Chief, Division of Sports Medicine



Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

Why Are Non-steroidal Anti-Inflammatory Medications Used: NSAIDs work

like corticosteroids (also called steroids), without many of the side effects of steroids. Steroids are man-made drugs that are very similar to cortisone, a naturally-occurring hormone. Like cortisone, NSAIDs are effective in reducing pain and inflammation often associated with joint and muscle diseases and injuries. Thus, Non-steroidal anti-inflammatory medications (NSAIDs) are most often used to reduce pain, swelling and inflammation. They also help reduce fevers. They are available over the counter (without prescription) or higher doses and other variations of NSAIDs with a prescription. These medications are effective, but not as strong, and a bit safer than their counterparts — corticosteroids.

Some examples of NSAIDs include Over-the-counter NSAIDs - ibuprofen (Advil, Motrin) and naproxen (Aleve). Some Prescription NSAIDs include diclofenac (Voltaren), sulindac (Clinoril), indomethacin (Indocin), meloxicam (Mobic), celecoxib (Celebrex), oxaprozin (Daypro), etodolac (Lodine), and piroxicam (Feldene). These are not complete lists of NSAIDs.

Description: NSAIDs work by blocking the production of certain body chemicals that cause inflammation, called prostaglandins. NSAIDs stop cells making prostaglandins. Prostaglandins are chemicals released by injured cells. They cause inflammation and swelling and they sensitize nerve endings, which can lead to pain. If you make less prostaglandin, you have less inflammation and less pain. By stopping cells making prostaglandins, NSAIDs relieve the symptoms of arthritis and joint inflammation. They do not stop the inflammation occurring in the future or prevent the disease progressing to joint damage. NSAIDs are also effective in treating general or localized pain, such as back pain, menstrual cramps, and headaches.

Potential Adverse Effects include an upset stomach or heartburn when they take NSAIDs. That is why most people take it with food or with medications. The Food and Drug Administration added new warnings about NSAIDs in July 2015. NSAIDs can increase the chance of heart attack or stroke. This risk may be greater if you have heart disease or risk factors (for example, smoking, high blood pressure, high cholesterol, diabetes) for heart disease. However, the risk may also be increased in people who do not have heart disease or those risk factors. Heart problems caused by NSAIDs can happen within the first weeks of use, and may happen more frequently with higher doses or with long-term use. NSAIDs should not be used right before or after heart bypass surgery. NSAIDs may increase the chance of serious stomach and bowel side effects like ulcers and bleeding. This risk may be greater in older individuals. These side effects can occur without warning signs.

Side effects may occur if you are taking large doses of NSAIDs, or if you are taking them for a long time. Some side effects are mild and go away, while others are more serious and need medical attention. Please note: The side effects listed below are the most common. All possible side effects are not included. Always contact your healthcare provider if you have questions about your particular medication.



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The most frequently reported side effects of NSAIDs are gastrointestinal symptoms, such as: Gas, Feeling bloated, Heartburn, Stomach pain, Nausea, Vomiting, Diarrhea and/or constipation. , These side effects can generally be relieved by taking the drug with adequate amounts of food. NSAIDs may also be taken with milk or antacids (such as Maalox® or Mylanta®) to prevent gastrointestinal symptoms. If the symptoms continue, the NSAID may need to be stopped. You should contact your healthcare provider if the symptoms listed above do not stop after a few days of taking the NSAID with food, milk, or antacids. Drinking alcohol while taking NSAIDs increases your risk of stomach problems, like ulcers, so it is recommended not to drink alcohol while you are taking NSAIDs.

Some other side effects of NSAIDs include Dizziness, Feeling lightheaded, Problems with balance, Difficulty concentrating, Mild headaches. If these symptoms continue for more than a few days, stop taking the NSAID and contact your healthcare provider for more instructions.

If you have any of the following side effects, it is important to call your healthcare provider right away. Fluid retention (recognized by swelling of the mouth, face, lips or tongue, around the ankles, feet, lower legs, hands, and possibly around the eyes); Ringing in the ears; Severe rash or hives or red, peeling skin; Itching; Unexplained bruising and bleeding; Unusual weight gain; black stools – bloody or black, tarry stools; Bloody or cloudy urine; Severe stomach pain; Blood or material that looks like coffee grounds in vomit (bleeding may occur without warning symptoms like pain); Blurred vision; Wheezing, trouble breathing, or unusual cough; Chest pain, rapid heartbeat, palpitations; Acute fatigue, flu-like symptoms; Jaundice; Photosensitivity (greater sensitivity to light); Change in strength on one side is greater than the other, trouble speaking or thinking, change in balance; Inability to pass urine, or change in how much urine is passed; Very bad back pain; Very bad headache; Feeling very tired and weak

Long term use of NSAIDs can result in sudden kidney problem called acute kidney injury. Further, NSAIDs can make certain health problems worse, such as heart failure and kidney disease. Do not use NSAIDs if you are taking a blood thinner.