

BACK RELIEF

# COPING WITH BACK PAIN

Helping you walk away from back pain.®





# Coping With Back Pain

Much of what medical science understands about coping with pain has been learned over the past few decades. There are four main themes:

## ① Pain Anatomy

It's easier to cope with both acute and chronic pain if you understand how pain works.

## ② Pain Medication

Medication is often helpful for acute pain (or an acute flare-up of a chronic condition) but is not usually recommended for chronic pain over the long term.

## ③ Pain and Fitness

People who are in good shape in terms of strength, flexibility and aerobics are better able to cope with pain than those who are not fit.

## ④ Pain Psychology

People who learn ways of coping with the psychological aspects of pain (including stress and/or depression) tend to have fewer acute bouts and, when an acute bout does occur, it generally resolves faster.

In this booklet, these themes are discussed in four separate sections.

## SECTION 1 :

COPING WITH BACK PAIN

# PAIN ANATOMY



The first step is to understand the differences between **acute pain** and **chronic pain**.

### Acute Pain ● ● ● \_\_\_\_\_

The mechanisms of acute pain are fairly easy to understand. Acute pain is almost always:

- produced by the body for a good reason
- short-lived
- caused by an injury that is obvious

An example of acute pain is what you feel when you stub your toe on a rock, or strain your back while lifting. The pain, which arrives with the speed of lightning, tells you to stop what you are doing in order to minimize the damage. In the case of back strain, muscle spasm often accompanies the pain. This is Mother Nature's way of **ensuring** that you discontinue the harmful activity!

### Chronic Pain ● ● ● \_\_\_\_\_

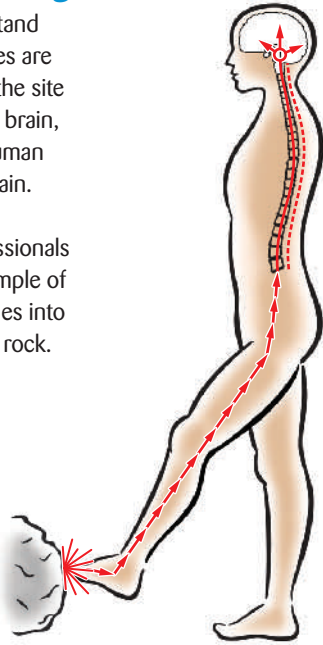
Pain that has been present for three months or longer is called chronic pain. More complicated than acute pain, chronic pain:

- is no longer useful as a warning signal
- often begins as acute pain but does not subside when the injury heals
- is real but part of this reality is "psychogenic," which is the medical term for psychological

## The Transmission of a Pain Message

It helps to understand how pain messages are transmitted from the site of an injury to the brain, which is where human beings perceive pain.

Health care professionals often use the example of a big toe that comes into contact with a big rock.

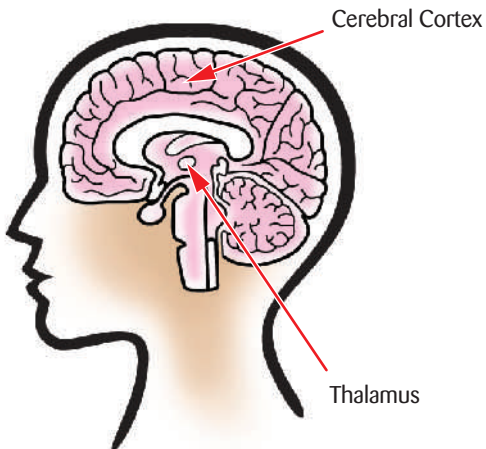


When researchers first began to study the mechanisms of pain, they thought that pain messages were transmitted from the toe to the brain in an uninterrupted fashion. You stubbed your toe and presto! The message zoomed along a nerve fibre to the spinal cord, then up the cord to the brain where pain is perceived. They also believed that the pain would range from mild to severe depending upon the quality of the impact.

Research has shown that this concept is faulty. Along the way, there are several gaps in the nerve fibres, which must be crossed. Otherwise no pain will be felt. Each gap is called a **synapse** and a chemical called a **neurotransmitter** ferries the pain message from the end of one nerve fibre to the beginning of the next.

If a pain message is strong enough to travel up the spinal cord to the lower part of the brain (called the **thalamus**) there will be a **reflex reaction**. An example is withdrawing your toe from the rock with the speed of lightning.

But this is not the end of the journey. From here, the message must cross another synapse to arrive at the brain's **cerebral cortex**. This is where the location of pain is perceived and more complex responses occur, many of them emotional in nature.



For example, you might scream, or become anxious about the impact the injury may have on your life. Or, the cerebral cortex may actually decide that the best response is to feel nothing because at that moment it's more important to continue playing the game, or waging the war. In other words, the same injury can cause different responses in different people, and even different responses in the same person at different times.

As well, pain – and particularly chronic pain – frequently sets a vicious cycle into motion. The pain causes muscle tension or muscle spasm, which causes more pain . . . until the cycle is broken.

If you are trying to cope with chronic pain, you and your physician should discuss what sorts of life experiences may be influencing your reactions. Once you are aware of these mechanisms, you will probably be able to cope better.

## SECTION 2 :

COPING WITH BACK PAIN

# PAIN MEDICATION



There are two basic categories of pain relievers:

- ▶ **non-narcotics**, which include a broad range of medications that act in different ways
- ▶ **narcotics**, which act on the brain to reduce the perception of pain.

### Non-narcotics ● ● ● \_\_\_\_\_

The most commonly used non-narcotic medications for back pain are:

- **NSAIDs** (non-steroidal anti-inflammatory drug)
- **acetaminophen**
- **muscle relaxants**
- **anti depressants**

NSAIDs relieve pain and stiffness in muscles and joints by blocking chemicals called **prostaglandins**, which are released at the site of an injury and cause swelling. When swelling is reduced, pain decreases. At prescription doses NSAIDs may cause stomach pain or even bleeding.

Some NSAIDs, such as ibuprofen, are available without a prescription. At non-prescription doses ibuprofen is unlikely to cause stomach upset, but also has reduced anti-inflammatory properties, and is used primarily for pain relief. Acetylsalicylic acid (ASA) is another example of a non-prescription NSAID, but it has a higher risk of causing stomach problems than ibuprofen.

Acetaminophen also works at the site of an injury but does not contain the anti-inflammatory ingredients found in NSAIDs. While it does not cause stomach upset, acetaminophen is cleared by the liver and should not be used by people with liver disease or by people who drink alcohol regularly.

Muscle relaxants reduce muscle spasm by slowing down the signals from the brain that cause injured muscles to contract. They are often combined with an analgesic and used to break the vicious pain/muscle spasm cycle.

Anti depressants are sometimes prescribed in low doses to relax muscles, reduce pain and aid sleep. SSRIs (selective serotonin re-uptake inhibitors) are prescribed most often because they have fewer side-effects than other types of anti depressants.

## Narcotics



Narcotics (which require a prescription) are not generally recommended for chronic pain because taking them over the long term can lead to **tolerance**. This means that your body gets used to a certain amount of medication and, in order to get the same relief, the dose must be increased. Narcotics (such as codeine) can also cause side effects like constipation, drowsiness and dependency. This is why chronic pain patients must look for non drug methods of controlling the problem. The most common narcotic prescribed for back pain is codeine. Usually, it is combined with another pain medication – either acetaminophen or ASA.

## SECTION 3 :

COPING WITH BACK PAIN

# PAIN AND FITNESS



Exercise is an essential part of the rehab process for anyone who is trying to cope with acute or chronic back pain. This includes aerobic exercise as well as specific back exercises. Another booklet in this series, **Fitness and Activity**, explains the basics of an exercise program.

## Exercise is essential because: ● ● ● \_\_\_\_\_

- a fit body is able to deliver nutrients more efficiently to damaged tissue and this speeds up the healing process
- pain sufferers who exercise feel more confident, less anxious and are far less prone to stress and/or depression
- pain, and particularly chronic pain, causes muscle tension, which exercise helps to relieve



## SECTION 4 :

COPING WITH BACK PAIN

# PAIN PSYCHOLOGY



People who learn ways of coping with the psychological aspects of pain (including stress and/or depression) tend to have fewer acute bouts and, when an acute bout does occur, it generally resolves faster.

Research studies have shown that, when people suffer from chronic pain over a period of time, the nerve fibres that carry pain messages may become **sensitized**. This means that a minor amount of stimulation can trigger the perception of severe pain. Understanding this has helped many people cope better because the fear, which so often accompanies pain, is reduced.

Other studies indicate that when pain continues after an injury has healed, it may be because people are deficient in their ability to produce **endorphins**, which are natural pain-killing chemicals that human brains normally produce. Depression, which often accompanies chronic pain, may also lower endorphin production. That's one reason why anti depressant medication is sometimes prescribed.

Most of the relaxation techniques that go hand-in-hand with stress reduction have been found to stimulate the production of endorphins. They also help many chronic pain patients cope with the depression that so often accompanies chronic pain. Relaxation techniques include: yoga, deep breathing, meditation and progressive relaxation, which involves learning to notice the difference between a muscle that is tense and one that is relaxed.



Your doctor is the best person to talk to about coping techniques. It may be that a **Pain Clinic**, where health care professionals from various disciplines pool their knowledge, will be helpful for you. Or, you may choose to join a **Support Group**, where ordinary people meet to share their experiences and knowledge.

For many pain patients, it's important to involve family members in this aspect of the rehabilitation process since on-going medical ailments like chronic pain invariably have an impact on the families of those who are suffering.



Visit: [www.backrelief.com](http://www.backrelief.com)



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