Antacids

Antacids are a class of drugs used to treat conditions caused by the acid that is produced by the stomach. The stomach naturally secretes an acid called hydrochloric acid that helps to break down proteins. This acid causes the contents of the stomach to be acidic in nature, with a pH level of 2 or 3. The stomach, duodenum, and esophagus are protected from acid by several protective mechanisms. When there is too much acid or protective mechanisms are inadequate, the lining of the stomach, duodenum or esophagus may become damaged by the acid, giving rise to various gastrointestinal symptoms such as abdominal pain, heartburn and other gastro-esophageal symptoms.

Antacids reduce acidity by neutralizing acid, reducing the acidity in the stomach, and reducing the amount of acid that is refluxed into the esophagus or emptied into the duodenum. Antacids also work by inhibiting the activity of pepsin, a digestive enzyme produced in the stomach that is active only in an acid environment and, like acid, is believed to be injurious to the lining of the stomach, duodenum, and esophagus.

It is important to note that when antacids are taken on an empty stomach they provide acid reduction for 20 to 40 minutes only because the antacid is rapidly emptied into the duodenum. When taken after a meal, (approximately 1 hour afterwards) antacids reduce acid for at least three hours since food from the meal slows emptying of the antacid from the stomach. It is important to discuss the use of antacids with a physician or pharmacist, especially if used in combination with other prescribed medications so as to avoid drug interactions.

There are over 120 different antacid formulations in the United States alone. Most of them contain at least one of these key ingredients: Calcium Carbonate, Magnesium Hydroxide, Aluminum Hydroxide and/or Sodium Bicarbonate. And while all these ingredients work to neutralize your stomach's acid, it's important to know more about them so you can choose the one that's right for you.

Calcium Carbonate is a strong and fast-acting antacid. In fact, it has been used since the first century. And because it's so effective, products like TUMS® still use it today.

Antacids that contain calcium carbonate may work longer than those containing sodium bicarbonate or magnesium. They also provide calcium, which is lacking in most adult diets. The amount of calcium carbonate usually ranges between 500 and 1,000 milligrams per tablet. It's important to take this calcium carbonate as directed and not exceed the recommendation on the label.

References
Directions:
1. Number each paragraph in the article.
   As you read the article:
2. Circle any key terms, essential words or numbers you think may be important to the understanding of “antacids”.
3. Underline information that is relevant to understanding what antacids are and how they work.

Answer the following questions using complete sentences after reading the article.
1. What is the typical pH of the stomach? __________________________________________________________

2. How does an antacid work? ________________________________________________________________

3. Does when you take an antacid affect how well or long it works? _______________________________
   Cite the passage that supports your answer: ____________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

4. Cite from the article 2 benefits of using an antacid that contains calcium carbonate over the other types.
   a. ____________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________
   b. ____________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

5. Why might it not be advised to take an antacid that contains aluminum hydroxide for long periods of time?
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