

Homemade Diets for Dogs and Cats

By Dr. Tina Aiken & Dr. Nancy Ying

Introduction

Both dogs and cats are carnivores, so their diet needs to be based on meat. The wild ancestors of our pets ate a wide variety of prey animals. Their food was always fresh and never processed in any way. Even though our domesticated pets look very different from their wild counterparts, their nutritional needs have not changed. Canned and kibbled food have only existed about 100 years. Evolutionary changes take place over a minimum of several hundred thousand years. To keep our pets as healthy and vibrant as possible, we need to feed them what they are designed to eat.

If you are feeding a raw diet, I recommend reading one of the books listed below.

“Natural Nutrition for Dogs and Cats” by Kymythy Schultze.

“Real Food for Healthy Dogs and Cats” by Dr. Karen Becker.

“Give Your Dog A Bone” by Dr. Ian Billinghurst.

There are certain principles that we need to observe when preparing or buying our pets’ foods, which we will discuss in the following sections:

General Rules

Variety

Use as wide a variety of protein sources as possible, such as various kinds of red meat, poultry, fish, and eggs. Feed at least four different sources of protein and rotate through them. Wolves and wild cats, the ancestors of our dogs and cats, consumed a vast variety of different prey animals that changed daily and with the seasons. Variety is a key element for good health. The same is true for the vegetable portion of the diet. Feed as large a variety of vegetables as possible including small amounts of fruits, but concentrating on green, leafy vegetables.

Fasting

Wolves eat irregularly; they feast and fast. If they catch a large prey, they can eat 10 pounds in one sitting. Then they might not eat anything substantial for 3 days in a row. Fasting gives the mitochondria a break and the body a chance to concentrate on eliminating waste products and toxins. I recommend fasting most dogs one day a week, the exceptions are very small or frail dogs. Offer water and plenty of exercise instead. Cats eats many small meals per day and should not be fasted.

Freezing

Freezing meat in a chest freezer (or its equivalent) for at least three weeks will kill most parasites. Any raw meat can contain parasites, but the parasites that can occur in raw pork and fish are especially

harmful and should always be killed by freezing or cooking these protein sources first. Do not use a microwave to thaw the food.

Microwave/Heating Food

Do not use a microwave, not even for thawing or warming up your pet's food. It changes the spin of the electrons and seems to change the energetic information of the food in an unnatural way. If you want to warm up your pet's food, use a regular stove top, oven or add some hot water to the food. For cats and weaker or geriatric dogs, it can be beneficial to feed their meal at body temperature, the way they would eat a freshly killed prey.

Vegetables and Carbohydrates

To save time, you can make a large batch of a vegetable stew based on cooked and raw vegetables and cooked carbohydrates. Everything should be finely pureed and resemble the chewed-up and predigested stomach contents of prey animals. Be sure to use significantly more vegetables than carbohydrates. Details will be discussed in the next section. You can freeze this mix in multiple day portions and combine it with various raw meat sources at the time of feeding.

Bones

Bones are fed for both recreational chewing and to meet the calcium and other mineral requirements of your pet. Recreational raw bones are excellent for your pets. Chewing provides psychological satisfaction as well as excellent dental health. Every 3 to 5 days give dogs either raw neck/spine bones, knuckle bones, or large, raw soup bones. It is best to avoid marrow bones and other very hard chewing objects, like deer antlers. They are too hard and have no "give" to them and can lead to tooth fractures. In addition, marrow bones contain a high amount of fat which could lead to weight gain and trigger pancreatitis. Cats and small dogs can enjoy raw chicken necks and chicken wings. Do NOT feed cooked bones because they are brittle and can splinter into dangerous sharp fragments. Raw bones, on the other hand, are relatively soft.

To meet the calcium and mineral requirements of your pet, raw diets must include raw bones or a calcium supplement. The difference between recreational bones and the bones below is that recreational bones are generally bigger. Examples of raw meaty bones that can be used for daily meals are: chicken necks, backs, wings, frames, turkey necks, backs, lamb necks, breasts (aka lamb flanks or riblets), beef necks and ribs. Similar bones of other prey species can be fed as well, e.g., venison, pork (after freezing), rabbit, duck, pheasant, fish heads and small whole fish (after freezing). If you are uncomfortable feeding whole bones such as the ones listed here, commercially prepared raw meat and bone diets are now available in which the bones are finely ground. Some of these products also contain ground organ meat and ground vegetables so that you have a convenient way to feed a nutritionally balanced raw diet.

Treats

Examples of good quality treats are small pieces of meat, fruit and vegetable. There are also good quality commercial treats made from dried meats or other animal parts, such as chicken, turkey and beef jerkies, lungs, livers, duck heads, fish skins (wild-caught), beef tendons, bully sticks, cow ears, tracheas, etc. Best buy from super premium companies and not from Purina, Hills, Eukanuba, Royal Canin etc.

Avoid raw hide treats. Do not feed any treats/snacks made in China!! Make sure the label states that the item is made in the USA, Canada, Europe, Australia or New Zealand, not just made for a certain company. Avoid treats based on carbohydrates, like grains, potatoes and legumes. Keep the size of treats very small, especially when using a lot for training! A lentil-sized treat is still a treat! Otherwise

you could feed way too many calories. Milk-Bones are an example of a low quality treat: based on carbohydrates, poor quality, unnatural ingredients and way too big.

Special Diets

Your veterinarian must formulate specific diets if your pet is suffering from diseases such as kidney failure, allergies, cancer, diabetes or urinary crystals.

Cooking

If you are cooking your pet's meals rather than feeding raw, please boil, pressure cook, bake, or broil. Do not fry, deep fry or microwave. Cooking does destroy all the enzymes in the food and diminishes many other nutrients. Thus, feeding raw is preferred. There are exceptions though: some older, weak or sick animals fare better on cooked or partially cooked food.

Meal Ingredients

Suggested ingredient proportions for your pet's meals:

	Meat-Fish-Eggs-Organs	Vegetables-Fruits	Carbohydrates
Cats & Kittens	90 – 98 %	2 – 10 %	0 – 2 %
Dogs	75 – 85 %	10 – 20 %	0 – 5 %
Puppies	60 %	35 %	0 – 5 %

Meat – Fish –Eggs - Organs

40% muscle meat, 10-20% organs, 40-50% meaty bones

Muscle Meat

40% by volume of meat fed. Ideally, low fat, lean meat.

Mammals: Beef, lamb, venison, goat, buffalo, rabbit, pork, tongue of any species, etc. If you feed pork, freeze it in a cold freezer for at least three weeks or cook it to kill the parasite trichinella that occasionally contaminates pork.

Poultry: Turkey, chicken, pheasant, ostrich, emu, duck, etc.

Fish: All types, including canned sardines. Wild-caught ocean fish are better than freshwater fish. If fed raw, fish **MUST** be frozen for three weeks first in order to kill parasites that may be present. Avoid most farmed fish which are pro-inflammatory.

Okay to feed: Sardines, wild pacific salmon, Atlantic herring, anchovies, farmed trout, canned light tuna, Atlantic mackerel, line-caught skipjack tuna, squid, capelin, smelt, clams, oysters, mussels, Alaskan pollock, whiting, Menhaden fish.

Avoid due to over fishing and/or contamination: farmed salmon, swordfish, shark, king mackerel, albacore tuna, Chilean seabass, Tilapia, Atlantic cod/halibut/flounder/sole, eel, swai, any shrimp, king crab, orange roughy, bluefin tuna, grouper, imported catfish.

Organs

10 – 20 % by volume of meat fed.

Organs are an absolute integral part of your pet's diet. Omitting them will lead to nutritional deficiencies. Carnivores eat the entire prey, including organs and glands. Muscle meat doesn't have the same nutrients as organs. You can feed fresh or frozen green tripe, kidney, spleen, brain, lung, gizzard. Always include liver (preferably not chicken liver which is pro-inflammatory) and heart, which are the most important. Feed a minimum of 10% liver and heart. If you have access to a large variety of organs, feed a total of about 20% organs, including 10% liver and heart. Liver and kidney should be grass-fed or organic. If feeding organs turns your stomach, you can feed a commercial raw diet that includes organs. Fresh or frozen green tripe is nature's probiotic for pet carnivores.

Meaty Bones

40 - 50 % by volume of meat fed

Poultry necks, wings, frames, backs, ribs, pelvis, spines. Necks and ribs of beef, deer, lamb, pigs. Avoid weight-bearing bones such as leg or marrow bones. They are too hard and can crack a tooth. Also, they are too fatty and can cause pancreatitis. See the above bone section for a detailed list of bones.

If you are cooking your pet's meals or feeding raw meat without bone, you must add a calcium supplement to each meal. The calcium/phosphorous ratio is very important to keep in balance. Meat is very high in phosphorous. In the wild, or with a raw meat and bone diet, bone supplies the calcium to balance that phosphorous. The best calcium supplement to use is derived from harvested ocean seaweed. As an alternative, calcium citrate can be used. Add 600 – 1000 milligrams per pound of meat. Avoid bone meal products as they are most often made from the heavy bones of cattle that often collect heavy metals and other toxins.

Eggs

Can be fed raw or soft-boiled. They are harder to digest if hard-boiled. The egg is nature's most perfect protein against which all other proteins are measured. Do not feed egg whites alone in large quantities unless they are cooked.

10 pound dogs/cats: 1 egg per week

30 pound dog: 1 – 2 eggs per week

60 pound dog: 2 – 3 eggs per week

Dairy

NONE except very small amounts of cottage cheese, ricotta cheese, kefir or plain yogurt. Parmesan cheese can be used as a topping for finicky eaters. A2 casein milk products from goats, sheep and certain, southern-European cattle breeds are better tolerated than the common A1 casein dairy products from regular Holstein Friesian cows. Dairy products are not a natural food for any species once they are weaned.

Vegetables and Fruits

Vegetables

Cooked or raw. All vegetables must be processed into a mush using a juicer, food processor or blender in order for the animal to obtain any nutrients. Carnivores lack the enzyme cellulase needed to break down the cell walls of vegetables. In the wild, the primary source of vegetation is from the

stomach contents of consumed prey; therefore, the cell walls are broken down by the prey animal's chewing and gastric action. Concentrate on feeding green, leafy vegetables simulating the green matter that would be present in the stomachs of the herbivores (rabbit, deer, etc.). Also, include some other colored vegetables, as different colors supply different phytonutrients (carrots, cauliflower, beets, red cabbage, etc.)

Most vegetables are fine to feed, but note the following:

- Do not feed onions in any form, including raw, cooked or dehydrated.
- Do not feed any vegetable on a daily basis. Rotate them so you are only feeding moderate quantities on a random basis.
- Feed only very small amounts of vegetables that are high in sugar such as carrots and peas.
- Cruciferous vegetables such as broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, Swiss chard and turnips are healthy, but are best fed cooked or fermented. These vegetables can interfere with the thyroid function if fed raw in large amounts or on a daily basis.
- Use only small amounts of spinach. It is high in oxalic acid.

Vegetables with high lectin content should be pressure cooked. These include:

- all nightshade vegetables: tomatoes, peppers, goji berries, eggplant, and regular potatoes.
- all winter and summer squashes: pumpkin, butternut squash, yellow squash, and zucchini
- all cucumbers
- all melons
- all legumes: peas, green beans, edamame

Lectins are various types of plant proteins (gluten is one of them) that irritate the intestines and lead to intestinal leaking, aka "leaky gut". Basically, tiny holes develop in the intestinal lining; this allows larger, undigested food particles to enter in to the bloodstream, leading to inflammation and autoimmune diseases, e.g., arthritis, skin allergies, kidney diseases, inflammatory bowel disease, asthma, etc. Pressure cooking destroys most of these lectins. Unfortunately, gluten is not affected by pressure cooking. Also, peeling and deseeding helps to reduce the lectin contents of lectin rich vegetables, like cucumbers, tomatoes, and squashes.

Fruits

Due to their high sugar content, fruits should only be fed in small quantities. Many pets love berries, melons, apples and bananas as a treat. Blueberries are very healthy and can be fed in moderate amounts especially if your pet has cancer.

Carbohydrates

Generally, carbohydrates should be fed on a limited basis as they are not a natural food for carnivores. Some owners of large dogs may want to replace part of the more expensive animal proteins with some cheaper carbohydrate sources. Although this is not ideal, I have seen some very healthy dogs (not cats!) that were fed this way. Cats are strict carnivores and should never eat any significant amount of carbohydrates. Carbohydrates ultimately metabolize to glucose (sugar) and carnivores are not meant to process large amounts of glucose (which can promote many diseases). Except for lactating female dogs and nursing puppies, dogs have no dietary requirement for carbohydrates but can tolerate them in small amounts. If your pet has ear infections, skin problems or cancer, it is probably wise to eliminate carbohydrates from his/her diet completely. All kibbled diets contain large amounts of highly processed carbohydrates.

Grains and legumes

Grains: rice, millet, sorghum, quinoa

Legumes: chickpeas, lentils, and beans

Ideally no grains should be fed. The least harmful grains are millet (cooked), sorghum (cooked), Quinoa and rice (both pressure cooked to reduce lectins). If your pet has intestinal or immune issues, white rice is better than brown rice. Avoid all gluten grains: barley, rye, oats (not all oats contain gluten), wheat and spelt. (acronym BROWS). Pressure cooking does not destroy gluten. Also avoid all types of bread, pasta, and corn.

Pressure cooked legumes, especially lentils, generally are less harmful than gluten grains. Legumes need to be soaked in water with baking soda added for at least 24-48 hours and rinsed several times before pressure cooking them. Do not feed any genetically modified organism (GMO) products. (No corn or soybeans ever.) Only use organic grains/legumes because non-organic products are sprayed with Roundup (contains glyphosate) about one week before harvest to kill and desiccate the plant. The Roundup residue is an antibiotic and kills part of the bacterial flora (microbiome/holobiome) in your pet's intestines, urogenital tract, skin and respiratory tract. Also, grains/legumes that are harvested this way are not allowed to fully mature which leads to increased lectin content. If you are feeding grains/legumes, always measure the volume of the cooked grains/legumes, not the raw or dried form. Otherwise, you would feed far too much carbohydrates.

Roots, Tubers and Winter Squash

Roots and tubers: Regular potatoes, sweet potatoes, carrots, yams, beets, parsnip, turnip, yucca, and taro root

Winter squash: Pumpkin, butternut squash, spaghetti squash, acorn squash, etc.

Both regular and sweet potatoes are best served in cooked form as raw potato starch is essentially undigestible. The best carbohydrates to feed are sweet potatoes and taro roots. They contain resistant starches which will actually feed your pet's gut bacteria. Sweet potatoes are best fed boiled or steamed and not baked or roasted as the baking process increases the glycemic index.

White potatoes are inferior because they have a high glycemic index (which means they lead to high blood sugar spikes, similar to sugar or white flour) and contain a lot of lectins (as part of the nightshade family). If you feed them, it's best to pressure cook them, let them cool down before reheating them. This creates more resistant starches (food for the gut flora). Always mash the potatoes before feeding them.

Pressure cooked winter squash is another acceptable choice of carbohydrates. Don't feed the skin or seeds; they contain a lot of lectins. Canned pumpkin is not necessarily pressure cooked.

Supplements

Supplements need to be added to homemade diets and commercial non-fortified raw diets. Wild carnivores would eat the whole prey including brain, eyes, skin, some of the fur or feathers, glands, and all the organs, that contain numerous nutrients. Since we are not feeding the whole prey, we need to make up the missing nutrients from those parts by adding multivitamins-mineral supplements. Also, acid rain and modern farming practices (especially the use of Roundup) have led to soils depleted in minerals and trace elements. Plants grown in these soils are nutrient deficient and will lead to depleted meat when being fed to chickens, cattle, etc.

Multivitamin – Mineral Supplement

Several options:

Essential Nutrients (Progressive Laboratories): About 1 capsule daily per 40 pounds body weight. Excellent levels of manganese.

Nutrient 950 without Iron (Pure Encapsulations): Excellent quality, but manganese level a little low. About 1 capsule daily per 40 pounds body weight.

Canine Plus for Dogs (VetriScience): Use double the recommended dose. Decent quality but low dosed.

NuCat Multivitamin (VetriScience): Use 1 1/2 to 2 times recommended dose. Decent quality but low dose. Contains taurine.

iViBlend (Integrative Veterinary Innovations): Designed to balance homemade diets for pets.

Fish body oil - Fish liver oil - Krill oil

The diet of our pets' ancestors was very high in omega-3 fatty acids. Their prey was always "grass-fed and grass-finished" and all parts of the prey were consumed, including brains and eyes, which are very rich in omega-3 fatty acids. The modern diet of dogs and cats usually is based on grains, legumes and other carbohydrate sources devoid in omega-3 fatty acids. The factory-style farmed meat and fish that is used to make our pets' food is raised on Roundup Ready grain and not on grass (or plankton and krill in the case of fish) which creates meat/fish that is very low in anti-inflammatory omega-3 fatty acids and very high in pro-inflammatory omega-6 fatty acids. Ordinary, commercial chicken is the worst and contains very little omega-3 fatty acids and very high levels of pro-inflammatory arachidonic acid. Although it is relatively cheap, I recommend limiting chicken to a maximum of 25% of your pet's food. Also, the high heat used to make kibble destroys most of the remaining omega-3 fatty acids. Even when makers of kibbled food try to make up for these shortcomings and add fish oil to their kibbles after the high heat processing, they actually do more harm than good. Kibbled food is exposed to oxygen and stored at room temperature (instead of in a freezer), so the fish oil will oxidize and turn rancid within days.

For all the above reasons, we need to add omega-3 fatty acids to our pets' diet in form of DHA and EPA sourced from fish body oil, fish liver oil and krill oil. Plant-based omega-3 fatty acids are useless (except algae oil which contains DHA but not EPA) since dogs and cats are carnivores and cannot convert these plant-based precursors to their active form, DHA and EPA.

Generally, I recommend about 1,000 mg of combined EPA and DHA per 50 pounds body weight. This does not equal the amount of fish oil. Some fish oil contains higher amounts of EPA/DHA per 1,000 mg of fish oil than others. I recommend wild sardine oil as a good source, about one teaspoon per 50 pounds, but wild salmon oil, anchovy oil, krill oil and TwinLab's cod liver oil are good as well. Make sure the oil smells neutral and fresh. Any fishy smell indicates rancidity. These oils get rancid easily and should be refrigerated or frozen once the container is opened, even if in capsule form. Refrigerated fish oil should be consumed within 2-3 months. It will keep longer in the freezer.

If you use fish oil capsules, ideally you should actually bite them open and taste them. Do not use them if they taste fishy. You need about 1-4 capsules per 50 pounds body weight depending on the contents of DHA/EPA per capsule. Please note – the DHA/EPA contents of the product usually are listed per serving size (often 2 or more capsules) and not per capsule.

If your pet has certain health conditions, like arthritis or cancer, the amount of DHA/EPA can be tripled.

When adding fish oil to your pet's diet, I recommend to also supply vitamin E, about 1 I.U. per pound body weight daily

Vitamin D

Many pets are vitamin D deficient, especially if they are older, neutered/spayed, sick or fed Roundup sprayed food or meat from conventionally raised animals or meat from animals raised without sunshine, e.g., most chickens. Kibble fed dogs often are vitamin D deficient.

Dogs and cats cannot make vitamin D from sunshine; they must get it from the food they eat.

A blood test will determine if your pet needs vitamin D supplementation and how much they need. I recommend VDI Labs (vdilab.com) for vitamin D tests.

Taurine

Taurine is an essential amino acid for cats and most likely also for dogs. It is plentiful in raw meat and especially in heart and liver, but large amounts get destroyed by cooking. It also can be lost in the liquid that oozes out of frozen meat when you thaw it. Commercial, processed, canned or kibbled pet food can be taurine deficient and sicken and kill pets even if the label states that the food is "complete and balanced" and meets AAFCO standards. In the past, taurine deficiency has killed hundreds of thousands of cats fed commercial cat food. If you feed raw food, you do not need to supplement with taurine; make sure to also feed the thawing liquid when feeding frozen food.

If you cook your cat's food, heat it as little as possible and supplement with about 75-100 mg of taurine per day or add about 250 mg per pound of food. It is safe and difficult to overdose.

Transitioning to Raw

When transitioning to a raw diet, start very gradually. Depending on the size of you pet, start with a teaspoon or less of raw food added to your pet's regular food. Increase the amount slowly every couple of days to about 25% raw food at the end of the first week, 50% after week two, 75% after week three, 100% after week four. To prevent diarrhea in the transitioning phase, you can add probiotics, colostrum and cooked sweet potatoes to the food. If your pet develops diarrhea, it should resolve by itself in 2-3 days. To resolve the diarrhea sooner, fast for 24 hours and give him/her slippery elm or marshmallow root capsules.

General Feeding Guidelines

The general guideline for amount of food fed per day is 2% of body weight. Because every dog and cat are different, you need to monitor the weight of your pet by feeling the ribs. If you feel a thick padding over the ribs, decrease the amount of food fed. If you pet is getting thin, then increase the amount of food fed.

10 pound dogs/cats: 5 oz of food daily

20 pound dogs: 7 oz of food daily

40 pound dog: 13 oz of food daily

60 pound dog: 20 oz of food daily

Commercial Raw Diets

FROZEN RAW	FREEZE-DRIED
Abady	Honest kitchen
Answers Pet Food	K9 Natural & Feline Natural
BARF World	Northwest Naturals
Bravo	Rawbble
Darwin's Natural Pet Products*	Primal
Hare Today Gone Tomorrow	Sojo
Instinct Raw (Nature's Variety)	Stella & Chewy's
K9 Natural & Feline Natural*	Ziwi Peak
Oma's Pride	
Primal	COOKED
Raaw Energy	Chi Dog
RAWganics	Raised Right
Rad Cat Raw Diet	Smalls
State of Nature Raw	Take the frozen raw food and lightly cook it on a stove top with little water, broth, or butter.
Stella & Chewy's	
Steve's Real Food	
Tucker's	No Microwave!
Vital Essentials	*Sells Frozen green tripe

If you don't want to make your pet's food from scratch, these pet food companies offer good quality frozen, dehydrated raw (freeze-dried) or cooked diets. It is necessary to rotate brand and flavors for variety.

Freeze-dried raw food is best soaked overnight to increase digestibility. You can soak 3-day portions at one time. Store in the refrigerator.

Benefits of Feeding A Raw Diet

Usually, you will notice an improvement in the quality and the smell of the coat and the ears of your pet, increased energy and healthier stools after a couple months of feeding the new, raw diet. Overall, your pet will be on a path to better health and increased longevity.

Online resources

HEALTHYPETS.MERCOLA.COM

Dr. Karen Becker's website contains many videos and articles.

WWW.CATINFO.ORG

Dr. Lisa A. Pierson's website that contains many articles on homemade diets for cats, and how to transition cats from dry foods.