



EXERCISE TIPS FOR CHRONIC PAIN MANAGEMENT

Hayley Loos, Sandra Sulzer, Kandice Atismé

What Is Chronic Pain?

Chronic pain is a term used to describe pain that persists for longer than the expected time frame of healing. Patients with chronic pain commonly experience collateral effects to their primary condition. These include depression, sleep disturbance, fatigue, and decreased physical and mental function overall. Some of the more common conditions associated with it are fibromyalgia, low-back pain and rheumatoid arthritis (Ambrose, et al., 2015).

Who Has Chronic Pain?

Worldwide, millions of people suffer from chronic pain every year. In America, 25.3 million people, or 11.2%, have reported to have conditions that cause chronic pain (NIH, 2015). Many cases of chronic pain are not able to be cured; symptoms can only be treated. One of the most common methods to manage symptoms is through medications. In Utah, approximately 20% of the adult population took opioid-based medications in a single year. Of those people, roughly one-third received a prescription for long-term use (Porucznik, et al., 2010). The dependence that can develop for chronic pain patients is often more difficult for addiction specialists to work with, because the medications are being used to improve daily function, not to become intoxicated. It is easy to feel that this is the only option for treatment. But there are several complementary approaches that have been proven to be quite effective. For example, exercise.

Why Exercise?

When a person is in pain, they naturally want to do whatever possible to reduce it. For many, that instinct tells them to rest and relax. However, when pain becomes chronic, there is such thing as too much rest. Muscles can atrophy, leading to less joint stability and poor posture, which can cause myriad additional problems. Regular physical activity combats muscular atrophy by strengthening the muscles and improving flexibility. In addition, it has been shown to reduce fatigue, which is a common limiting factor in many conditions that cause chronic pain. (Rall, et al., 2011). Exercise causes the release of chemical messengers that decrease chronic inflammation in the body, as is seen in many autoimmune diseases (Pedersen, BK, 2017).

While strict guidelines are lacking, the general consensus from evidence is that an active lifestyle is better than remaining sedentary (Ambrose, et al., 2015). There is great flexibility in tailoring exercise programs to fit individual needs and limitations. The goals of exercising with chronic pain are to: improve flexibility and strength, improve performance of endurance activities, reduce intensity of pain, and to reduce pain-related disabilities (fears, concerns, attitudes toward pain etc.).

The Best Exercise for Chronic Pain

Typically the first area to work on is flexibility. Stretching exercises for the entire body, with emphasis on any particularly tender areas are effective, such as a the standing quad stretch and lying hamstring stretch for a sore knee. Muscle strengthening exercises can be used to improve joint stability, posture, and reduce the risk of injury (Hayden et al., 2005). Methods of exercise that combine stretching and muscular strengthening exercises, such as Pilates, have been shown to improve disability, pain, flexibility, and balance in patients with chronic pain (Valenza, et al., 2015). Swimming, a water aerobics class, or hydrotherapy are great places to start because muscles can be strengthened with minimal stress placed on the joints (Rall, et al., 2011). Any exercises can be modified to adjust for individual needs. It is critical that above all, you are aware of your body and its limits. Start with a smaller range of motion without weights or resistance at first and progress from there at a self-determined pace.

SOURCES

- Ambrose, K. R., & Golightly, Y. M. (2015). Physical exercise as non-pharmacological treatment of chronic pain: why and when. *Best Practice & Research Clinical Rheumatology*, 29(1), 120-130.
- Hayden, J. A., Van Tulder, M. W., & Tomlinson, G. (2005). Systematic review: strategies for using exercise therapy to improve outcomes in chronic low back pain. *Annals of internal medicine*, 142(9), 776-785

Before You Begin

Supervision is crucial when beginning a treatment plan to minimize risk of injury or overexertion (Henchoz, et al., 2008). This is where you need to assemble your team. Talk to a healthcare provider before beginning any exercise program

to determine the level of activity that is appropriate and safe. They may recommend beginning with a referral to a physical therapist to safely reestablish movement and flexibility. Seeking an exercise specialist who has experience with chronic pain clients may also be beneficial (Patti, et al., 2016). Many people employ a small team of these professionals to ensure the plan will yield maximum benefits.

Remember that attitude is important! Patients who take a positive approach and view their conditions as treatable are often able to function better and live happier (McCracken, et al., 2006).

- McCracken, L. M., & Vowles, K. E. (2006). Acceptance of chronic pain. *Current pain and headache reports*, 10(2), 90.
- NIH analysis shows Americans are in pain. (2015, August 12). Retrieved November 28, 2017, from <https://www.nih.gov/news-events/news-releases/nih-analysis-shows-americans-are-pain>
- Patti, A., Bianco, A., Paoli, A., Messina, G., Montalto, M. A., Bellafiore, M., & ... Palma, A. (2016). Pain Perception and Stabilometric Parameters in People With Chronic Low Back Pain After a Pilates Exercise Program: A Randomized Controlled Trial. *Medicine*, 95(2), e2414. doi:10.1097/MD.0000000000002414
- Pedersen, B. K. (2017). Anti-inflammatory effects of exercise: role in diabetes and cardiovascular disease. *European Journal Of Clinical Investigation*, 47(8), 600-611. doi:10.1111/eci.12781
- Porucznik, C. A., Sauer, B. C., Johnson, E. M., Crook, J., Wrathall, J., Anderson, J.W., & Rolfs, R. T. (2010). Adult use of prescription opioid pain medications-Utah, 2008. *Morbidity and Mortality Weekly Report*, 59(6), 153-157.
- Rall, L. C., & Roubenoff, R. (2001). Benefits of Exercise for Patients with Rheumatoid Arthritis. *Nutrition In Clinical Care*, 3(4), 209-215. Exercise as a treatment for chronic low back pain. *The Spine Journal*, 4(1), 106-115.
- Valenza, M. C., Rodríguez-Torres, J., Cabrera-Martos, I., Diaz-Pelegrina, A., Aguilar-Ferrández, M. E., & Castellote-Caballero, Y. (2016). Results of a Pilates exercise program in patients with chronic nonspecific low back pain: A randomized controlled trial. *Clinical rehabilitation*, 0269215516651978.

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions. Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities. This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University.