

# DIARRHEA

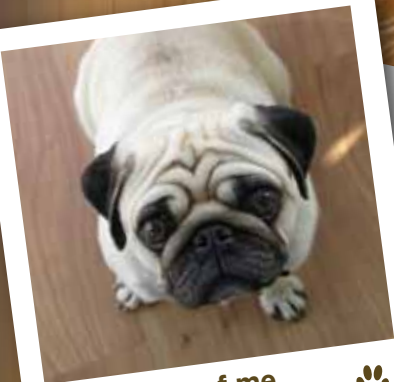
I trust you to . . .




feed me  
everyday,



scratch behind  
my ears,



take care of me  
when I get diarrhea. 



Ask your veterinarian  
how *DiaGel* can help  
your dog or cat.

# What causes diarrhea?

Diarrhea is not a disease itself but rather a symptom signaling something wrong with your pet's health or gastrointestinal (GI) tract. **DiaGel** can be used as the primary solution to help control diarrhea from different causes. A one-time administration of **DiaGel** may improve or firm stools within 24 hours.

## **DiaGel** can be used as a primary solution on the following causes of diarrhea:



### Stress

Stress is a very common cause for diarrhea in pets. It may be caused by boarding, traveling, leaving pets alone longer, and having an addition to the family (two-legged or four-legged). Stress may cause a nervous reaction in the stomach, resulting in undigested stomach contents escaping into the intestine. The undigested material becomes a good food source for bad bacteria, and the overpopulation of bacteria causes diarrhea.



### Changes in Diet

Diarrhea can occur when there has been a sudden change to your pet's diet. If the change is not gradual, the correct enzymes and microflora are not available to break down intestinal matter. Loose stools do not indicate that the new food is bad for your pet. Rather, it is a result of upsetting the digestive tract.



### Garbage Gut

Garbage toxicosis, commonly called Garbage Gut, refers to a condition associated with "eating something they shouldn't have." Pets often enjoy raiding the garbage can for "snacks" or finding a juicy morsel during a walk. Garbage Gut is caused by ingestion of food or garbage contaminated with bacteria. After ingestion, various bacteria (including *Salmonella* and *E. coli*) become overpopulated in the GI tract resulting in diarrhea.

**DiaGel** may also be used as a secondary aid to support the healing of the GI tract when used with other treatments. As a secondary aid, more administrations of **DiaGel** may be necessary.

## **DiaGel** can be used as a secondary aid on the following causes of diarrhea:



### Parvovirus / Coronavirus

Both parvovirus and coronavirus are highly contagious viral illnesses. Parvovirus is very serious and often fatal in young animals and very small breeds. It attacks the lining of the small intestine causing bloody diarrhea and vomiting. Coronavirus is more severe in young animals as well, but rarely fatal. There is no cure for viral infections so supportive care, such as fluid therapy, is a common method of treatment.



### Intestinal Worms / Parasites

Diarrhea may develop when intestinal worms and parasites disrupt the lining of the intestine. Giardia and coccidia are protozoan parasites that live in the intestine of affected animals. Hookworms migrate to the intestines where they hook onto the intestinal wall and feast on the host's blood. Roundworms swim inside the dog's intestines and consume partially digested food. The most common way for a pet to get intestinal parasites is through contact with fecal material from another animal.



### Ingestion of Poisons / Foreign Objects

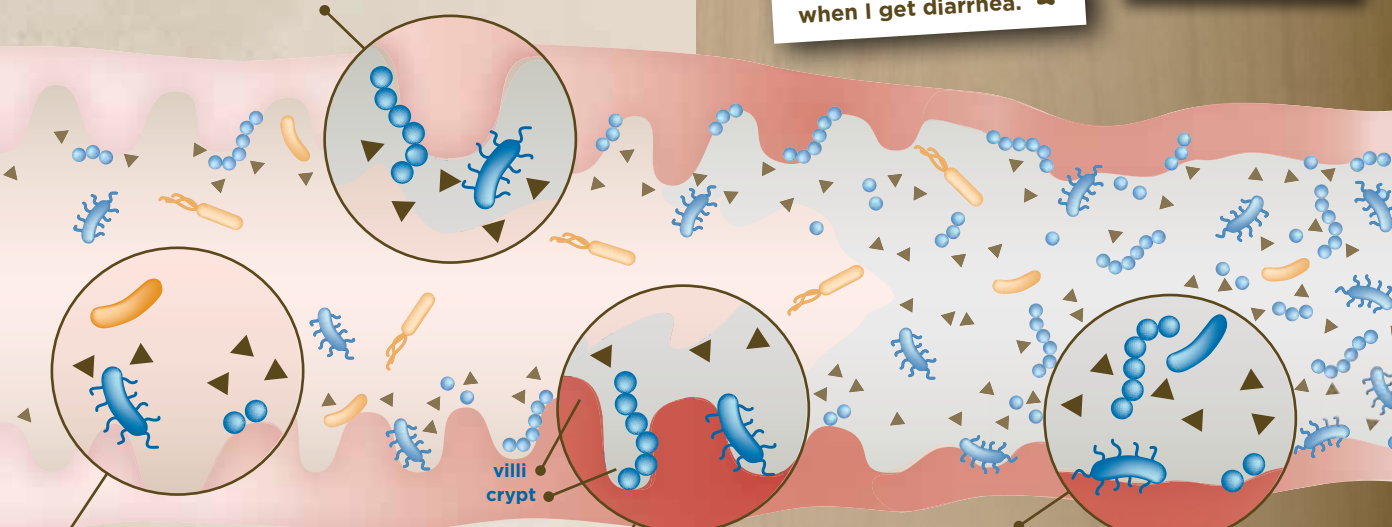
Diarrhea is just one possible side effect of your pet ingesting toxic chemicals or foreign objects. If you suspect ingestion of poison as the cause of your pet's diarrhea, it is vital that you call the vet or pet poison control center right away. When a foreign matter, such as a rock or part of a toy, is ingested, diarrhea may result until the offending object is passed. In rare cases the object can actually puncture the intestines or create a blockage requiring surgical removal.

## Diarrhea, it's serious business

When diarrhea hits, dehydration is the number one concern. Diarrhea can lead to weight loss, blood sugar depletion, circulatory collapse, and even death when it is left untreated. It should be taken very seriously when accompanied by bloody stools, vomiting, lethargy, and behavioral changes. Because the severity of diarrhea isn't always apparent at onset, immediate medical attention is advised when accompanied by additional symptoms.

Let's look at what is happening in the intestine when your pet gets diarrhea. In a typical diarrhea situation, bad bacteria start to overpopulate and form colonies on the villi. The bacteria secrete harmful toxins that release free radicals, which cause damage to villi. When the cells of the villi recognize these invaders they react by dilating and secreting fluid in an attempt to flush the bacteria from their cell wall. This results in a sudden loss of fluid that dehydrates the animal and causes the intestine to lose its rigidity. When the firmness is lost, the smooth pulsating movement of the intestine becomes disrupted. The intestine can thrash so vigorously that it can tie itself in knots (volvulus) or fold in upon itself (intussusception). Both of these conditions can be fatal.

**The cells of the intestinal lining dilate, trying to flush the bacteria from it's cell wall.**



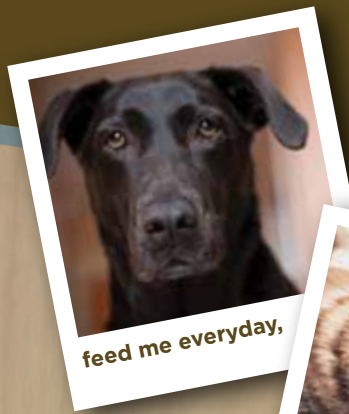
**Bacteria start to form colonies on the villi and release toxins.**

**The toxins settle down into the crypt area.**

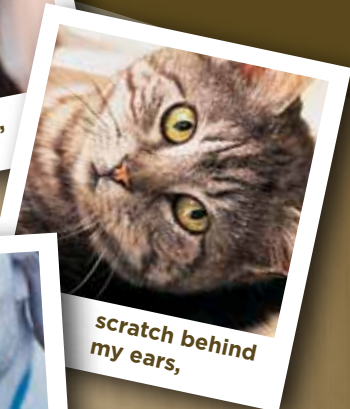
**The intestine is left seriously damaged and the animal is listless and dehydrated.**

As the damage intensifies, bacteria and toxins begin to settle down into the crypt area, the tight space between the villi, causing the villi to become shortened and distressed. The mucosal layer is destroyed causing inflammation of the intestinal lining. Just like a burn on the skin if it is not healed properly, scar tissue replaces the damaged tissue. Since scar tissue

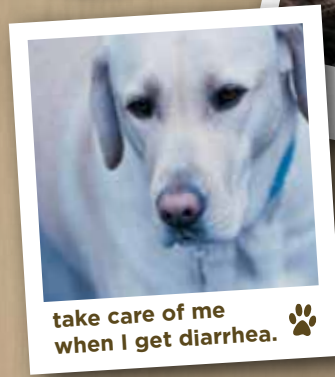
does not respire, the intestine has no ability to absorb valuable nutrients in those areas. This becomes a concern when a dog or cat has chronic diarrhea. With the accumulated effects of diarrhea, the intestine is left seriously damaged and the animal may become listless and dehydrated.



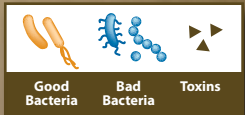
feed me everyday.



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take care of me when I get diarrhea. 



# DiaGel, the natural solution



**DiaGel is a natural solution for pet diarrhea. The carefully selected ingredients create a product that eliminates bacteria and aids in healing the intestine.**



## Eliminate Bacteria with Axaphen X

**DiaGel** starts working on diarrhea immediately by eliminating bad bacteria on contact with our patented active compound, Axaphen. Axaphen is a proprietary blend of essential oils containing active phenols, which are Carvacrol, Eugenol, Cinnamaldahyde, Thymol, and Chamazulene. Axaphen is enhanced with sesquiterpenoid and salts which have an affinity to bacteria. The mutual attraction greatly increases the effects of Axaphen and gives it access into the hard-to-reach crypt area between the villi.

## Stop the Loss of Fluid

While Axaphen is eliminating bacteria, the other ingredients in **DiaGel** aid in healing the intestine. First, dehydration and fluid loss must be stopped. Fluid loss is extremely serious, especially in baby animals who do not have the capacity to stop fluid loss like an adult animal. For example, a puppy can only lose 3% of its bodily fluid before the heart stops. Tannins, having strong astringent components, constrict cells very quickly. The tannins in **DiaGel** are found in Citrus Peel (composed of lemon and lime), Cranberry Powder, and Carob Bean Shell. When

they come in contact with the dilated cells lining the intestine, they effectively stop fluid loss by causing the cells to pucker up, just like the mouth puckers when biting into a lemon. Cranberry powder also has antioxidant properties to neutralize the harmful free radicals that have been released by toxins. Neutralizing free radicals helps repair damaged cells and prevents further cell destruction.

## Firm up Stools and Calm the GI Tract

**DiaGel** also includes citrus peel because of the other effective components that it offers. The pith, the white layer under the peel of the citrus fruit, includes two types of pectins—soluble and insoluble. Psyllium husks are also a main source of soluble pectins. The soluble pectins move down the digestive tract absorbing toxins and chime, forming a firm bolus. The pathogens that were not eliminated by Axaphen identify the pectin as an immense food source, but once they attach, they cannot remove themselves, as if they were stuck in tar. Once a bolus is formed again, the intestine can constrict and return to its regular smooth pulsating movement. To assist this mode of action, chamomile works to calm the intestine by relaxing the cells.

## Soothe the Intestinal Lining

When the intestine is calming down, the ulcerated wound is addressed. The insoluble pectins in the formula have an affinity towards the ulcer. They form a band-aid over the wound, helping to prevent further irritation from the acids and salts in the GI tract. The insoluble pectins aid in healing the intestine very quickly. Once the intestine is healed, the natural intestinal bacteria must repopulate. Oat Bran is a beta-glucan or prebiotic included in the formula as a fiber source for bacteria to grow and repopulate quickly. It swells up with fluid and travels slowly while Axaphen travels at a very fast rate. Therefore, the majority of bad bacteria are eliminated by the time the fiber reaches the intestine for the good bacteria. The growth of natural bacteria completes the healing process in the intestine.



Astringent properties from tannins cause dilated cells to constrict, stopping fluid loss.

Cranberry powder has antioxidant properties that bind to and neutralize free radicals.

Oat bran is a prebiotic that provides a fiber source for good bacteria.

Growth of good bacteria completes the healing process.

Soluble pectins absorb toxins and chime while creating a firm bolus. Soluble pectins also attract pathogens and adhere to them like tar.

Axaphen eliminates bad bacteria on contact.

Insoluble pectins form a band-aid to help protect the damaged intestinal lining.




**VAN BEEK**<sup>®</sup>  
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