

## Are Vegetarian Diets for Cats and Dogs Safe?

Cats and dogs have very specific nutritional needs that are affected by many variables including breed, level of activity, age, size and sex. It is sometimes supposed that the nutritional needs of cats and dogs are similar and that they can be fed the same food. This is not the case; both cats and dogs have evolved differently and their physiology and needs are very specific to their species.

### A Vegetarian Diet for Cats

The cat is an obligate carnivore and has highly exacting nutritional needs, for this reason we advise owners to think very carefully before providing a vegetarian diet for their cats, and to ensure they get advice from a veterinary nutritionist.

There is some commercial ‘complete’ vegetarian cat food available on the market. If a cat owner is intending to feed one of these products, we would recommend the owner discusses this option with their vet in the context of the individual needs of their cat.

Cats have high requirements for **protein and amino acids** which their bodies breakdown very rapidly. If resources run low they’re unable to reduce the rate of breakdown which makes them particularly sensitive to deficiencies.

The particular importance of **taurine** (an amino acid exclusively found in animal-based proteins) in cat nutrition is well documented. It is an essential nutrient for cats and deficiency can lead to blindness and/or heart failure. Cats have minimal ability to synthesise sufficient taurine to meet their needs and therefore require a dietary supply which is found exclusively in animal derived materials. Whilst synthetic supplements are available, these can vary in bioavailability and there is no margin for error.



**Arachidonic acid** (an essential fatty acid) is another example of a nutrient required by cats only available from animal sources, along with **preformed vitamin A (retinol)** as cats cannot utilise sufficient quantities from the pro-vitamin A of vegetables.

Cats also need to sustain good levels of **vitamin B12** found naturally in meat.

## A Vegetarian Diet for Dogs

Dogs are omnivores and can adapt to a well-balanced vegetarian diet. There is a wider range of commercially prepared 'complete' vegetarian dog foods available and for the majority of owners this is the safest way to feed a vegetarian diet. Once again, we advise that these feeding options are discussed with the vet or animal nutritionist.

## Vegan diets for Pets

Vegan foods (no animal products) should be carefully checked by a vet or animal nutritionist as they may be deficient in arginine, lysine, methionine, tryptophan, taurine, iron, calcium, zinc, vitamin A and some B vitamins<sup>2,3</sup>. Meticulous attention to detail would be needed to assure nutritional adequacy and palatability.

## Home Prepared Vegetarian Diets for Cats and Dogs

Studies have shown that nutritional errors are commonplace in many homemade diets<sup>1</sup>; providing a nutritionally balanced, homemade vegetarian diet is a complicated task that would require meticulous planning and a specific formulation from a vet or animal nutritionist – particularly for cats.

A survey of 86 vegetarian dogs in Germany, Switzerland and Belgium found that over 50% of the dogs were fed diets deficient in protein, essential amino acids, calcium, zinc and vitamins D and B12. <sup>2</sup> Dietary deficiencies can have a significant impact on long term health and well-being.



<sup>1</sup> University of California, Davis School of Veterinary Medicine 'Homemade dog food recipes can be a risky business, study finds' (15 July 2013)

<sup>2</sup> A Field Study on the Nutrition of Vegetarian Dogs and Cats in Europe. Jan 1998-Dec 1999. E. Kienzle, R Engelhard.

<sup>3</sup> Dwyer JT. Nutritional consequences of vegetarianism. Annual reviews of nutrition 1991; 11: 61-69.

<sup>3</sup> McDonald P, Edwards RA, Greenhalgh JFD, et al. Evaluation of foods – protein. In: Animal Nutrition, 5th ed. Harlow (Essex), UK: Longman Scientific and Technical, 1995.

More advice can be found at [www.fediaf.org](http://www.fediaf.org)

Status: September 2017