

Chronic Pain

Introduction

Physical Therapy in Central Illinois & Western Illinois for Womens' Health Issues

Welcome to Advanced Rehab & Sports Medicine Services resource on chronic pain.

Chronic pain is generally classified as pain that lasts for longer than 6 months [1]. While there are many possible causes, one is thought to be due to problems with some of the receptors found throughout the body that receive and transmit information from your five senses to your brain. Alternately there may be a problem with how the receptors of the central brain and nervous system interpret the information they receive [2]. Common complaints include joint pain from arthritis, headache, low back pain or pain associated with cancer. There is also the chronic pain that seems to have no real cause, is just as severe and debilitating as pain with a known cause.

Research has shown that women deal with chronic pain longer and more often than men. Women also feel pain more intensely [3]. Therefore it should come as no surprise that women are 1.5 times more likely to have headaches and neck/shoulder, knee or back pain; two times more likely to have oral or facial pain; 2.5 times more likely to suffer from migraines and four times more likely to have fibromyalgia [4].

Causes

There are many different causes of chronic pain in both men and women. Some of the more common causes include:

Arthritis

Arthritis is a general term for over 100 different diseases that cause joint stiffness, swelling and pain. The pain usually increases over time and can be incapacitating.

Back Pain

Back pain is most often caused by an injury. Strain and stress on the back muscles can linger allowing the pain to become chronic. Back pain can also be due to poor posture or repetitive motions.

Headache

There are many different factors that may contribute to chronic headache pain. Colds, flu, infections and food sensitivities are the most common medical conditions that can contribute to reoccurring headaches. An injury is more often the cause of chronic head pain, however. A pinched nerve, head trauma or even a brain tumor can cause consistent long term headaches.

Cancer

Not everyone who has cancer suffers from chronic pain, but pain can be caused by growing tumors, infection, inflammation, poor blood circulation or as a side effect of chemotherapy or radiation.

Fibromyalgia

Although doctors are unsure of the cause, fibromyalgia can cause severe pain in the muscles and fibrous tissues.

Urologic Chronic Pelvic Pain Syndromes (UCPPS)

An umbrella term for pain syndromes associated with the bladder (bladder pain syndrome/interstitial cystitis) and the prostate gland (chronic prostatitis/chronic pelvic pain syndrome). Chronic pelvic pain may also involve the digestive, gynecologic or musculoskeletal systems.

Chronic prostatitis in men

Prostatitis describes persistent pain in the pelvic area that can last for months. For many years doctors thought chronic prostatitis was caused by bacterial infection; however, a landmark study found that one-third of men with and without prostatitis had equal counts of similar bacteria colonizing their prostates [5]. As a result, attempts to relieve the pain with antibiotics did not work. As a side note, the study also found that muscle relaxants aiming to relax the bladder neck muscles and muscle fibers in the prostate were not effective either in substantially reducing the symptoms of chronic prostatitis [6].

Pelvic floor muscle dysfunction in both men and women can produce chronic pelvic pain from musculoskeletal restriction resulting from things like psychological distress (divorce, trauma, job loss, abuse) or even certain types of exercise like cycling.

Chronic pelvic pain (CPP) in women

CPP, also referred to as Chronic Regional Pelvic Pain Syndrome (CRPPS), is one of the most common kinds of pain in women. CPP has been associated with dyspareunia (pain with vaginal penetration), depression and challenges with activities of daily life [7]. A thorough work up by your health care provider is essential for uncovering the underlying causes of chronic pelvic pain. Some of the diverse causes of CPP are:

- Gastrointestinal conditions like diverticulitis, irritable bowel syndrome (IBS), constipation, inflammatory bowel disease and ulcerative colitis
- Urinary conditions like interstitial cystitis or urinary tract infection (UTI)
- Gynecological conditions like endometriosis, chronic pelvic inflammatory disease, pelvic congestion syndrome, ovarian remnant following a complete hysterectomy, fibroids
- Psychological conditions like depression, chronic stress or a history of sexual or physical abuse

Treatment

The complexity of chronic pain requires a thorough medical work up to determine the factors contributing to the condition as well as to match the underlying condition with the appropriate treatment. The goals of the chosen treatment may include general pain relief, improvement in function and mobility, and psychological and emotional strategies to cope with the

pain. It is also important to prevent secondary musculoskeletal conditions. Months or years of pain can alter muscles, joints, and nerve sensitivity, resulting in changes in posture, strength and mobility.

The goal of chronic pain treatment is to improve the quality of life of the patient. This might mean giving them the skills to cope with some measure of pain, including sleeping tips, stress-reducing tips, and things that can be done to help them return to more regular activities.

Some of the more common treatments for chronic pain include:

Medication

Patients may also want to consult with their doctor or pharmacist regarding the use of over-the-counter pain relief or anti-inflammatory medication such as acetaminophen, NSAIDs (nonsteroidal anti-inflammatories, like ibuprofen) or aspirin. If the pain does not go away with the regular use of an over the counter treatment, your doctor may prescribe something stronger. Most doctors will work with you to determine the lowest dose of the medicine with the least amount of side effects that will decrease your pain to a level you can live with. The medicine prescribed may be an anticonvulsant, antidepressant or one of the many opioid analgesics. One of the negative aspects of this type of treatment for chronic pain is that it treats the symptoms, but not the underlying condition [8]. In order to continue to receive relief from the pain, treatment must be continued. Ongoing monitoring of the kidneys and liver are essential when taking long-term medications. Even over-the-counter medications can have significant risk when taken over time, so be sure to tell your health care provider the type of medication, the amount you are taking as well as how long you have used the medication for pain relief.

Exercise

It is critical that your health care provider refer you to a physiotherapist for a clinician-directed therapeutic exercise program designed especially for your needs. There are a variety of exercises and activities that increase strength, range of motion and mobility but they must be appropriate for you and your needs. By performing gentle stretching or non-weight-bearing exercises such as swimming regularly, your muscles and joints will get stronger. A study performed in 2006 showed that patients with chronic low back pain benefited from a specific Pilates-based exercise program [9].

Neural Downregulation

Neural downregulation is the technical term for treatments that change the messages the brain sends the body about pain and discomfort. Things such as yoga, meditation, guided imagery, biofeedback and cognitive behavioral techniques play a critical role in changing the brain's response and perception of pain. The patient can use these techniques to choose their response to pain, which may result in a reduction of perceived pain levels. These techniques can be a complement to traditional therapies and have been shown to benefit people suffering from chronic pain [10,11]. In a 2008 study by Carrico, participants with chronic pelvic pain listened to a guided imagery CD which resulted in significant reduction in urinary urgency and pain in individuals with interstitial cystitis [12].

Healthy diet

A diet rich in vitamins and minerals and other needed nutrients and low in fat and sugar can help reduce pain. In case of pain caused by IBS, a diet high in fiber has been shown to be beneficial [13]. Optimizing your nutrition by avoiding processed foods and alcohol, as well as emphasizing lean protein, vegetables and fruits will not only reduce risk of future disease, but improve overall health. Caffeine can elevate levels of anxiety and stress, which can thereby increase myofascial pain. Conversely, caffeine has been shown to increase the pain-killing effects of aspirin and acetaminophen.

(Tylenol) by 40% [14].

Quit smoking

Smoking reduces oxygen in your heart and lungs, which slows the ability of the body to heal. Smoking can result in a smoker's cough, which can increase pressure in the spine, abdomen, brain and eyes. Nicotine also can increase the body's perception of pain. Quitting smoking is one of the most significant steps you can take to reduce your pain and improve your overall health.

Acupuncture

This treatment is gaining ground as a viable option for those suffering from chronic pain. People adding acupuncture to their treatment regimen show a marked improvement in results [15,16]. Results were even greater for women for whom other treatments did not work and who had a positive experience with acupuncture in the past [15].

TENS treatment

TENS, or transcutaneous electrical nerve stimulation, is thought to alter the pain signals as they travel to the brain. For some people, it is a very effective treatment, but for others it seems to have no effect. Research on the effectiveness of TENS treatment is also inconclusive [17].

Physical Therapy

Physical Therapy encompasses many different types of treatment starting with a comprehensive evaluation of your body systems, mobility and functional abilities. Based on those findings, your physiotherapist will choose specific techniques and interventions appropriate for your condition. These may include manual therapy to increase range of motion of joints, ligaments and muscles; exercises to maintain strength, flexibility and mobility; postural correction; hands-on soft tissue mobilization; modalities such as interferential, cold laser, heat or cold therapies. One of the most important interventions you can receive is education about the origins of chronic pain and the brain's response to pain over time. The book *Ending Pain* by David Butler and Dr. Lorimer Moseley is an extraordinary book for clients to understand the response of the brain to pain and how to change it.

Physical Therapy as a treatment for chronic pain can be very effective as it encompasses many of the other treatments discussed. It has also been shown that receiving encouragement from a therapist during treatment will increase motivation and ultimately improve results [18]. By working with a Physical Therapist, instead of on your own, you will receive a customized rehabilitation program as well as encouragement and accountability to carry on with the treatment. Working with a highly trained physiotherapist gives you a better chance of success.

Advanced Rehab & Sports Medicine Services provides services for Physical Therapy in Central Illinois & Western Illinois.

Summary

Pain and physical discomfort are not a normal part of life. If you are affected by these or any other conditions, the professional Physical Therapists at Advanced Rehab & Sports Medicine Services would be happy to talk to you and answer any questions you may have about whether Physical Therapy is right for you.

References

1. Thienhaus O, Cole BE. Classification of pain. In Weiner, R.S. Pain management: a practical guide for clinicians (ed.). American Academy of Pain Management. 2002.
2. Keay KA, Clement CI, Bandler R. The neuroanatomy of cardiac nociceptive pathways. In Horst, GJT. The nervous system and the heart. Totowa, New Jersey: Humana Press. 2000. p. 304.
3. Kelly JF. Translating research on chronic pain in women to practice. 118th Annual Convention of the American Psychological Association. 2010 Aug; San Diego, California.
4. International Association for the Study of Pain. Epidemiology of pain in women. http://www.iasp-pain.org/AM/Template.cfm?Section=Fact_Sheets&Template=/CM/HTMLDisplay.cfm&ContentID=1000 Updated Sept 2007.
5. Lee JC, Muller CH, Rothman I, Agnew KJ, Eschenbach D, Ciol MA, et al. Prostate biopsy culture findings of men with chronic pelvic pain syndrome do not differ from those of healthy controls. *J Urol*. 2003 Feb;169(2):584-7.
6. Alexander RB, Propert KJ, Schaeffer AJ, Landis JR, Nickel JC, O'Leary MP, et al. Ciprofloxacin or Tamsulosin for men with chronic prostatitis/ chronic pelvic pain syndrome. A randomized, double-blind trial. *Ann Intern Med*. 2004 Oct 19;141:581-589.
7. International Pelvic Pain Society. Chronic Pelvic Pain: A Patient Education Booklet. http://www.pelvicpain.org/pdf/Patients/PPP_Pt_Ed_Booklet.pdf
8. Mouzopoulos G, Kanakaris NK, Mokawem M, Kontakis G, Giannoudis PV. The management of post-traumatic osteoarthritis. *Minerva Med*. 2011 Feb;102(1):41-58.
9. Rydeard R, Leger A, Smith D. Pilates-based therapeutic exercise: effect on subjects with nonspecific chronic back pain and functional disability: a randomized controlled trial. *J Orthop Sports Phys Ther*. 2006 Jul;36(7):472-84.
10. Yogitha B, Nagarathna R, John E, Nagendra H. Complimentary effect of yogic sound resonance relaxation technique in patients with common neck pain. *Int J Yoga*. 2010 Jan;3(1):18-25.
11. Fors EA, Sexton H, Gotestam KG. The effect of guided imagery and amitriptyline on daily fibromyalgia pain: a prospective, randomized, controlled trial. *J Psychiatr Res*. 2002 May-June;36(3):179-87.
12. Carrico DJ, Peters KM, Diokno AC. Guided imagery for women with interstitial cystitis: results of a prospective randomized controlled pilot study. *J Alt Comp Med*. 2008 Jan-Feb;14(1):53-60.
13. Feldman W, McGrath P, Hodgson C, Ritter H, Shipman RT. The use of dietary fiber in the management of sinusoidal childhood, idiopathic, recurrent, abdominal pain. Results in a prospective, double-blind, randomized, controlled trial. *Am J Dis Child*. 1985 Dec;139(12):1216-8.
14. Tollison CD, Satterthwaite JR, Tollison JW, eds. Practical Pain Management. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2002: 270.
15. Witt CM, Schützler L, Lüdtke R, Wegscheider K, Willich SN. Patient characteristics and variation in treatment outcomes: which patients benefit most from acupuncture for chronic pain? *Clin J Pain*. 2011; In Press.
16. Rubinstein SM, van Middelkoop M, Kuijpers T, Ostelo R, Verhagen AP, de Boer MR, Koes BW, van Tulder RL. A systematic review on the effectiveness of complementary and alternative medicine for chronic non-specific low-back pain. *Eur Spine J*. 2010 Aug;19(8):1213-28.
17. Khadilkar A, Milne S, Brosseau L, Robinson V, Saginur M, Shea B, Tugwell P, Wells G. Transcutaneous electrical nerve stimulation (TENS) for chronic low-back pain. *Cochrane Database Syst Rev*. 2005 Jul 20;(3):CD003000.
18. Vong SK, Cheing GL, Chan F, So EM, Chan CC. Motivational enhancement therapy in addition to Physical Therapy improves motivational factors and treatment outcomes in people with low back pain: a randomized controlled trial. *Arch Phys Med Rehabil*. 2011 Feb;92(2):176-83.