Dishy Dogs
SUPERFOOD
Optimising Pet Health

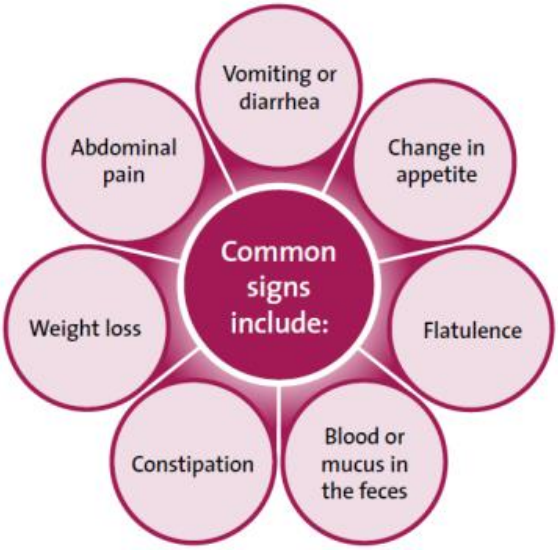
GASTROINTESTINAL DISORDERS

FACT SHEET

wellbeing, healing and disease prevention

The Importance of digestive enzymes

Gastrointestinal disorders



Reading time: 10 minutes

Does your dog or cat have any of the common signs listed in the adjacent chart? If yes, have you considered giving digestive enzymes to your dog? Perhaps you think your pet doesn't need them. As far as you know, the food's going in one end and out the other, so everything's fine, right? Well, not always. In fact, your dog likely needs help absorbing nutrients from the food he/she eats.

There are several reasons for this. So, let's explore some facts about digestive enzymes, and when to use them.

Dogs and cats naturally produce digestive enzymes in their body. However, Digestive enzymes are not the only enzymes your pet's body makes, but they are some of the most important ones for your pet's health.

But what exactly are digestive enzymes? They are proteins that help break down

food molecules into smaller pieces, that fuels your pet's body by helping it take in nutrients more efficiently.

The enzymes that naturally occur in a dog's body typically live in the pancreas. As food goes through the GI tract of your dog, the pancreas releases enzymes to aid in the metabolization process.

Once food breaks down, the small intestine absorbs it and transfers these nutrients throughout the blood and body.

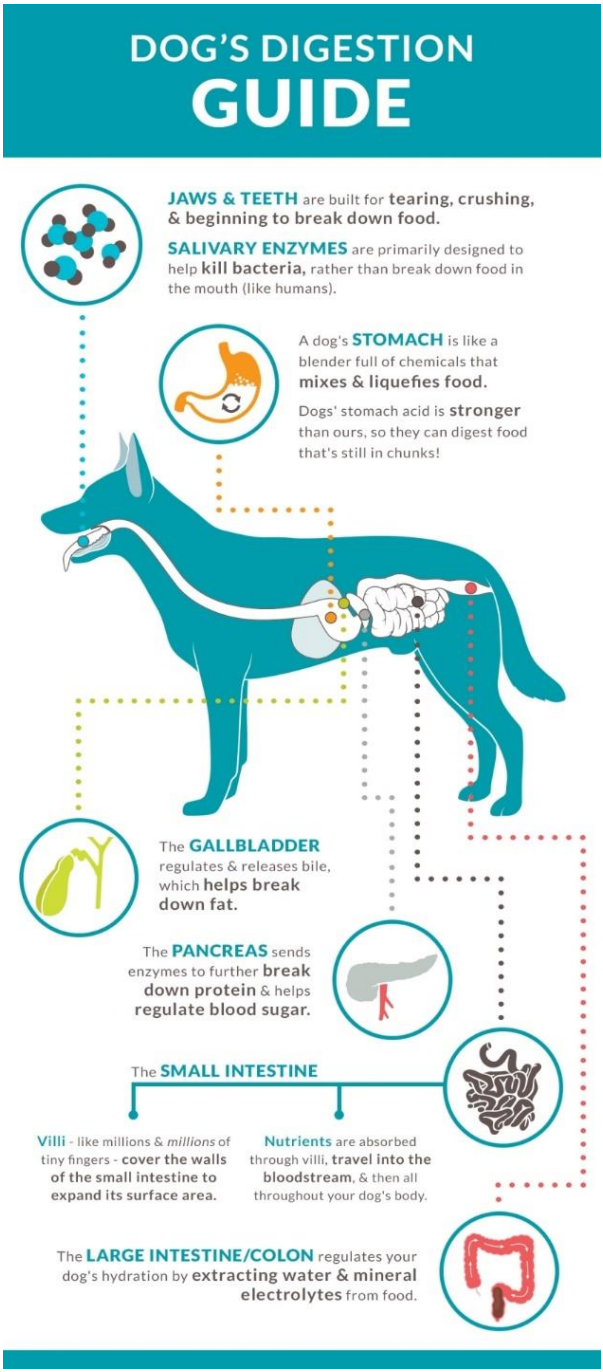
All dogs need digestive enzymes to maintain a healthy level of nutrients in the body.

Without these enzymes, the nutrients that dogs get from their food go to waste.

Enzyme names all end in "-ase."

The main types of digestive enzymes dogs need are:

- Protease, which breaks down proteins into amino acids so the body can use them.
- Amylase breaks down starches into smaller carbohydrate molecules.
- Lipase helps digest fats in the diet.
- Cellulase breaks down fibre from plants and grains. Your dog/cat does not naturally produce this enzyme in his body. However, it is an **essential enzyme** for pets who eat kibble/dry food. Kibble contain fibrous elements and cellulose which



needs extra help breaking down. So, if your dog's body makes all these digestive enzymes with the exception of cellulase, why would your pet need supplements?

Well, there are some health issues that need support from extra digestive enzymes. We will get to those in a bit.

The thing is, even your healthy dog could have a digestive enzyme deficiency.

Dr Edward Howell pioneered digestive enzyme research in the early 20th century. He observed that the body becomes enzyme deficient over time, because we cook our food.
He found that the lack of enzymes from cooked food causes shortened life span in people and **animals**, due to the following:

- Lowered resistance to stress and disease;
- Enlarged pancreas – strained by having to produce more enzymes;
- Reduced size of other organs like the brain.

He summarised his findings very eloquently with his famous *Enzyme Nutrition Axiom*:
"The length of life is inversely proportional to the rate of exhaustion of the enzyme potential of an organism. The increased use of food enzymes **promotes a decreased** rate of exhaustion of the enzyme potential."

What he meant, in plainer English, was that we use up the enzymes our bodies make. So eventually we deplete our enzyme resources, which shortens our lives. But using food enzymes slows this process. And it's ***true for your dog*** too.

Your pet's diet is one reason for enzyme deficiency in your dog. In theory your dog's body produces enough enzymes to digest all the food groups, carbohydrates, protein and fat. But **because of modern diets**, that's not always the case. Here is the thing: Most dogs eat cooked diets, whether kibble, canned or even home-made.

Veterinarian Dr PJ Broadfoot said in a 2018 paper: - "Supplemental enzymes are needed to replace those destroyed by cooking and processing food. Processing and cooking at any heat of approximately 48°C to 54°C, for as few as three minutes, can destroy virtually all enzymes, which results in very little pre-digestion taking place in the stomach. Thus, what is left of the food mass enters the small intestine largely undigested. This puts the pancreas and other organs of the endocrine system under tremendous stress, since they have to draw reserves from the entire body in order to produce massive amounts of the proper enzymes."

Jean Hofve DVM agrees. In a 2013 paper about *Digestive Enzymes,* she made the case for routine digestive enzyme supplementation for all pets.

"Digestive enzymes can be used for pancreatic and GI issues but are also beneficial for healthy patients eating heat-processed pet foods."
Dr Hofve g

oes on to say:
"… recent research shows that in humans with gastrointestinal disease, but more importantly, even in normal individuals, supplementation with digestive enzymes substantially **increased digestion in the lumen of the small intestine and improved the bioavailability of proteins and carbohydrates**. Especially **in view of the highly processed diet** that most of our pets are eating, this implies that most healthy adult dogs and cats can benefit from a digestive enzyme supplement. Digestive enzymes help pets digest and assimilate food better, that refers to "any food." So, raw feeders, don't stop reading! Dr Hofve said, "any food!" This is important for your dog too. Raw fed dogs often need extra enzymes. The way you feed and raise your dog creates some situations where digestive enzymes can really help your dog.

Factors in Enzyme Deficiency:

- If your dog eats food with **starchy ingredients** (like kibble, potatoes, starchy vegetables such as pumpkin and sweet potato, pea protein and even some canned, freeze dried or dehydrated foods), your dog may not produce enough enzymes to break it down. Amylase helps digest starches. But dogs **don't naturally make** much amylase, because in the wild, they wouldn't eat starchy foods.
- **Processed foods** are "dead" foods. The high temperatures and pressures used to make kibble destroy any live enzymes that were in the raw ingredients. Natural enzymes are destroyed at temperatures above 47.7ºC. And some kibbles are heated to 180º Celsius. That's more than 2 times the temperature that kills enzymes!
- **Canned food** cooking temperatures are also high enough to destroy enzymes. And canned food is truly "dead" because it's completely sterile AND they also contribute to heavy metal toxicity. Read our Heavy Metal's fact sheet.
- If you're a **raw feeder**, you know that raw is the BEST food for your dog. And that raw food contains live enzymes. In the wild, dogs would also get some extra enzymes from the guts of their prey. But most of us don't feed guts to our domestic dogs. So, your dog's body has to work harder to produce enzymes.
- **Vaccines, pharmaceutical drugs, dead foods and fluoridated water** all contribute to heavy metals toxicity and **can all lower** your dog's ability to make its own enzymes. Over time, this can cause enzyme deficiency.
- To make matters worse, as your **dog ages** his body produces fewer enzymes naturally. So, the deficiency is compounded. Your dog's body can't keep up! This means **all senior dogs are likely to have an enzyme shortfall.**

Enzyme Deficiency Affects the Whole Body:

So now you know even your healthy dog can deplete his own digestive enzyme sources. Of course, this **can affect** other vital processes in your pet's body, like:

- immune system;
- waste and toxin elimination;

- liver;
- hormone regulation; and
- gallbladder function.

The liver was mentioned in the list above, and there is a **reason for that**. Most people don't realise how vital a role the liver plays in our pet's health. In fact, a healthy liver is critical in supporting the gallbladder which plays a **very important** role in digestion. It produces **bile to help digest fat**. If your pet's liver is laden with fat (fatty liver) and heavy metals, the gallbladder will not be working efficiently. This means your dog won't have enough bile in his digestive system to break down fats.

So how can you tell your dog needs more digestive enzymes? Well, here are some symptoms of Digestive Enzyme Deficiency.

- pale, fatty stools (known as steatorrhea);
- foul smelling stools;
- loose stools;
- blood or mucus in your dog's poop;
- diarrhoea or chronic diarrhoea;
- coprophagia (when dogs eat their own stool or the stool of other animals);
- weight loss;
- burping and flatulence;
- regurgitating undigested food;
- constipation;
- bloating;
- smelly breath;
- acid reflux;
- tummy rumbling or gurgling;
- abdominal pain or cramping; and
- undigested food in stool.

If you **recognise any of the above symptoms** in your pet, then more than likely your pet may need some digestive enzyme support.

Why canines need digestive enzymes: Lack of enzymes in a dog`s system may cause indigestion which may result in large `unprocessed` food to enter the bloodstream from the large intestine. It could be lethal if it happens. In an attempt to survive, the body robs critical metabolic enzymes performing vital functions. Deprived of enzymes, the body suffers from a lack of enough blood cells. Besides feeding your pet foods lacking in enzymes and/or them using up their own natural enzyme supply, your pet may have a specific health issue that digestive enzyme supplements can help with.

Let's take a look at some chronic health issues that need extra digestive enzyme support:

- Yeast overgrowth

- Inflammatory bowel disease (IBD) and SIBO
- Acid reflux
- EPI (Exocrine Pancreatic Insufficiency) - EPI is a ***serious condition*** that stops your dog's pancreas from producing digestive enzymes. In severe cases it can lead to starvation because your dog can't absorb nutrients. Signs of EPI include **ravenous hunger, weight loss, or chronic diarrhea.** Your vet can diagnose EPI using a test called TLI – trypsin-like immunoreactivity test. Dogs with EPI often develop small intestinal bacterial overgrowth (SIBO) which is underpinned by the Streptococcus bacteria. This is because with EPI there's undigested food passing through the intestine. This feeds bacteria in the small intestine, allowing them to grow there (instead of the colon, where they usually live).

Managing EPI and SIBO - Even conventional vets will prescribe **digestive enzymes** and a **liver tonic** for EPI **-** Digestive enzymes together with a Liver tonic **can also relieve** SIBO symptoms. By helping break down food and killing off the underlying bacteria, they often reduce problems like bloating, gas, constipation or diarrhoea. And they'll improve nutrient absorption. Not only that, digestive enzymes such as Dishy Dogs Digestit Pet are essential for the breakdown of macronutrients so that the body can use them for nourishment. These macronutrients are sugars, starches, fats, and proteins.

The benefits of Dishy Dogs Digestit Pet are many and include:

- aid in the absorption of minerals and vitamins from food;
- promote normal cell growth;
- improve digestion and digestive problems;
- promote respiratory wellbeing;
- support the immune system;
- aid in removal of toxins and yeast biofilm from the body;
- reduce food sensitivities;
- reduce skin irritations;
- reduce heartburn, constipation, bloating, and gas;
- support healthy teeth and gums;
- support normal body weight without cravings or hunger;
- improve joint health and movement;
- maintain appropriate cholesterol levels; and
- reduces excessive shedding.

Interested in wellbeing, disease prevention and healing your pet, then ask us about Dishy Dogs range of superfood meals, supplements, bone broth and treats or go to our website https://dishydogs.com.au

Dishy Dogs is certified "Australian Made and Owned". Our ingredients are 100% human grade, 100% preservative, gluten, egg, dairy and additive free with **no** added salt, sugar, flavour or colour.

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