T, Sterling M. A randomized clinical trial of a comprehensive exercise program for chronic whiplash: trial protocol. *BMC Musculoskelet Disord.* 2009 Dec 2;10(1):149.

4. Hayden JA, van Tulder MW, Tomlinson G. Systematic review: strategies for using exercise therapy to improve outcomes in chronic low back pain. *Ann Intern Med.* 2005 May 3;142(9):776-85.

5. Nicolakis P, Erdogmus B, Kopf A, Nicolakis M, Piehslinger E, Fialka-Moser V. Effectiveness of exercise therapy in patients with myofascial pain dysfunction syndrome. *J Oral Rehabil.* 2002 Apr;29(4):362-8.

6. Busch AJ, Schachter CL, Overend TJ, Peloso PM, Barber KA. Exercise for fibromyalgia: a systematic review. *J Rheumatol.* 2008 Jun;35(6):1130-44.

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Yoga and Low Back Pain

Farah Hameed, MD

Yoga refers to the traditional and mental discipline originating in India that couples physical exercise with mental focus through breathing and meditation.

Hatha yoga, the yoga typically practiced in the United States, is the foundation of all yoga styles and was developed approximately 4,000 years ago. It incorporates Asanas (postures), Pranayama (breathing), meditation (Dharana and Dhyana) and kundalini (Laya Yoga) into a complete system that can be used to achieve enlightenment or self-realization. It has become a popular way to exercise and help with stress management. The postures are designed to increase flexibility, improve balance, and strengthen the body, and breathing exercises help the mind focus.

There are several subtypes of Hatha yoga, including Iyengar yoga and Viniyoga yoga. Iyengar yoga promotes strength, flexibility, endurance and balance through coordinated breathing and poses that require precise body alignment. Viniyoga yoga is a gentle, healing practice that is tailored to each person's body type and needs (especially useful after surgeries/injuries).

Research

According to the Yoga Research and Education Council Report on Yoga statistics, there were 15 million Americans practicing yoga more than three times weekly in 2003, with over one million of them practicing for low back pain. A handful of randomized controlled studies have been performed since 2004, which have shown the benefits of yoga in helping with chronic low back pain. In 2004 Galantino et al published a randomized controlled pilot study showing that with six weeks of twice weekly yoga classes, patients can potentially benefit from decreased depression and improved flexibility and balance. In 2005, Williams et al conducted a study evaluating Iyengar yoga intervention compared to an education control group. This study suggested that yoga therapy resulted in significant reductions in disability and pain and decreased use of pain medications.

In a 2005 study conducted by Sherman and colleagues, researchers compared Viniyoga style yoga classes to conventional exercise classes and a self care book in chronic low back pain patients. The authors concluded that yoga was more effective than a self care book in reducing pain and improving functional status. The difference between yoga and conventional exercise was not statistically different.

Mechanism

The precise mechanism that underlies the therapeutic effects of yoga is unclear, but it appears to work on physical and mental factors that are associated with low back pain. It appears to address the imbalances in the musculoskeletal system affecting spinal alignment and posture and helps to lengthen tightened muscles and strengthen underutilized core muscles. The mental focus induced by yoga likely helps people increase their awareness of how they position and move their bodies in maladaptive ways and relax tense muscles. In addition, yoga is generally believed to reduce stress and improve mood and overall well-being; these effects are likely enhanced by the breathing techniques taught as part of the yoga practice. In conclusion, yoga appears to be a safe and effective treatment option for the low back pain patient with moderately good adherence.

References:

1. Sorosky S, Stilp S, Akuthota V. Yoga and pilates in the management of low back pain. *Current Reviews in Musculoskeletal Medicine* 2008; 1:39-47.

2. Galantino ML, Bzdewka TM, Eissler-Russo JL, Holbrook ML, Mogek EP, Geigle P et al. The impact of modified Hatha yoga on chronic low back pain: a pilot study. *Altern Ther Heath Med* 2004; 10:56-9.

3. Williams, K, Steinberg L, Petronis J. Therapeutic application of Iyengar yoga for healing chronic low back pain. *Int J Yoga Ther* 2003; 13:55-67.

4. Sherman KJ, Cherkin DC, Erro J, Miglioretti DK, Deyo RA. Comparing yoga, exercise, and a self- care book for chronic low back pain: a randomized, controlled trial. *Ann Intern Med* 2005; 143:849-56.

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