

Kids – Young Adults: Pain Relievers

Yow! You went after the ball at the same time two other kids did, and you got kicked hard in the shin by four feet. Or maybe you listened to music that was too loud, and now you have a pounding headache that won't go away. In cases like these (and many others), a parent may have given you a pain reliever to take. Most pain relievers that kids take are medications called **ibuprofen** (say: eye-byoo-**pro**-fen) - like Advil - and **acetaminophen** (say: uh-see-toe-**min**-oh-fen) - like Tylenol. You swallow them, and the pain soon goes away or becomes less severe.

But what happens after you take that pill or swallow that liquid? It doesn't go directly to your shin or head, that's for sure - even though it can seem that way, because the pain goes away from the **exact** spot that hurts! Actually, the pain reliever works with your cells, your body's nerve endings, your nervous system, and your brain to keep you from feeling the pain.

Your body is full of nerve endings that are in your skin and different tissues. Some of these nerve endings can sense pain - either from an extreme change in temperature (like if you burn your hand), or from pressure on a body part (like all those feet on your shin), for example. When cells in your body are injured or damaged, they release a chemical called **prostaglandin** (say: prah-sti-**glan**-din). The special nerve endings that sense pain are very sensitive to this chemical. When prostaglandin is released, the nerve endings respond to it by picking up and transmitting the pain and injury messages through the nervous system to the brain. They tell the brain everything about the pain - like where it is and how much it hurts. The brain then responds: yow!

When you take a pain reliever like acetaminophen or ibuprofen, it keeps injured or damaged cells from releasing prostaglandin. When the cells can't release this chemical, it means that the brain won't get the pain "message" as quickly or clearly, and it can't respond. So your pain goes away or becomes less severe, for as long as the cells aren't releasing the chemical.

Sometimes if a person has a serious operation or another health problem that means he'll have a lot of pain, doctors will prescribe pain relievers that are much stronger than acetaminophen and ibuprofen. This type of pain reliever works by getting in between the cells in the body's nervous system so they cannot transmit the pain message to one another. The message isn't able to make it to the brain, and this keeps the patient from feeling pain.

Updated and reviewed by: Kim Rutherford, MD

Date reviewed: May 2001

Originally reviewed by: Steve Dowshen, MD

Source: KidsHealth www.KidsHealth.com is a project of The Nemours Foundation which is dedicated to improving the health and spirit of children. Today, as part of its continuing mission, the Foundation supports the operation of a number of renowned children's health facilities throughout the nation, including the Alfred I. duPont Hospital for Children in Wilmington, Delaware, and the Nemours Children's Clinics throughout Florida. Visit The Nemours Foundation to find out more about them and its health facilities for children <http://www.nemours.org/no/>

from: <http://endoflifecare.tripod.com/kidsyoungadults/id64.html>