

Famotidine

BRAND NAME: PEPCID AC

AVAILABLE IN
10 mg and 20 mg TABLETS
AND INJECTABLE

BACKGROUND

Stomach ulceration in humans is a prominent medical condition and there has long been pressure to develop effective and convenient ways to control it. Until relatively recently, we relied on simply neutralizing stomach acid by pouring alkaline solutions (i.e., Alka Seltzer, Tums, Rolaids etc.) into the stomach. In fact, ulceration is a complicated process and there are many ways to address it.

Control of stomach acidity is a very important factor in the treatment of stomach ulcers. Acid secretion is controlled by a hormone called **gastrin** (secreted in the presence of food and leading to secretion of stomach acid), **acetylcholine** (a neurotransmitter), and **histamine** (that same substance responsible for the unpleasant allergic effects of hay fever).

Famotidine is a special antihistamine as are its cousins cimetidine (Tagamet HB) and ranitidine (Zantac). This class of antihistamine is not useful in combating familiar allergic symptoms (itching, sneezing, stuffy nose etc.) In allergy histamine causes its unpleasant effects by binding so-called H1 receptors. Instead famotidine, ranitidine, and cimetidine bind to histamine receptors in the stomach called H2 receptors.

Cimetidine was the first such **H2 blocker** available and each generation has brought about improvements in terms of fewer drug interactions and stronger effect. Famotidine is the longest lasting of the H2 blockers (usually one dose lasts 24 hours). **Famotidine is 32 times stronger in its ability to inhibit stomach acid than is cimetidine and is 9 times stronger than ranitidine.** A newer H2 blocker called Nizatidine is now available which offers the additional advantages of especially rapid onset of action and some effect on normalizing stomach contractions as well.

Famotidine is currently available in an over-the-counter formulation making it highly convenient for pet owners to obtain (though obviously one should not consider using medications licensed for human consumption without specific instructions from one's veterinarian). Famotidine is especially useful for pets with chronic vomiting.

HOW THIS MEDICATION IS USED

Famotidine is useful in any situation where stomach irritation is an issue and ulceration is a concern. It is often used in the treatment of:

- *Helicobacter* infection
- Inflammatory bowel disease
- Canine parvovirus

- Ingestion of a toxin that could be ulcerating (overdose of aspirin, for example)
- Any disease involving protracted vomiting

or in combination with medications which may have stomach irritating properties.

In diseases involving frequent vomiting or regurgitation, the esophagus (tube connecting the mouth and stomach) can be ulcerated by continuing exposure to vomit/stomach acid. Antacids are also helpful in this type of situation to reduce damage to the esophagus. Megaesophagus, a condition where the esophagus loses all muscle tone, would be a condition where a long acting antacid such as famotidine could be helpful.

SIDE EFFECTS

The H2 blockers as a group have a very limited potential for side effects, hence their recent release to “over the counter” status.

There have been some reports of exacerbating heart rhythm problems in patients who already have heart rhythm problems so it may be prudent to choose another means of stomach acid control in heart patients.

INTERACTIONS WITH OTHER DRUGS

There are some drugs that are absorbed better in the presence of stomach acid (example: itraconazole). The dose may require adjustment in the presence of famotidine.

CONCERNS AND CAUTIONS

The dose of famotidine may require reduction in patients with liver or kidney disease as these diseases tend to prolong drug activities.

It appears that famotidine is safe for use in pregnancy but should probably be avoided during lactation.



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Additional drug and general pet care information can be found on our world wide web site:
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