

**Title:** Peptic Ulcer prevention in chronic NSAID-user

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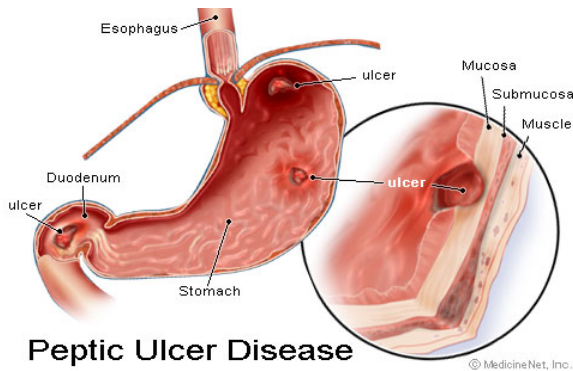
**Abstract:**

Approximately 33 million Americans take Nonsteroidal anti-inflammatory drugs (NSAIDs) regularly. As many as 15-25% of these chronic NSAID users will develop ulcer disease. Of which 2-4% will experience complication of bleeding or perforation. Therefore, physicians who prescribe NSAIDs are faced with the difficult dilemma of identification of high risk patients and selecting the appropriate strategy to prevent peptic ulcer disease and its complications. Successful intervention must include adequate patient education and risk stratification strategies in order to make appropriate prevention recommendation. This pamphlet is designed to help patient understand their risks of developing ulcers and the clinical risk assessment of Gastrointestinal and Cardiovascular risks in primary prevention of NSAID-related ulcer.

This document was created by a medical student enrolled in the Primary Care Clerkship at the University of Minnesota Medical School as part of the course project. The aim of the project is to present information on a medical topic in the format of a patient education handout. It does not necessarily reflect the views of the University of Minnesota Medical School physicians and faculty. These materials are provided for informational purposes only and are in no way intended to take the place of the advice and recommendations of your personal health care provider. The information provided may no longer be up to date since it has not been reviewed since the date of creation. The information provided should not be used to diagnose a health problem or disease, or as a means of determining treatment. In the event of a medical emergency, immediately contact a doctor or call 911.

## What is peptic ulcer?

A peptic ulcer is an erosion or a sore in the wall of the stomach (gastric ulcer) or duodenum (duodenal ulcer). Peptic ulcers happen when the acidic juices that are secreted by the stomach cells to help you digest food causes damage to the lining of the intestinal tract. One major cause of ulcers is the chronic use of NSAIDs



Peptic Ulcer Disease

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## What are NSAID?

NSAID stands for Non-steroidal Anti-inflammatory Drugs, which include commonly used over-the-counter drugs like aspirin, ibuprofen and naproxen. These are drugs are most often used for headaches, arthritis, cramps, or even as daily therapy for heart attack and stroke prevention.



## For further information on Peptic ulcer and NSAID use:

National Digestive Diseases Information Clearinghouse (NDDIC)  
<http://digestive.niddk.nih.gov>

Mayo Clinic Health Information  
<http://www.mayoclinic.com/health/peptic-ulcer>

Developed by Sheila Nguyen, MS4

## Prevention of Peptic Ulcer Disease in NSAID-users



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## What are symptoms of peptic ulcers?

Most common symptom is **burning pain** that typically:

- Lasts from a few minutes to several hours
- Starts 2-3 hours after meal
- Worse when stomach is empty such as in the middle of the night
- Temporarily relieved by eating certain foods that buffer stomach acid or by taking acid-blocker.

Other more severe symptoms:

- Weight loss
- Decreased appetite
- Nausea or vomiting
- Vomiting up blood
- Dark blood in stools or tarry black stools



## How can I find out whether I have peptic ulcers?

If you have symptoms, contact your doctor. Your doctor may:

- Take x-ray of your stomach and duodenum
- Refer you to see a specialist doctor who may perform a procedure called an endoscopy to look inside your stomach and duodenum.

## How do NSAIDs work and how do they cause stomach problems?

Your body produces natural chemicals called prostaglandins that promote inflammation. NSAIDs work by inhibiting your body's production of this chemical. However, certain prostaglandins are also important in protecting the stomach lining from the effect of stomach acid. By disrupting the production of prostaglandins in the stomach, NSAIDs can cause ulcers and bleeding. Some NSAIDs have less effect on prostaglandins in the stomach than others and may have lower risk of causing ulcers.

## Am I at risk for developing ulcer?

Your doctor can best assess your risk of developing ulcer while on NSAID. In general, you have higher risks of ulcer if you have the following:

- Age > 65 years
- High dose NSAID use
- Previous history of ulcer
- Current use of aspirin, corticosteroids, or blood thinner medication (ex: Coumadin, Heparin, Lovenox)

In addition, your doctor will also need to know about your cardiovascular risk status which includes the following:

- Requirement of chronic low-dose aspirin
- Prior history of heart attack
- Diabetes
- Hypertension
- High cholesterol
- Obesity

## PREVENTION OF NSAID-RELATED ULCER

### What my doctors can do?

Based risk status, your doctor may recommend one of the following medications:

- **Misoprostol** (Cytotec) has been shown to decrease NSAID-induced ulcers and complications. Side effects include abdominal cramps and diarrhea.
- **Proton Pump Inhibitors** (ex: Omeprazole) are the most effective at reducing gastric and duodenal ulcers in patients taking NSAIDs.
- **H2-blockers** (ex: Ranitidine) at high dose have also been shown to reduce risk of ulcers, although less effective than Proton pump inhibitors.
- **COX-2 inhibitor** (ex: Celecoxib) has been shown to have lower incidence of peptic ulcers when compared to traditional NSAIDs. However, this medication has some potential effect on the heart and thus should only be used with close supervision by your doctor.

### What can I do to prevent peptic ulcers?

- **Decrease dose or avoid NSAIDs.** If you require use of pain relievers regularly, consider talking to your doctor about other options.

### What can I do to lower my risk of getting peptic ulcers?

- **Don't smoke.** Smoking may increase stomach acid and interferes with the protective lining of the stomach making it more susceptible to form ulcer.
- **Limit or avoid alcohol.** Excessive use of alcohol can irritate the lining of the stomach and intestine.