



HEALTHY FOOD for your pet

We all want to keep our families healthy. So, let's not forget about the small, furry members. Pet nutrition expert **Dr David Thomas** answers common questions on cat and dog nutrition.

WHEN I WAS a kid we chopped vast quantities of ox heart or sheep's heart from the butcher to put in the freezer – that's what we fed the cat, with a saucer of milk on the side. And dogs were fed scraps from the kitchen table. Now we're told that cats shouldn't have milk at all, and dogs need special diets! Do they really? What should we be feeding our pets? Here are the answers to some common questions.

DO CATS AND DOGS HAVE SIMILAR NUTRITIONAL NEEDS TO US HUMANS?

Cats specifically, and dogs to a

certain extent, have quite different nutritional needs to humans. Both are classified as carnivores, but this is a little misleading, especially in the case of dogs, who need more than just meat.

Cats are known as 'strict' or 'true carnivores'. This means that they must eat meat in order to survive. There are no truly adequate vegetarian diets for cats. Cats have evolved to survive on very little, if any, plant material.

Dogs, on the other hand, are more omnivorous (able to digest and use plant and animal material) and can survive on plant material alone, so they don't have to consume meat. However, this

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doesn't mean that plant material alone is a good source of nutrition for dogs. Dogs have evolved to be primarily meat eaters, and should have meat in their diets in order to thrive.

DO PETS OF DIFFERENT AGES NEED DIFFERENT FOOD?

There are lots of commercial pet foods available targeting different ages of pet. These are typically marketed as Growth (kitten or puppy), Maintenance (Adult), Gestation (Pregnancy)/Lactation and Old Age (Mature). But there is a lot of overlap in the nutrient requirements for different aged animals. The pet food industry only has standards for two nutrient profiles for dogs and cats – growth/lactation and maintenance.

In dogs, diets formulated for growth and lactation have

increased levels of protein, fat, minerals and vitamins compared to maintenance diets. In cats, there is much less difference between the nutrient profiles, with the diets formulated for growth and lactation having similar levels of protein and fat to the maintenance formulation but increased levels of minerals and vitamins. Cats of all ages need similar amounts of protein to maintain normal body tissues.

Diets formulated for mature animals are increasingly being marketed by the pet food industry. Studies have shown that older animals do need increased levels of protein and lower energy levels. Manufacturers have responded to this and are also commonly including "nutraceutical" ingredients such as glucosamine and chondroitin sulphate to assist in maintaining joint health.

It used to be argued that the level of protein in the diets of geriatric dogs should be reduced to prevent the natural decline in kidney function. Some "mature" formulas for dogs still have lower levels of protein in them. However, recent research has shown that protein levels should not be restricted simply because the dog is old, as this will only lead to a loss of protein reserves; this causes muscle wastage and dogs becoming very thin.

WET OR DRY FOOD: WHAT'S THE DIFFERENCE?

The two main types of "maintenance" food for pets are wet (canned) or dry. Both are suitable for most pets.

Canned foods contain about 75% moisture and are typically more expensive than dry food, but usually contain more fat and protein on a dry matter basis. To compare the nutrients without the water content, a general rule is to multiply the nutrient levels on the can by four to directly compare them to a dry product. Wet food generally provides good nutrition for all life stages of cats and dogs.

Dry food as the name suggests, contains very little moisture (around 5-10%). It is manufactured from grains and meat by-products and has a shelf life of 12 months or more. Dry food is formed in an extruder by heating the food ingredients under pressure, and is mostly low fat (~25% energy as fat). Dry foods are fine for adult dogs or cats that have normal amounts of exercise but may not contain enough fat for pregnancy, lactation or growth, or for dogs that do a lot of exercise. More expensive (premium) dry diets have fat sprayed on after extrusion and tend to contain more fat (~40% energy as fat), are greasy to the touch and are packaged in special grease proof bags.



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The situation is different if a dog does have kidney disease. In this instance the restriction of dietary protein may be of benefit and is recommended for the management of the disease. It's a good idea to discuss this with your vet before changing to a lower protein food.

DRY OR WET FOOD: WHICH SHOULD I CHOOSE?

Good quality dry and wet foods both have their benefits, and are suitable for all life stages of cats and dogs. Both are a complete and balanced diet; your choice over which to feed (or a combination of both) should be based on what's most convenient for you and what your pet prefers (cats are typically much fussier than dogs!)

PETS AND MILK: WHAT'S THE STORY?

Most cats and dogs love the taste of milk. Milk contains a simple sugar called lactose which is broken down in the gut by the enzyme lactase. However, some cats and dogs don't have enough lactase to digest the large quantities of lactose in milk, which results in digestive upset and diarrhoea. Most pets can tolerate and enjoy an occasional bowl of milk, but it should be treated as a supplement and fed sparingly. There are also specially formulated "pet milks" available that do not have cow's milk in them or that are pre-treated with the enzyme lactase to break down the lactose and make it more digestible; these should not cause any upsets for your pets.



Dogs tend to eat everything that is fed to them very rapidly. Cats are very different, having much smaller stomachs and eating little and often.

Dry foods are fine for adult dogs or cats that have normal amounts of exercise, but lower quality brands may not contain enough fat for pregnancy, lactation or growth, or for dogs that undertake a lot of exercise such as working or farm dogs. The major benefits of dry pet food for both cats and dogs are economy and

convenience for the owners in terms of storage and feeding. Good quality dry foods are highly digestible and have high nutrient densities which means that you need to feed less food, more nutrients will be absorbed and used, and less faeces will be produced. This may be an advantage if the pet is kept indoors and uses a litter tray. Dry food can often be fed by free choice to animals without the worry of rapid spoilage, especially in hot weather. There is also some dental benefit in feeding dry diets, particularly with the new "dental formula" brands now being released. However, these dental formulas are quite a bit more expensive than other dry food, so it's your choice whether it's worth feeding these exclu-



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sively, just for their dental health benefits.

Canned or 'wet' food generally provides good nutrition for all life stages of cats and dogs. Wet foods are more palatable, mainly because of their relatively high amounts of fat and protein and texture, so you may find your pet enjoys these more than dry food. They are also more digestible than many dry foods. They contain a higher proportion of protein and fat on a dry matter basis (i.e. once the water is removed). The canning process is carried out in a high-temperature and -pressure environment which effectively sterilises the pet food, but this also causes the loss of some vitamins from the food. Manufacturers of good-quality products usually adjust their dietary formulations to compensate for these losses. Canned pet foods have the benefit of an extremely long shelf-life without the need for special storage considerations.

WHAT DOES "COMPLETE AND BALANCED" MEAN ON PET FOOD LABELS?

The words "Complete and balanced" on a pet food label means that the diet contains all the nutrients an animal needs, and that no other foods are needed to be fed. Labels which don't have these words on them should only be considered as supplements.

HOW TO PUT YOUR PET ON A DIET

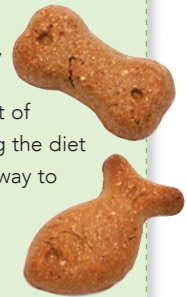
If you think your cat or dog is overweight, it's a good idea to consult your vet to check; some breeds are naturally bigger than others. A vet will be able to advise you and assess the body condition of your pet. All pet weight loss programmes have three fundamental components: behaviour modification, exercise and dietary change. Dietary change and exercise create an energy deficit that will result in weight loss. Behavioural modification (i.e. changing the habits that have led to the weight problem) helps to change both the owner's and pet's behaviour, which will assist with weight loss and prevent weight regain.

Practical tips to manage weight loss in pets:

- Your vet has charts which show an 8-point scale of body condition; you can judge from these silhouettes where your pet fits, and how much weight is needed to be lost.
- Try to restrict your pet's food intake to 60% to 70% of what you would normally feed. A good tip to achieve this using dry food is to pre-measure a day's worth of food into a container and top up the food bowl from this container only each day. This will stop over-feeding, which can easily happen with dry food.
- Select an appropriate low-calorie food for weight loss; these are available from vet clinics and supermarkets.
- Cut out all table scraps and treats.
- Include moderate levels of daily exercise; for dogs this means 20-30 minutes of activity every day. Regular, moderate exercise every day is better than one big session every weekend.
- For cats, if they're young, try and encourage them to play by

chasing toys, string, etc. With older cats who are in the habit of lounging, restricting the diet is the only realistic way to reduce weight.

- The aim is to produce a weight loss of 1% to 2% of total body weight per week. Any more than this will mean the pet is hungry; any less and the owner will not notice any change and lose hope!
- Once weight loss has been achieved, adjust the pet's intake to maintain the new, ideal body weight. You can increase the amount you feed above the diet amount, but try and keep treats to a minimum.
- Prevent weight regain by continuing regular exercise and strictly monitoring energy intake.



CAN YOU FEED A “COMPLETE AND BALANCED” HOMEMADE DIET TO A CAT OR DOG?

Homemade diets are fed to pets for a number of reasons. These include the idea (quite mistaken in many cases) that fresh ingredients are purer and safer; individual preference (some pets simply prefer homemade diets to commercial products), in veterinary hospitals as specifically designed diets for patients or in remote locations where commercial diets, especially those with special formulations, are unavailable. However, it's important to note that the nutrient content of most whole ingredients is variable, which can make it difficult to get a totally balanced diet, and that there can be pathogens and toxins in these ingredients which are difficult to eliminate.

HOW OFTEN SHOULD YOU FEED CATS/DOGS?

Cats and dogs have very different feeding behaviours. Dogs have relatively large stomachs which hold big volumes of food so they tend to eat everything that is fed to them very rapidly. Cats are very different, having much smaller stomachs and eating little and often. Studies have shown

Obesity levels are increasing worldwide in both cats and dogs. Interestingly, weight problems in companion animals closely mirror those of their owners.

Here's an example of a homemade maintenance diet for a 3.8kg cat (which will last 3 days) or a 10kg dog (for one day):

Raw long-grain white rice
(140g dog; 70g cat)

Lean beef
(70g dog; 140g cat)

Liver
(30g dog and cat)

Bone meal
(11g dog and cat)

Corn oil
(5g dog and cat)

Iodised salt
(2g dog and cat)

Combine all ingredients in 360ml of boiling water and cook for 20 minutes.

that while dogs voluntarily eat up to 4 meals a day, cats eat between 12 and 20.


For dogs, portion-controlled feeding (i.e. set amounts at set times) is the best way to feed in most situations and can be used with both wet and dry food. Feeding dogs via a “free choice” method can encourage them to overeat. Provide one or several meals per day, pre-measured to meet the dog's daily energy and nutrient needs (see the guidelines on the pet food package for how



much to feed – it will depend on your pet's weight and age).

Cats are often fed using the portion control method, but if they are fed free-choice once a day they will usually eat small, frequent meals throughout a 24-hour period. Free-choice feeding requires the least amount of work and knowledge on the part of the owner, and is most suited to dry food which will not spoil as quickly as wet food. Cats are generally better at self-regulating how much they eat than dogs, but there is still potential for cats to over or under-eat using this method, so keep an eye on your cat's weight when feeding this way.

CAN CATS AND DOGS HAVE WEIGHT PROBLEMS?

Yes! Obesity levels are increasing worldwide in both cats and dogs. Studies estimate the incidence of overweight or obese cats is between 19% and 40% and of 

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overweight or obese dogs is between 24% and 45%. Neutering and spaying has been shown to increase the risk of obesity because it reduces energy requirement by 33% and increases appetite.

Interestingly, weight problems in companion animals closely mirror those of their owners. It is thought that the rise in numbers of overweight or obese pets is due to an increasingly sedentary lifestyle coupled with the over-feeding of highly palatable energy-dense foods: rather like humans. However, other factors such as diet palatability, food composition and texture, and the timing and environment of meals, appear to be important factors leading to overeating and obesity. For example, most pets increase food intake when eating in the presence of other animals.

DANGER FOODS FOR DOGS:

Most dogs enjoy sweet flavours, including the taste of chocolate. However, chocolate contains a substance (theobromine), which is toxic to dogs when consumed in large quantities. Small amounts of chocolate given as treats are not likely to be harmful, but it has been calculated that 700g of milk chocolate could be lethal for an 11kg dog.

Grapes and raisins are also toxic for dogs. Ten cases have now been reported in America, with dogs eating between 250g and 900g of grapes or raisins, and 5 animals dying of kidney failure.

Therefore it is important to store all chocolate foods, grapes and raisins out of the reach of dogs.

HOW CAN YOU TELL IF YOUR PET IS NOT GETTING THE RIGHT FOOD?

The most visible aspect of a pet's health is the condition of its coat and skin. The coat and skin does provide a sensitive and broad gauge of an animal's nutritional status. Deficiencies in the levels of dietary protein, some vitamins, fatty acids and minerals all affect the condition of the coat and skin. However, there are also a number of non-dietary factors which influence the quality of

the coat and underlying skin such as allergies, environmental conditions (including parasites), seasonal variation and age and breed differences. If you notice a definite and persistent change in the condition of your dog or cat's coat, it's worth investigating with your vet. Watch out for roughness or a loss of lustre and shine, as well as shedding. Remember cats and dogs do have a seasonal shedding pattern though.

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For sources of information for this article see page 91 or www.healthyfood.co.nz

Book Review:

French Cats Don't Get Fat The Secrets of La Cuisine Féline

By Henri de la Barbe
(Publisher: *Headline Book Publishing*, Great Britain)

Touted as 'essential reading for cat owners with class' this book promises to teach your cat how to savour a meal with all five senses; and to provide a 'fool-proof' exercise regime'.

The recipes have simple ingredients (1 rat) and are presented with ideas on how to make the most of such morsels (1. kill 2. shred thoroughly 3. scatter

on carpet). These are not new recipes but the tried-and-true presented in an appealing way. The 'seasonal cuisine' section is not so helpful to the Antipodean cat, who would not find a mole or a vole no matter the season.

On sharing the book with my furry friends I found the recipe section a great hit but 'Le Workout' section did not have universal appeal. One of them agreed wholeheartedly with the need to scamper around at regular intervals in a seemingly meaningless way, but another found the thought quite

distasteful. And while tearing furniture to shreds is very appealing sometimes, at others, I was told, you just can't be bothered. Like

us, all cats are different: you just have to find the exercise that suits you, and aim to do it regularly.

This is a quick, light and entertaining read for the whole 'family'.

– Rose Carr

