

Pain Tolerance

Skaters differ in their ability to tolerate pain. One person may not be able to tolerate the pain of a small bruise, but another skater can tolerate pain caused by a major fall and voice few complaints.

The ability to withstand pain varies according to mood, personality, and circumstance.

In a moment of excitement during a practice or competition, an athlete may not notice a severe bruise but is likely to be very aware of the pain afterwards, especially if the individual has lost.

Pain Receptors

Pain caused by a physical injury begins at special pain receptors scattered throughout the body. These pain receptors transmit messages or signals as electrical impulses along nerves to the spinal cord and then upward to the brain. Sometimes the signal evokes a reflex response.

When the signal reaches the spinal cord, a signal is immediately sent back along motor nerves to the original site of the pain, triggering the muscles to contract without involving the brain. For example, when people inadvertently touch something very hot, they immediately pull away. This reflex reaction helps prevent permanent damage.

The pain signal is also sent to the brain. Only when the brain processes the signal and interprets it as pain do people become conscious of the pain. Pain receptors and their nerve pathways differ in different parts of the body.

For this reason, pain sensation varies with the type and location of injury. For example, pain receptors in the skin are plentiful and capable of transmitting precise information, including where an injury is located and whether the source was sharp, such as a blade wound, or dull, such as pressure, heat, or cold.

Pain management

There are dozens of pain medications and combinations available. The most frequently used pain medications are aspirin, [acetaminophen](#), and NSAIDs such as ibuprofen. There are also pain medications available as cream and gel. The product name for acetaminophen is [Tylenol](#).

Danger of pain medication by cream

People who use large amounts of skin-numbing creams and lotions for pain relief are at risk of irregular heartbeats, seizures and even death. Topical pain creams have been applied in amounts so large that a lethal dose of the chemicals entered the bloodstream causing death.

Pain numbing creams and lotions, available both by prescription and over the counter, are approved to soothe burning or itching skin as well

as pain before and after aggressive physical exercise.

These topical medicines contain numbing drugs that can include lidocaine, tetracaine, benzocaine and prilocaine.

Leaving the creams on the skin for long periods of time or on large portions of the skin increases the risk.

Ankle pain

MR imaging (MRI) can make a difference in the management of patients with ankle pain, changing treatment in about one-third of the patients. A study, of 91 patients, found that MRI changed the management plans of 35% of patients, said Philip W.P. Bearcroft, MD, of Cambridge University Hospitals in England. "This is itself is significant, but more significant is the fact that before an MRI was done, 65 of the 91 patients were scheduled to undergo surgery.

After an MRI was done, nine of those patients were treated nonsurgically," Dr. Bearcroft said. Dr. Bearcroft and his colleagues conducted the study in conjunction with an orthopedic foot and ankle surgeon at a regional teaching hospital. The surgeon noted his proposed treatment plan for each patient before and after an MR examination.

The surgeon also noted the potential diagnoses for each injury. Before an MR examination was done, the surgeon indicated an average 2.3 possible diagnoses per patient. "After MRI was performed, the number of diagnoses per patient was reduced to 1.2," said Dr. Bearcroft.

MRI increased the referring physician's confidence in his diagnoses, Dr. Bearcroft said. "In 66% of the MRI examinations performed, the referring surgeon felt that his understanding of the patient's disease had either depended upon or had been substantially improved by MRI," he added. American Roentgen Ray Society

Foot pain

Pain and stiffness due to plantar fasciitis, an inflammatory condition involving the sole of the foot, is relieved by "iontophoresis" treatment with acetic acid. Iontophoresis refers to the use of a small electric current to move ionized substances through the skin into tissues.

Heel pain and plantar fasciitis

Dr. Joseph Fox, podiatric surgeon with Gramercy Surgery center in New York, says: "If you experience nagging heel pain when you wake up in the morning or after spending a significant time on your feet, you're not alone. Heel pain is the most common complaint among podiatric patients, affecting more than one million Americans each year.

The cause of the pain, most often, is plantar fasciitis -- an inflammation of the tendon that runs along the arch of the foot from the heel to the toes.

Fortunately, about 90 percent of all plantar fasciitis cases resolve with conservative treatment. However, up to 10 percent of cases, or 100,000 annually, may become chronic, excruciating and debilitating.

While invasive surgery has been the primary option to treat chronic plantar fasciitis, a new, minimally invasive technique called Coblation therapy promises pain relief and resumption of normal activities with fewer side effects."

Pain Pill warning

Sterner warning labels for the pain pills acetaminophen, aspirin and ibuprofen are being advised cautioning millions of Americans who take the nonprescription pain pills regularly can expect potentially serious side effects.

The over-the-counter pain pills remain safe and effective when used as directed, says the Food and Drug Administration, even though with aspirin, ibuprofen and other nonsteroidal anti-inflammatory pain pills, there is a risk of gastrointestinal bleeding and kidney injury even when patients take the correct dose.

Overdoses of acetaminophen can cause serious liver damage, even death. These pain pills are linked to thousands of deaths a year. The drugs are found in hundreds of products sold to treat pain, headache and fever.

The wide availability of those combination products allows patients to unwittingly overdose.

Pain Medicine Overdose

The most common drugs involved in fatal pain medicine overdoses listed on death certificates are prescription opioid painkillers, often obtained illicitly. The worsening abuse of potent opioid drugs, such as oxycodone or fentanyl, coincides with an increase in the prescribing of these pain drugs by doctors, who have been encouraged to treat chronic pain more aggressively by pharmaceutical companies.