

## How Do I Stop This Pain?

The International Association for the Study of Pain has defined pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." This definition indicates that pain may result from actual injury to a tissue (ie, bone, muscle, tendon, etc) or the potential for injury to a tissue. Whether actual or potential damage has occurred, however, people will experience pain as real.

### Understanding Pain

Pain is one of the most common symptoms that may lead someone to seek the help of a physical therapist or other health care professional. Over the past decade, our understanding of how and why pain exists has changed. While pain was once thought to originate at the level of the tissues (eg, if a knee was injured, pain signals originated at the level of the knee), it is now believed that pain is not perceived until the brain concludes there is a *potential* threat to those tissues. Today's findings suggest that if a knee is injured, danger signals originate at the level of the knee, these signals are relayed to the brain, and the brain determines if it needs to respond by sending an output of pain. This response is individual what causes 1 person's brain to respond, may not cause another's to do so. This response is based on many different variables.

The recent shift in the understanding of pain has several major implications. First, it changes the way a physical therapist may approach your care. While many health care fields used to focus on the treatment of individual tissues, many physical therapists are beginning to use a "bio-psycho-social" model of pain treatment. In this approach, physical therapists do not solely focus on the tissues of the body (bio), but they also account for psychological and social factors that may be influencing the amount of pain you experience. If you hurt your knee at work, for example, a physical therapist may incorporate different aspects of your work into your rehabilitation. Your physical therapist may design exercises that replicate the positions you assume during a workday or the tasks you perform at work, such as lifting crates, or climbing a ladder. Your physical therapist will also talk to you about any fears that you may have about movement, and help give you the confidence to move safely again.

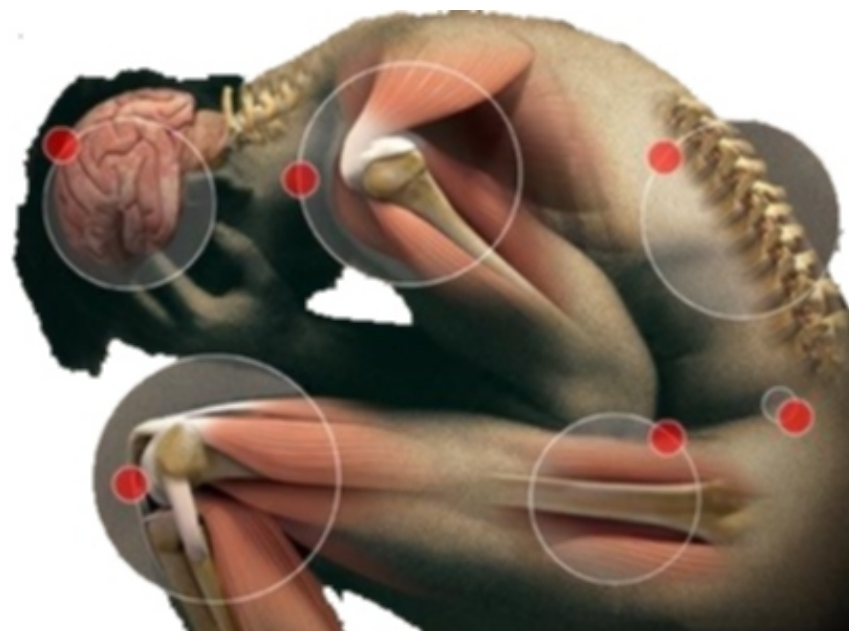
Second, it can have a wide economic impact. In 2010, it was estimated that the United States spent between \$500 billion and \$635 billion on the treatment of pain. To put these numbers in perspective, that same year \$309 billion was spent treating heart disease, \$243 billion was spent treating cancer, and \$188 billion was spent treating diabetes. We are spending an enormous amount of money on the treatment of pain, but these numbers could decrease as we better understand why pain occurs.

Pain is a completely individualized experience. We often use different terms to describe it, but it is hard to know if you feel pain the same way as your friends or family feel pain. Some people talk about having a high or low tolerance to pain, but because pain is such a subjective experience, science has not developed accurate ways to measure pain tolerance.

**Currently, there are 2 ways your physical therapist may categorize your pain:**

1. The most standard classification of pain is **time-based**:
  - Acute (pain experienced for less than 3 months)
  - Chronic (pain experienced for more than 3 months)

While these terms help us categorize pain, they do not describe the mechanisms causing your pain.



Pain (con't)

2. The second classification of pain is based on the likely **triggering mechanism**:

- **Nociceptive** triggers result in pain that is localized to an area of injury or dysfunction. The pain is often aggravated or eased by certain movements or positions, which demonstrates that the pain has a clear mechanical nature.
- **Peripheral neuropathic**-induced pain occurs with a history of injury, disease, or mechanical compromise to a nerve. Pain is generally experienced due to damage or disease of neural (nerve) tissue.
- **Central sensitization** results in pain that is disproportionate to the nature or extent of the injury or disease. The pain is usually nonmechanical and unpredictable in response to factors that usually aggravate or decrease pain.

Research has indicated pain may also result in the following deficits:

- **Fear avoidance** an avoidance of movements or activities because of a belief about the potential negative consequences of those movements or activities (eg, My work might harm my back).
- **Catastrophizing** an exaggerated, negative orientation toward pain (eg, "Because of this pain, I feel I cannot go on").
- **Kinesiophobia** a fear of moving or exercising (eg, I am afraid to return to exercising).
- **Muscle weakness**
- **Inability to move** as freely as usual
- **Difficulty** performing daily activities

## Signs and Symptoms

We all experience pain differently; the nature of your pain may give your physical therapist some insight into the contributing mechanism. The following is a general description of the different types of pain experienced:

**Acute pain**, often from a nociceptive mechanism, generally results in discomfort locally at the injured tissue. This pain will increase when the injured tissue is provoked or compromised, and will decrease when the trigger is removed. For example, if you have a swollen or injured tendon in your shoulder, you may experience pain when moving your arm overhead. That is because the tendon can get stretched, pinched, or compressed during the movement. When you move the arm back down, unloading the tendon, the pain often resolves or at least significantly lessens. A physical therapist will help you identify positions that hurt and positions that do not hurt, and provide treatment and exercises to help the injured tissue move more efficiently.

**Chronic pain**, often from a central sensitization mechanism, results in widespread pain that is often unpredictable. Individuals experiencing it may be hypersensitive to even the slightest triggers. Chronic pain often is related to psychological factors, and has been identified as a characteristic of chronic low back pain, chronic fatigue syndrome, whiplash, TMJ disorder, rheumatoid arthritis, osteoarthritis, and fibromyalgia. The approach to care for chronic pain is often less aggressive because of its unpredictability, and treatment often emphasizes education in addition to exercise and manual therapy. A physical therapist is well equipped to assess and treat disorders resulting in pain.

Your physical therapist will ask you questions as well as perform tests to better understand what may be causing your pain. Your physical therapist may ask:

- Where is the pain located?
- When do you experience the pain?
- What types of activities bring it on, and when provoked, how long does it take to go away?
- What does the pain "feel" like?
- On a scale of 0 to 10, can you rate how much pain you are currently experiencing (as well as the best and worst pain you have felt in the past 24 hours)?
- What do you think is causing the pain?

In addition, your physical therapist may ask you to fill out a questionnaire to better understand how the pain may be affecting your daily life.

Imaging tests, such as x-rays, computed tomography (CT) scans, and magnetic resonance imaging (MRI) may be needed to rule out any underlying medical condition that is contributing to your pain. Your physical therapist will refer you to other medical professionals for these assessments.

Pain (con't)

## How Can a Physical Therapist Help With Pain?

Once your condition has been diagnosed, your physical therapist will work with you to develop a treatment plan to help address your pain.

Because the mechanisms of pain vary, each approach to care will also vary. That being said, there is evidence to suggest that simply understanding pain through educational means, such as reading this guide, may result in reduced symptoms. (Know pain equals know gain!)

In addition, physical therapy treatments may include:

**Manual therapy.** Manual therapy consists of specific, hands-on techniques that may be used to manipulate or mobilize your skin, bones, and soft tissues. Manual therapy is often used in conjunction with other activities to increase movement and reduce pain. Some physical therapists have additional certifications that identify them as having advanced training in this type of therapy.

**Movement and strengthening exercises.** Moving and exercising can often be a great strategy to lessen pain. Your physical therapist will help identify specific movements that will help reduce your symptoms.

**Modalities.** Your physical therapist will be able to determine whether the use of modalities, such as ice, heat, or electrical stimulation will benefit your unique condition.

## Can Pain Be Prevented?

Pain is a symptom that all healthy human beings experience at some point in their lives. The sensation of pain is necessary for survival; if we did not experience it, we would not know that we were injured or unwell.

However, the degree of pain experienced does not always match the degree of injury (ie, minor injuries may cause extreme pain, and vice versa).

Your physical therapist will work with you to develop strategies to better understand and manage your pain. Some points to remember:

- **Education is key.** When we understand what pain is, we can use it to better guide our movements and activities.
- **Bed rest may not always be helpful.** Despite what we once thought, long periods of bed rest (more than a day or 2) may actually make your pain worse and lead to other medical complications. Your physical therapist can work with you to develop safe levels of activity to help treat your condition.
- **Regular exercise is important.** Routine exercise provides a lot of benefits, such as improving the conditioning of the nervous system, which is responsible for sending pain messages.
- **Relaxation and imagery exercises can help.** We often experience things that can trigger pain (ie, a stressful day, loud noises, an uncomfortable situation, etc). A physical therapist will help you learn ways to relax the body, which can often calm down the nervous system.

**Are you tired of dealing with pain and would like some relief? Give Pearson Physical Therapy a call and get scheduled to see one of our therapist's. We will do a thorough evaluation and provide several ways to relieve or eliminate your pain.**



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