Nicholas Caggiano, MD
Orthopedic Hand Surgeon
Central Coast Orthopedics

San Luis Obispo
862 Meinecke Avenue, Suite 100
San Luis Obispo, CA 93405
805-541-4600 (p)
805-541-8716 (f)

Pismo Beach
921 Oak Park Boulevard, Suite 204
Pismo Beach, CA 93449
805-473-4949 (p)
805-473-1802 (f)

Over-the-Counter Pain Medication

Acetaminophen can be effective for mild to moderate pain. Risks of acetaminophen include dose-dependent liver toxicity, especially when the drug is taken at high doses, with alcohol, or by those with liver disease. This risk further illustrates why patients should be aware of the presence of acetaminophen in both over-the-counter and prescribed combination medications. The usual dose is 325 mg to 650 mg. Take every 4 to 6 hours, as needed, up to 4 times in a 24-hour period. The maximum dose may vary from 3,000 mg to 4,000 mg, but do not take more than 4,000 mg in a 24-hour period. Pediatric doses are age and weight based. Consult your pediatrician for pediatric dosing and precautions. Follow all instructions on the label. Since acetaminophen is metabolized by the liver, any drug that affects the liver can change the level of acetaminophen in your body. The potential for acetaminophen to damage the liver is increased if it is used with alcohol. Acetaminophen may increase the blood thinning effect of coumadin. Long term administration of acetaminophen with coumadin should be discussed with your cardiologist/primary care provider. Side effects from acetaminophen are uncommon. The most serious effect is liver damage if used in large doses. Do not use acetaminophen if you have a history of acetaminophen allergy or sensitivity.

NSAIDs such as aspirin, ibuprofen, and naproxen can provide significant pain relief for inflammation, such as from arthritis, bone fractures or tumors, muscle pains, headache, and acute pain caused by injury or surgery. Nonselective NSAIDs (those that inhibit the activity of both the cyclooxygenase [COX]-1 and COX-2 enzymes) can be associated with gastritis, gastric ulcers, and gastrointestinal (GI) bleeding. Conversely, COX-2 inhibitors have fewer GI adverse effects. The use of NSAIDs may be associated with renal insufficiency, hypertension, and cardiac-related events. NSAIDs should be taken with food. Prolonged use of NSAIDs can result in the development of stomach ulcers or bleeding. Stop taking NSAIDs if abdominal pain occurs. Do not use an NSAID if you have a history of aspirin or NSAID allergy or sensitivity.

Topical NSAIDs are applied to the skin either as a gel (Voltaren Gel) or drops (Pennsaid). The medication is absorbed through the skin. The most common reactions are skin-related such

as dry skin or rash. Stomach upset, nausea, or diarrhea may also occur. If any of these side effects occur, the medication should be discontinued immediately. Contact of the patch with your eyes, nose, or mouth is to be avoided. Serious reactions are extremely rare; however, there is increased risk of heart attack, stroke, and bleeding in the stomach or intestines. Do not use a topical NSAID if you have a history of aspirin or NSAID allergy or sensitivity.

The risks of prolonged use of **oral steroids** include but are not limited to weight gain, insomnia, osteoporosis, mood changes, diabetes, susceptibility to infection, glaucoma and high blood pressure. In cases where prednisone use is prolonged, patients should be monitored with blood pressure checks, serum glucose levels and an eye exam. Additionally, the patient may need to be placed on GI prophylaxis, PCP prophylaxis, and calcium and vitamin D supplementation and/or a bisphosphonate.

Recommended reading:

- https://www.health.harvard.edu/pain/acetaminophen-safety-be-cautious-but-not-afraid

Sources:
- Modernizing Medicine 2021
- Department of Health and Human Services (https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf, accessed 2021-11-08 at 10pm PST)
- University of Michigan Health (https://www.uofmhealth.org/health-library/sid41443, accessed 2021-11-08 at 10pm PST)