

HOT TOPIC

Fats in pet food



In focus

Fat is an important nutrient for pets. What is its function, and are there differences in the fat requirements of pets and people?

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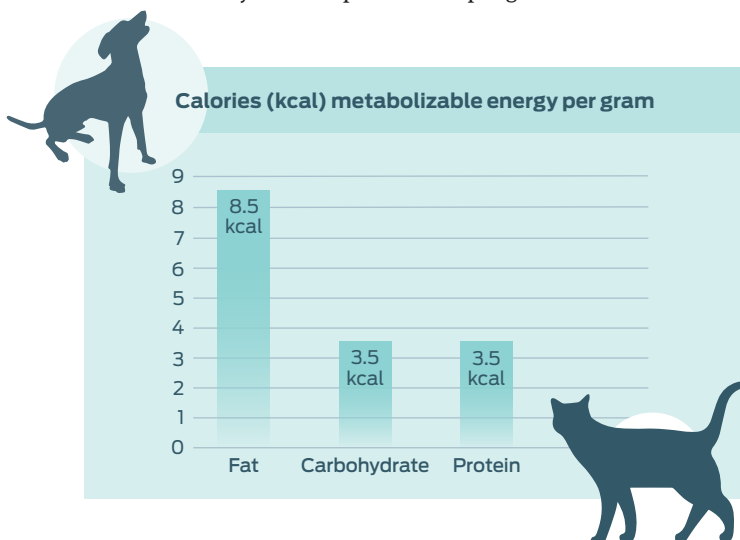
Fat and fatty acids

Fat is composed of fatty acids and most fat found in pet food is in the form of 'triglycerides,' which contain three fatty acids. The physical and metabolic effects of the fat depend on the fatty acids it contains. Dietary fats can come from animal, marine, or vegetable sources and are either solid or liquid (oils) at room temperature.

COMMON SOURCES OF FAT IN PET FOOD	
ANIMAL OR MARINE	VEGETABLE
Beef fat	Canola (rapeseed) oil
Chicken fat	Corn oil
Fish oil	Flaxseed oil
	Soybean oil
	Sunflower oil
	Vegetable oil

What is the function of fat in pet food?

- Provides energy – fat is the most concentrated source of calories in the diet, providing more than twice that supplied from carbohydrates or protein on a per gram basis.¹



- Provides the essential fatty acids which cannot be produced in the body.¹



ESSENTIAL FATTY ACIDS

• Linoleic acid	
• Alpha-linolenic acid	
• Arachidonic acid	For cats only
• Eicosapentaenoic acid	Both are considered 'conditionally essential' during growth, gestation, and lactation – they are produced in the body, but not in sufficient quantities during these times
• Docosahexaenoic acid	

- Carries the fat-soluble vitamins (A, D, E, and K) and facilitates their absorption from the intestine.¹
- Dietary fat helps promote healthy skin (by helping retain moisture in the skin) and a soft, shiny coat.²
- Enhances the taste and also influences the texture of food.¹

When do pets benefit from a lower fat diet?

- Since fat is the main contributor of calories, less dietary fat helps reduce the caloric density of food which can help obese, overweight, or less active pets.¹

- As dogs age, their energy needs typically decrease, particularly if they are less active, and a reduced fat diet can help maintain optimal weight.¹
- A lower fat diet is often recommended for dogs with gastrointestinal (GI) conditions since they may not digest fat properly. Undigested fat in the colon or large intestine can lead to diarrhea (steatorrhea) and intestinal inflammation.^{1,3} Dietary fat is not as important when managing GI conditions in cats, and a Purina study showed no difference in response between cats with chronic diarrhea fed diets differing only in the level of fat.³

When do pets benefit from a higher fat diet?

Increased fat levels in the diet can help meet the higher energy needs required by:

- Highly active, sporting, or working dogs – due to differences in muscle fibers, dogs rely more on fat as a source of energy for endurance exercise,^{1,2} while human endurance athletes rely more on energy from glycogen (supplied by dietary carbohydrates).⁴ Purina research showed canine endurance athletes fed a high fat diet had improved endurance than when fed a high carbohydrate diet.⁵
- Pregnant or lactating pets, with the latter requiring up to 3 times as many calories compared to maintenance needs.¹
- Healthy animals that have difficulty maintaining body weight, e.g., geriatric cats.¹

Since fat increases the palatability of foods, a higher fat diet may also encourage finicky pets to eat.

What are the differences in fat requirements between pets and people?

In general, reducing intake of saturated fat is recommended for people due to the association of fat with high cholesterol.⁶ There are two types of cholesterol which are often referred to as 'good' (HDL) and 'bad' (LDL).

- 'Good' cholesterol = **HDL**, or high density lipoprotein
- 'Bad' cholesterol = **LDL**, or low density lipoprotein

In people, a diet high in most saturated fats can increase the level of 'bad' cholesterol, which may potentially lead to the development of 'blocked arteries.' However, due to genetic and metabolic differences, dogs and cats have more 'good' than 'bad' cholesterol regardless of their diet, and are far less susceptible to developing blocked arteries, so can typically tolerate high levels of any type of fat in their diets.⁷

References

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