

# Homemade and Commercial Diets for Dogs with Health Conditions

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This article is prefaced by some background review. First, six different processing steps pertain to dog and cat foods:

- Raw – Consists of one or more animal or bird meats, organ meats, some bone, fish, and vegetables given in their raw state. The majority of nutrients — such as amino acids, vitamins, minerals, prebiotics, probiotics, and enzymes — have not been altered or destroyed and are derived from more natural sources. For safety reasons, so-called “kill” steps are incorporated to destroy pathogens while creating the least impact on the food’s enzymes, vitamins, minerals, proteins and other basic nutrients.
- Freeze dried – Essentially raw, but the 3-step process is designed to remove water content. Fresh or even cooked **foods** are placed in the **dryer** where they are frozen to -40 degrees Fahrenheit or colder. Once the **food** is frozen, the **freeze dryer** creates a powerful vacuum around the **food**. Then, as the **food** is slightly warmed, the ice transitions into vapor and evaporates.
- Dehydrated – Generally lightly steamed or cooked before it is dehydrated to remove the water. May slightly denature some of the more labile ingredients.
- Kibble – A dry form of pet food processed using a method called extrusion. The extrusion process adversely affects the quality of the food in several ways. The high temperatures destroy many of the original ingredients’ vitamins and minerals, which then need to be added back into the finished product. Dry kibbled diets typically consist of at least 60% carbohydrate, very little moisture, and relatively low quality poorly digestible protein. Much of the protein is also plant based, especially from corn.
- Canned – Contain about 80% water and a variety of ingredients. The sealed cans are heated at high temperatures, so more protein is used and fewer preservatives. It provides a water source for pets that fail to drink enough, but is recommended to be fed with kibble to help reduce the tartar and plaque buildup in the mouth from soft foods.
- Homemade – Typically raw or cooked; and one or more of the above processing steps is often used as well.

Each and every one of these different forms of processing foods is and should be subject to the same questions and scrutiny by pet caregivers and veterinarians:

1. Ingredients
2. Sourcing
3. Manufacturing
4. Additives
5. Nutritionally balanced

What is often not discussed, however, and should be is the life stages or health and medical conditions that can be impacted by the processing of foods.

## Food Sensitivity or Intolerance

None of these various types of processing foods will be suitable for companion dogs or cats, if they have a food intolerance to a particular ingredient or ingredients.

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## Cancer

Many commercial kibble diets are high in carbohydrates, which feed cancer cells. Dogs and cats need to be on a high quality protein, low carbohydrate and high fat diet as part of their ~~for~~ cancer therapy. For dogs with good vitality and functioning immune system, feeding or careful conversion to a raw food diet may be ideal. Giving omega-3 fatty acids is also important.

However, dogs with liver or bowel cancers should be eating homecooked foods or possibly dehydrated foods. This is because bacteria in the food could multiply – especially if the contractions and relaxations (peristalsis) of bowel segments are irregular – thereby producing pockets of bowel stasis and promoting bacterial growth. The bacteria can then travel up the bile duct and further damage the remaining liver tissue.

If you choose chemotherapy, many veterinary oncologists do *not* want dogs with cancer eating raw diets. Chemotherapy further compromises the immune system and their concern is the increased potential for microbial growth. Try to feed primarily homecooked, dehydrated, and canned foods. Always keep in mind when purchasing: low carbohydrate/high quality protein diet/high fat.

## Gastroenteritis

Dogs with bowel problems such as gastroenteritis, which might include bouts of vomiting, diarrhea, constipation or all of the above, should *not* be fed a raw diet during flare-ups. When the bowel is *not* moving at its normal rate, there is again an increased risk for bacteria or other microbes present in raw meat to incubate and multiply in the bowel pockets that then enter the bile duct and damage the liver. This is very serious and can be fatal. As long as the raw food does not contain bones, you can lightly cook it during times of illness. Once your companion dog recovers, simply transition him back to his raw diet. Alternately, you can keep a high quality grain-free kibble, dehydrated or canned food on hand for these times.

## Liver Conditions

When the liver is damaged, it can't efficiently process protein or metabolize an assimilate foods, so there is the danger that urea and ammonia, toxic byproducts of protein metabolism, can build up and affect the brain. If your dog presents with liver disease, you do *not* want to feed a raw diet. Raw meat can contain bacteria such as Salmonella and E.coli, which will likely pass through a healthy animal without causing harm. However, since the liver is responsible for filtering bacteria, dogs with liver disease are at increased risk of food-borne infection. In addition, red meat is high in aromatic amino acids (phenylalanine, tyrosine and tryptophan), which dogs with liver disease do *not* tolerate well. Instead, a diet rich in proteins derived from dairy products (preferably from goat and sheep sources) is recommended over meat-based sources. Studies show that dogs with liver disease live longer and have less severe clinical signs when fed dairy-based protein diets than those containing meat-based proteins.

## Pregnancy

An ongoing debate exists about the wisdom of feeding pregnant dogs raw diets. Personally, I am

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unaware of documented adverse effects on fertility and pregnancy from raw diets or their contributing to a problem with a litter. So, there should be no problem with it. What breeders, rescuers and shelters need to remember about planning a breeding and pregnancy:

- Phytoestrogens – Diets high in certain phytoestrogens can cause infertility because they are endocrine disruptors. These disruptors mimic or partly mimic naturally occurring hormones in the body like estrogens (the female sex hormone), androgens (the male sex hormone), and thyroid hormones, potentially producing overstimulation and imbalance. Avoid peas, lentils, flaxseed and soy. Kibble and other pet foods often contain peas, pea protein or pea fiber.
- Please don't overfeed a dog that is pregnant. Gradually increase the pregnant dog's food consumption during the last three to four weeks of pregnancy, so that by the time of whelping she has gained 15 to 25% more than her normal body weight. Depending upon her size and the size of her litter, she'll need to eat about 25 to 50% more than her maintenance diet to achieve this weight increase.
- Omega-3 fatty acid (EPA and DHA) supplements from fish oil and other marine sources are important for both pregnant and lactating dogs, because the physiological stress of these conditions reduces the availability of these nutrients.
- A lactating dog typically requires nearly double the amount of essential amino acids from proteins than an equivalent size dog in maintenance status. Therefore, high quality protein should comprise a large portion of the total energy in the lactating dam's diet.
- A lactating mother can easily require five times as much fat as the same size dog in maintenance status.

### Kidney Disease

Animals with kidney disease or kidney dysfunction should not eat lower protein diets, as this commonly held belief is misleading. As long as the protein source in their diet is of high quality such as white fish and eggs and easily digestible, it helps kidney function and overall body nutrition. It is the lower quality, poorly digestible protein diets (soy, wheat gluten, even corn gluten meal) that tax the kidneys, making them work harder in filtering and clearing metabolic waste products, water, and certain chemicals and drugs from the body.

Let's also remember the primary function of the kidneys: to help flush the body of toxins via the urine. So, it makes sense not to additionally tax the kidneys with a diet low in moisture content such as kibble. Therefore, I suggest raw, canned, homecooked or dehydrated foods for them.

### References

Dodds, W. Jean & Laverdure, Diana R. *Canine Nutrigenomics: The New Science of Feeding Your Dog for Optimal Health*, DogWise Publishing, Wenatchee, WA, 2015.