

# Maropitant Citrate

**BRAND NAME: CERENIA**

AVAILABLE IN  
16 mg, 24 mg, 60 mg, & 160 mg  
TABLETS  
and as INJECTABLE

## BACKGROUND

While strong nausea-controlling drugs in injectable form have been available for pets for some time, oral medications have been lacking. Until recently, efforts were largely confined to the oral use of metoclopramide (which is rather short acting) and meclizine (which is not approved for use in pets). In 2008, Pfizer released maropitant citrate, a strong anti-nauseal medication for dogs that could be given once a day. Maropitant has since been approved for cats as well.

The brain actually has an area called the vomit center and when it is stimulated, vomiting happens. Stimulation can happen in several ways: over-filling the stomach, emotional shock, motion sickness or from activity in another brain area called the "chemoreceptor trigger zone" which in turn reactions to nauseating toxins in the bloodstream. These mechanisms are not isolated and can occur in combination.

An important molecular step in initiating vomiting, involves the binding of a material called "substance P" to a structure called the "NK-1 receptor." This lock and key binding occurs in both the vomit center and in the chemoreceptor trigger zone. Maropitant citrate mimics the structure of substance P and binds the NK-1 receptors so that they cannot bind substance P thus making stimulation of the vomit center extremely difficult.

Substance P is involved in numerous inflammatory conditions which has led to further investigation of maropitant citrate uses far beyond nausea control. It is currently being explored in treatment of chronic upper respiratory infections in cats, cough suppression, feline idiopathic cystitis, and inflammatory bowel disease.

## HOW THIS MEDICATION IS USED

Maropitant is used once a day to control nausea. It can be given as a shot or as a tablet. The dose is higher for motion sickness versus for treatment of disease-related nausea. Maropitant can be used short term for acute nausea episodes or it can be used long term for more chronic situations.

## SIDE EFFECTS

Side effects are uncommon with the use of this medication but the most commonly noted side effect is vomiting the pill immediately after administration. Giving the medication with a small amount of food can mitigate this.

The FDA has received sporadic reports of more serious reactions: facial swelling, incoordination, fever, muscle tremors, and convulsions.

## **INTERACTION WITH OTHER DRUGS**

The risk of experiencing the above maropitant side effects is increased when maropitant is combined with other drugs that are highly blood protein bound in the circulation.

Common drugs that meet this criterion include non-steroidal anti-inflammatory drugs, sulfa class antibiotics, as well as others.

Some drugs use the same removal enzyme system as maropitant and concurrent use can decrease the effectiveness of maropitant. Such medications include: cimetidine (antacid), erythromycin (antibiotic), ketoconazole (antifungal), itraconazole (antifungal), terbinafine (antifungal), fluoxetine (for behavior modification).

## **CONCERNS AND CAUTIONS**

- Note that the dosage recommended for a one time control of motion sickness is much higher than that for longer term nausea relief (as in the treatment of a disease).
- Maropitant has not been tested for safety in puppies under 16 weeks of age.
- Do not give this medication wrapped in a treat that may upset your pet's stomach. Minimize fatty treats as they work against the effectiveness of the medication.
- Maropitant may require dose adjustment for pets with liver disease.
- Maropitant has not been evaluated in pregnant or nursing animals.
- Store maropitant tablets in their blister packs at room temperature.
- If a dose is accidentally skipped, simply give it when it is remembered. Do not double up on the next dose.

