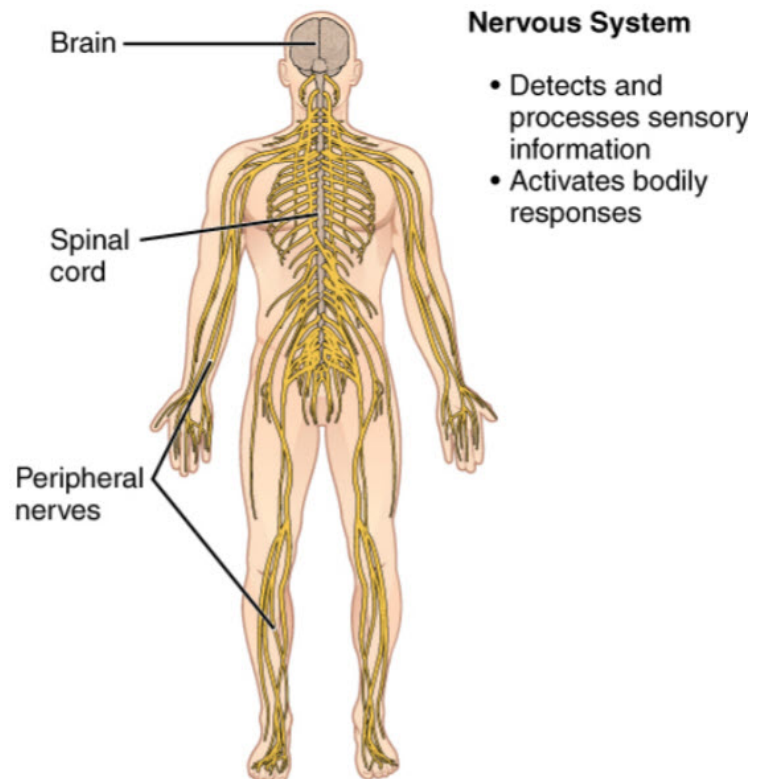




Why do I have pain?

Ongoing or increased pain is a result of a hypersensitive nervous system. The **nervous system** is the network of nerve tissue in the body which includes the brain and spinal cord and nerves that extend from the spinal cord to the rest of the body. Having a **hypersensitive nervous system** means your nervous system is extra sensitive to things it senses.

There are many reasons your nervous system may have become hypersensitive. You may have experienced an injury or your pain may have come on suddenly or gradually without an obvious cause. We will explore some of these reasons later on, but we will start by explaining how pain works.



Pain is the body's alarm system.

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At rest, your nerves maintain a low level of activity, attending to the various stimulation around you (temperature, touch, pressure, sounds, etc.). When there is a potential threat or danger, your nerves send a warning message to your brain and pain is produced.

When you get injured, pain is present to warn you about possible tissue damage. You examine the area to look for signs of injury such as swelling, bruising, or a wound. If the injury is cared for, the pain will decrease over time and eventually go away. Your nervous system will return to its resting level of activity. However, sometimes the nervous system does not go back to its resting level; it stays sensitive. This sensitivity impacts your life greatly as the pain threshold is lowered. Therefore, pain is more frequent and intense and triggered by everyday activities.

Think of it like a car alarm. Sometimes a car alarm can go off even when there is no sign of danger. For example, a large truck driving by a parked car, or a slight bump of the door may cause an alarm to go off. The purpose is to alert you to potential danger, but if the car alarm is going off without the presence of danger or a threat, this is a false alarm. Some car alarms are very sensitive while others seem to hardly ever go off. A hypersensitive nervous system is like a sensitive car alarm, giving out “false alarms” in the form of pain. Additionally, only minor input causes the alarm to go off, leading to persistent pain.

What if I have never had an injury?

Have you ever noticed a bruise and wondered where it came from? You experienced an injury, however you did not have pain. If pain was present, you would have a memory of the injury itself. Pain was not produced by the brain in this case because the perceived threat was minimal.

However, pain can be produced in the brain without an actual injury occurring. This could be due to other perceived threats activating your body’s alarm system. Your nervous system sensitivity can also be influenced by your emotions, good or bad and stressors such as:

- School
- Finances

- Relationships
- Trauma or abuse
- Failed treatment experiences
- Different medical explanations for your pain

These stressors can lead to a hypersensitive nervous system and result in a lower pain threshold. This does **not** mean you “can’t deal with stress” or that “it’s all in your head.” The pain you experience is real and very disruptive to your life.

Why did my nervous system become so sensitive?

It is not well-understood why this happens to people, but there are some risk factors that have been identified. Think of a cup. You can fill your cup to a certain point, but it eventually will overflow. Think of the overflow as your pain. Many things make up the content of your cup, some of which you cannot control. This can include your:

- | | |
|------------------------|-------------------------------|
| • Genetics | • Past trauma or abuse |
| • Family history | • Stress |
| • Race | • Lack of physical activity |
| • Age | • Poor sleep |
| • Gender | • Inconsistent medical advice |
| • Socioeconomic status | and explanations |

The relative contribution of each of these factors is different from person to person. If your cup becomes too full, it will overflow and you will experience pain.



Both of these cups have the same contents of varying levels. While in the cup to the left, the contents are smaller and do not overflow, the combination of the contents in the cup on the right have caused the cup to overflow, resulting in pain. It's not necessarily important what actually made the cup overflow, but the contents in the cup that can be influenced (exercise, sleep, stress management) should be reduced to relieve pain.

How do I treat my pain?

Treating your pain involves a multi-faceted approach aimed at improving areas that are known to be most influential on the pain experience. These include:

- Getting better sleep
- Getting enough exercise
- Learning to use coping strategies
- Receiving education

Intervention in each of these areas can help calm the nervous system, build resiliency, and reduce pain. It is important that all areas be addressed in order to have the best effect. The amount of intervention needed in each of the above areas varies between individuals. Your treatment team will recommend an approach that best suits your needs.

Who do I contact with questions?

MiPAIN Program-Department of Pediatrics &
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“The recovery from chronic pain is like trying to get a car with four flat tires moving again. You can fill one tire with medications or bracing but that will not make the car go again. You can fill another tire with coping skills, another with physical activity, and the fourth with sleep. Together they will make the car move.”

Adapted from The American Chronic Pain Association, 2013 via [Coakley & Neil, 2013](#).

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