

NUTRITION / DIET

Good nutrition is vital to produce and maintain a state of health. Health may be defined as a state of well being in which the body thrives and functions at optimal levels.

Most of the information about feeding pets today focuses on the use of dry or wet pre-packaged foods. It is possible, and in many cases preferable, to feed a balanced diet made up of fresh food, which may be raw or cooked, or a combination of these depending on the needs of the animal.

Supplements may need to be added to the diet, again this depends on the needs of each animal.

Cats and dogs have different nutritional needs;

Cats are **obligate carnivores**, they are designed to eat the bulk of their food as meaty bone and organ meat.

Dogs have more varied eating habits and can tolerate a wider range of foods including some starches, fruit and vegetables.

The cat is designed to eat small mammals such as mice, birds, and occasionally fish.

These foods have high protein levels and low to zero carbohydrate content.

Cats are metabolically adapted to preferentially use protein and fat as energy sources.

Cats have minimal amounts of the liver enzymes necessary for storage of glucose and for oxidizing glucose to produce energy. They also have minimal activity of the enzymes responsible for converting glucose to glycogen so that it can be stored in the liver.

In carnivores blood glucose concentrations do not fluctuate as they do in other mammals because glucose is released in small continuous amounts over a longer period of time as a result of the breakdown of proteins to produce glucose. When additional carbohydrate is added to the diet that is not used for energy or stored as muscle glycogen, it is stored as fat. This contributes to the increasingly high levels of obesity observed in our pet cats.

Carnivores typically get most of their energy from fat. This is also important for palatability and acceptance of food. Meat based diets, which also contain animal fat, supply essential fatty acids to cats, including linoleic, linolenic, arachidonic, and some eicosatrienoic acids. Cats cannot synthesize many nutrients because they do not have the enzymes systems to do so. This is probably due to evolutionary streamlining as these nutrients are plentiful in their natural diet.

The easiest way to provide all the nutrients a cat requires is to feed the foods in which they are abundant.

The following is for **healthy adult cats**, kittens, sick animals and many geriatric animals may have different nutritional requirements.

A daily ration with 70% - 75% meaty bones, preferably raw

10% - 20% offal (liver, kidney, heart) ½ liver and ½ (heart+kidney)

10% various additives - may include amino acids, oils, minerals and trace

elements, vitamins and/or other nutrients which may be appropriate to an individual's state of health.

0% - 5% fruit and vegetables

Meaty bones may be fed whole or ground to a mince like consistency and mixed with offal and vegetable and some of the additives. If this is done the resultant mix may be frozen and used as a whole meal. If you are going to feed in this manner, you must ensure that you vary the content of the mixtures at each batch so that enough variety exists in the diet to achieve a balance of nutrients long term. Balance may be achieved over a two to three week period.

Additives should include a source of omega 3 fatty acids such as fish body oil. These contain EPA Eicosapentaenoic acid and DHA Docosahexaenoic acid, which the cat is unable to produce from plant omega 3 containing oils. Oils such as flax seed oil are therefore of little benefit to the cat.

Vitamin E is an important antioxidant and may be supplemented at 5 – 10iu / kg / day.

A safe level for all cats would be 5iu/kg/day with optimum levels higher than this for many individuals.

Vitamin B Complex may be added to food daily, as a water soluble complex, any excess will be discarded via the urine and there are many benefits to supplementation.

Vitamins A & D are present in liver and if this is fed as above there is no need for further supplementation.

Vitamin C may be supplemented at 50mg/kg/day.

Minerals and trace elements may be added in the form of kelp powder or tablets at the rate of ½ - 1 tablet /day for adult cats.

The addition of oils to a mixture which will be frozen is not ideal. Oils should be added to food just prior to feeding, or the cat dosed with a capsule just before or after feeding.

N.B.: The feeding of solely ground or minced food is not ideal. The diet should include some small items such as chicken wings or necks which encourage the cat to chew meat and bone together and results in plaque being removed from teeth before thick layers of tartar build up and contribute to ill health from periodontal disease.

The addition of the amino acid 'Taurine' to the diet is essential as all meats are lower in taurine content than the cats natural prey, mouse!

Taurine can be obtained from most health shops in 500 mg capsules - approx 100mg daily is adequate supplementation for most cats.

Dogs may be fed a mixture of raw, meaty bones together with organ meats and some green vegetables. Feeding of whole carcasses most accurately reflects how carnivores feed naturally, however this may not be possible in a suburban situation.

Starchy vegetables such as sweet potato and squashes such as butternut and gem, pumpkin and marrows may be used for very active dogs that tend to lose weight easily if an increase in the meaty bone component of the diet does not suffice.

The raw meaty bone component may be chicken, beef, ostrich, turkey or lamb. Rabbit and duck are also suitable if available.

Chicken necks or wings are convenient to feed as they have the ideal ratio of meat to bone. Wings are preferable to necks for growing pups as the bone: cartilage ratio of necks is too low to provide adequate mineral for bone development.

Beef bones may be fed but as they are the toughest of the bones, they should form only a small part of the total bone intake. It is important not to feed beef bones that have been sliced longitudinally to expose the marrow. This provides the dog with the opportunity to chew sharp edges of thick, tough bone which may result in broken teeth.

Ostrich neck may be acceptable for dogs that chew well but for those that bolt food, the vertebrae may cause an obstruction and should be avoided.

Turkey legs may be fed but have a high meat : bone ratio and should be fed in alternation with bones that have little meat on them.

Chicken thighs, breasts, etc. may be dealt with in the same manner.

The feeding of whole carcasses is the closest to how dogs would eat naturally and if this is possible, it is ideal, as it provides the opportunity for the natural gnawing and tearing actions which keep gums and teeth in good condition. The organs such as heart, liver and kidney, may have to be fed in addition as many carcasses, especially chicken, have had these removed.

The vegetable component should be mainly dark green veg. for example spinach, green beans, small amounts of broccoli, baby marrow skins or small amounts of whole marrow. The outer green leaves of lettuce may be used as also may fresh leafy tops of carrots, beets, celery (small amounts) and parsley.

Green vegetables should ideally be fed raw and pulped to provide the greatest range of nutrients available. Raw pulped vegetable which is not fed immediately after preparation should be frozen to preserve the nutrient content.

If necessary vegetables may be lightly cooked, however, this will destroy all the enzyme content (which aids digestion of the food) and some of the vitamin content, although steaming or waterless cooking can minimize this loss.

The offal; heart, liver, kidney, may be fed on a daily basis in very small amounts or more easily as one large meal every week. Those owners who have access to other organ meats such as tripe, heads, etc. may feed that in addition.

Healthy adult dogs may be fed according to the proportions below, inactive dogs and older dogs tend to need lower protein (meaty bone) levels while young dogs and active breeds may need the higher levels.

Raw meaty bones	60 –75%
Vegetables green	10 –15%
Offal	15 - 20 %
Supplements	5%

Starchy vegetables may be added at up to 10% if required.

Supplements include additional food items such as omega 3 fatty acids – flax or salmon oil, vitamin E, yoghurt or other probiotics, and other nutrients depending on individual requirements.

AMOUNT OF FOOD TO BE FED

The daily allowance of food may be calculated on a percentage of the body weight or a direct conversion may be made from amount of dry food to amount of wet food, where
1cup dry food = 2 ½ - 3cups wet food.

On average dogs can be fed between 1 – 3% of their body weight per day depending on their size. Large dogs require a lower % than smaller dogs.

Where amount is calculated on % body weight, the level of activity, the age of the dog and whether it is overweight, must be taken into account.

The calculation for growing pups is different and you are advised to speak to a veterinarian who is familiar with this type of feeding, or a breeder who uses the raw food diet to raise his/her pups.

It is advisable to speak to a veterinarian who is informed about home prepared or raw food diets before changing your animal's diet.

Further reading:

Dr Tom Lonsdale Raw Meaty Bones : Promote Health ISBN 9780646396248

Work Wonders – Feed Your Dog Raw Meaty Bones

Website: www.rawmeatybones.com

Dr Ian Billinghurst The BARF Diet for Dogs and Cats ISBN 9780958592512

www.drianbillinghurst.com

Kymythy Schultze The Natural Nutrition No-Cook Book ISBN 1401903517

Dr Pitcairn Complete Guide to Natural Health for Dogs and Cats ISBN 9781579549732

www.catinfo.org

www.felinefuture.com