

Famotidine

BRAND NAME: PEPCID, PEPCID AC, PEPCID RPD

AVAILABLE IN
10 mg, 20 mg and 40 mg
TABLETS, INJECTABLE
and ORAL SUSPENSION

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, though as technology has advanced, H2 receptor blockers are gradually becoming supplanted by proton pump inhibitors (such as omeprazole) which are even stronger antacids.

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 in mitigating injury to the esophagus though there is a trade off in protection against aspiration pneumonia, in that stomach acid hampers bacterial growth should stomach contents enter the lung.

Famotidine is directly helpful in managing nausea in species where there are H1 receptors in the brain's chemoreceptor trigger zone (an area involved in stimulating the act of vomiting). In other words, famotidine is not only an antacid but also an anti-nauseal for dogs but is only an antacid for cats.

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, ketoconazole, fluconazole). These drug should be given at least an hour apart from famotidine.

Cefpodoxime does not absorb as well in the presence of famotidine. This effect is reduced by giving both medications with food.

Oral iron supplements do not absorb into the body as well in the presence of famotidine. Stagger their administration by at least an hour.

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.

Last revised: 1/11/2019



Mar Vista Animal Medical Center

3850 Grand View Blvd., Los Angeles, CA 90066 • (310) 391-6741 • Fax: (310) 391-6744
 Additional drug and general pet care information can be found on our world wide web site:
<http://www.marvistavet.com>