

# Foods that Spell Danger to Cats and Dogs

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## Onions and Garlic

It is well known that onions can be fatal to dogs and cats. This is because onions destroy red blood cells (causing haemolytic anaemia), resulting in weakness and breathing difficulties. Some veterinary experts warn that even small amounts can cause cumulative damage over time. The problem appears to include several members of the onion family, including onions and chives - raw, powdered, dehydrated, or cooked. The problem is worse with onion that is cooked, dehydrated and (most particularly) when powdered. Consumption of as little as 5g/kg bodyweight of onions in cats or 15 to 30 g/kg in dogs has resulted in clinically important hematologic (blood) changes. Onion toxicosis is consistently noted in animals that ingest more than 0.5% of their body weight in onions at one time.



Any dog which has ingested onion should be immediately presented to a veterinarian for examination and treatment.

Garlic does share an association with the onion, as they are both from the same genus, *Allium*: onions are *Allium cepa*, whereas garlic is *Allium sativum*. For that reason, concerns are also raised about the safety of garlic. But even though they are somewhat related, garlic and onion don't have the same composition so the effects they produce are very different.

Garlic can be harmful to dogs and cats when fed in large amounts.

*But, a small amount of garlic has been used safely for many years in home produced (and in fact many commercially produced) dog foods, where it has been included because of its well-known health enhancing properties. Garlic has been used for thousands of years for medicinal purposes to help boost the liver and cardiovascular system amongst other things.*

The toxic compounds within onions which cause this side effect are only found in very small amounts in garlic. Therefore, unless very large quantities of garlic are consumed, it is unlikely that the same side effects will be produced that consumption of onions can cause. Dogs have been fed up to 5g of whole garlic per kilogram of body weight daily for seven days without any clinical signs of anaemia. This is roughly the equivalent of 10 cloves of garlic for a 10kg dog.

With garlic (as with so many other dietary components), dietary inclusion of a correctly balanced level is the key to enhancing health and ensuring an absence of toxic side effects.

*So, why is there garlic in Doctor B's BARF for dogs, but not in Doctor B's BARF For cats?*

We omit garlic from our cat products simply because of its palatability destroying properties - for many cats. In short, many cats just don't like the taste of it. On the other hand, we do include it in our dog formulations where it is present at a safe and health enhancing level.

## Grapes – Including Dried Grapes (Sultanas, Raisins)



These seemingly innocuous fruits are a relatively common cause of poisoning in dogs; anecdotal reports have also been received of toxicity in cats.

**Affected pets may experience severe renal failure and death.**

It is still not entirely clear what makes grapes and their weathered friends sultanas and raisins so toxic. However, what is clear, is that these fruits contain a fungus, pesticide, excess levels of a heavy metal or vitamin D or some other toxin that negatively affects an animal's kidneys.

And it doesn't take much toxin (i.e. much grape material) to cause problems; there is no clear dose-response but the estimated toxic dose of grapes is 32 grams of grapes per kilogram of body weight and for raisins it is 11-30 g/kg bodyweight.

The clinical syndrome most commonly observed includes an initial gastrointestinal upset (vomiting) within the first two hours of exposure. Diarrhoea, lethargy and increased drinking follow within 5-6 hours of exposure. This is usually followed within 24-72 hours, by acute kidney failure accompanied by a cessation of all urine production. During this stage, a dog may display anorexia, lethargy, depression, vomiting, diarrhoea, abdominal pain and tremors, which may progress to a coma and death.

Recent research suggests that not all animals are as susceptible. The problem appears to be genetic. Only those dogs lacking the enzymes that detoxify the poison – whatever it is – are likely to suffer from grape poisoning.

What this means from a practical point of view ...until we can be certain of the genetics or otherwise of this grape toxicity conundrum, AND we have a way of detecting (safely) those dogs likely to be harmed by grapes, the strongest advice we can hand out is do not feed any member of the grape family (in any form) to any pet.

And, if your pet has ingested grapes, immediately contact your veterinarian.

## Chocolate

**Chocolate can cause seizures, coma and death in dogs (and cats).**

Chocolate is derived from the roasted seeds of the cacao plant, *Theobroma cacao*. It contains two compounds in the same family, called methylxanthines, one of which will be familiar to many; the other probably not, but they have very similar effects. The first, and less toxic is caffeine and the second, and considerably more toxic, is called theobromine.



The darker the chocolate, the more dangerous it is, as there is a direct relationship by the proportion of cacao and the concentration of theobromine & caffeine. Cacao powder is the most dangerous, followed by cooking or dark chocolate, with milk chocolate less dangerous. But any chocolate, in large enough amounts, can kill a dog. The lethal dose which is fatal to half of dogs is between 100-200mg/kg, but severe clinical signs can occur at much lower doses than this. A semi-dark (65%) 100g chocolate bar would contain around 1040mg of total methylxanthines. This could well be fatal for a 10kg dog. Many dogs will happily consume far more than this. Cats don't tend to have a 'sweet tooth' as dogs do, so tend to be less likely to consume chocolate.

The clinical signs tend to show up within 6-12 hours of ingestion. The methylxanthines tend to ultimately poison the nervous system, but initial signs can include vomiting, diarrhea, a swollen abdomen, increased thirst and restlessness. These may progress to hyperactivity, difficulty walking, excessive urination, tremors and seizures. The heart often develops a rapid and irregular beat and the animal starts panting, has blood pressure fluctuations and falls into a coma, and may die within twenty-four hours.

**If there is any suspicion that a dog has consumed chocolate, veterinary attention should be sought as soon as possible. It may be possible to prevent or treat the toxicity with prompt veterinary intervention.**

## Spinach and Oxalic Acid

Many people are concerned about the level of oxalic acid in spinach, particularly the possibility that this may be problematic if spinach or silver beet is included as part of a raw food or BARF programme of nutrition.

Foods that are rich in oxalic acid include tea, cocoa, rhubarb (especially the leaves – these can be quite toxic), celery leaves, beetroot tops and parsley, as well as spinach and silver beet. Rhubarb leaves are of

much greater concern, and far more toxic than spinach because of their high concentration of oxalic acid and these should not be fed to pets under any circumstances.

**In the context of the balanced formulations of Doctor B's BARF, there is insufficient oxalic acid within the quantities of green leafy vegetables included in the recipes to warrant concern for most cats and dogs.**



The reason for the toxic effects is that oxalic acid can form insoluble complexes with various minerals such as calcium and iron. This has the potential to prevent the absorption of these important minerals and cause calcium or iron deficiencies: when these minerals are attached to oxalic acid, they become unavailable to the animal's body. In some susceptible animals, these insoluble complexes can be deposited in the urinary system, causing stones or 'uroliths', which can lead to kidney damage, blockage of the urinary system and other adverse effects. So in those small numbers of dogs and cats that have a genetic tendency to form oxalate uroliths in the urinary system, it may be best to avoid foods that contain oxalic acid.

It should be pointed out that oxalic acid toxicity is far more of a problem with cooked food than raw food. In general, many kilos of cooked spinach or silver beet would have to be consumed for these vegetables to have any sort of adverse effect on your pet's body and high levels of oxalic acid makes food very bitter, which is a deterrent to its consumption by most animals.

Spinach may cause some vomiting or diarrhea in quantities that dogs are may ingest, but would not be expected if consuming a properly formulated food such as Doctor B's BARF. Kidney or bladder stones, or a calcium or iron deficiency as a result of oxalate poisoning are highly unlikely.

## Avocados

Avocados have been found toxic to dogs and cats – albeit less so than other species, particularly birds. All parts of the plant appear to be toxic: fruit, pit, leaves and stems. The toxic component is a substance called 'persin'. Studies to date indicate that persin can damage heart, lung and other tissues including the mammary glands in lactating animals.

The most severe toxic effect is called 'myocardial necrosis', or heart muscle destruction. Reported clinical signs of persin toxicity have included difficulty breathing, abdominal enlargement, abnormal fluid accumulations in the chest, abdomen and sac around the heart (the pericardium). It is not known how much persin or avocado needs to be ingested in order for these toxic effects to be seen. Nor is it known exactly how persin produces its adverse effects.



In cats and dogs, mostly gastrointestinal signs are seen, which a vet can

treat symptomatically. Ingestion of the pit can cause gastrointestinal obstruction, which may require surgical intervention. Other reported problems with avocados relate to their high fat content: in these cases the problems seen can include gastrointestinal upset, vomiting and pancreatitis.

According to the ASPCA:

**“Some dogs can eat avocados without having any adverse reactions..... The Guatemalan variety, a common one found in stores, appears to be the most problematic. Other strains of avocado can have different degrees of toxic potential.”**

## Green Potatoes

Green potatoes contain a toxin called solanine.

**Solanine poisoning (from green potatoes) results in gastrointestinal and neurological signs.**

Solanine tends to be concentrated just under the skin of green potatoes. Levels tend to increase when the potatoes have been exposed to light for prolonged periods. The green colouring in the potato is chlorophyll. While chlorophyll itself is not poisonous, the presence of chlorophyll is usually correlated with elevated levels of solanine. Interestingly, the solanine is present in the green potato to act as a natural fungicide and insecticide to protect the potato tuber against fungal and insect attack. This attack is more likely to occur when the potato is exposed to light; hence the correlation between chlorophyll formation and solanine.



The clinical signs associated with solanine toxicity include nausea, diarrhoea, vomiting, abdominal pain, drowsiness, seizures, an irregular heartbeat and even death.

Note that raw potatoes also contain oxalic acid (discussed earlier in this article), arsenic, tannins and nitrate, all of which can be toxic. The good news here is that solanine is quite bitter, which will deter most animals from eating green potatoes.

The exact toxic dose in dogs is not known, but a human study indicates that a dose of 2 - 5 mg/kg body weight can cause toxic symptoms in humans, and fatalities in people are possible with a dose rate of 3 - 6 mg/kg body weight. Companion animals are thought to be more sensitive to solanine than humans, so it is extremely important not to allow our cats and dogs to consume food made from green potatoes.

## Green Tomatoes



Green tomatoes (and more particularly the tomato plant itself) can be poisonous to dogs. Tomatoes are members of the deadly nightshade family. Like potatoes, when they are green they contain a poisonous alkaloid, called 'tomatine'.

Tomatine is closely related to solanine (the green poisonous principal in potatoes).

**As the tomato fruit ripens, the tomatine disappears. This means that ripe tomatoes are much safer than green tomatoes.**

The clinical signs of tomatine poisoning include gastrointestinal upset (vomiting, diarrhoea or constipation), lethargy, salivation, effects on the heart, central nervous system signs (e.g., unsteady gait, muscle weakness, depression, tremors, seizures), or in very severe cases, coma and death.

As a matter of interest, all parts of the tomato plant except the ripe fruit are poisonous to humans, although some people are sensitive to the ripe fruit also. However, dogs are far more susceptible than humans to the toxicity. That said, the toxin is not well absorbed after ingestion. It is estimated that the toxic dose which would be fatal for 50% of dogs would be over 70 green tomatoes for a 5kg dog. Treatment for this poisoning is mainly symptomatic.

## Nutmeg

**Nutmeg, a seemingly innocent spice, is one of the lesser known canine toxins.**

The toxic substance in it is called myristicin. At low doses, like a sprinkle in or on some food, this won't cause any problems. But if a dog ingests larger quantities, the clinical signs it can cause include vomiting, diarrhoea and abdominal discomfort, and at higher doses again, central nervous system problems, such as tremors or seizures, disorientation, increased heart rate and blood pressure, which can last for up to 48 hours.

Be aware that this can also be toxic by inhalation to animals, so if you are sprinkling this spice liberally on food, it is best to keep animals out of the kitchen.

## Caffeine (Coffee, Tea, Energy drinks)

As most people know, coffee and tea contain caffeine. Caffeine can be harmful to dogs and cats.

Coffee grounds and beans, including chocolate covered coffee beans, tea leaves and energy drinks (especially those containing guarana), can all be potentially toxic to dogs. 1-2 laps of a cappuccino or Earl Grey accidentally left out are not likely to cause toxic signs, but ingestion of a moderate amount of coffee grounds, or a tea bag can make an animal very ill.



The signs of caffeine toxicity are similar to those of chocolate toxicity, as caffeine is in the same chemical family as the toxin in chocolate. Caffeine poisoning can be just as serious as chocolate toxicity. The lethal dose of caffeine for over half of dogs falls between 110-200mg/kg. It is well absorbed into the body after ingestion; this is almost complete within 45 minutes, and clinical signs can be expected within 2 hours.

Caffeine is a stimulant. It stimulates the central nervous system and heart, and can cause vomiting, restlessness, hyperactivity, dilated pupils, heart palpitations, increased blood pressure, tremors, increased body temperature, seizures, collapse and even death within hours.

**There is no antidote for caffeine; treatment is symptomatic. Avoidance is preferable!**

## Alcohol

Dogs and cats are highly susceptible to alcohol poisoning and at certain levels, it can cause fatalities.

Alcohol is toxic to the central nervous system primarily. After ingestion, signs of toxicity can begin to occur within 30 minutes and peak blood levels are reached within 1.5 - 2 hours.

Clinical signs of alcohol poisoning in dogs can include “alcoholic breath”, vomiting, diarrhoea, a staggering or wobbly gait, excitement or depression, disorientation, increased urination, then increased thirst as a result of dehydration, slow breathing and heart rate, low body temperature, seizures, coma, respiratory failure, cardiac arrest and death.

**Any animal suspected to be suffering from alcohol poisoning should be presented to a veterinarian as soon as possible. Treatment is symptomatic and supportive.**

Another form of alcohol poisoning which can be quite unexpected, can come from an animal eating bread dough. Yes, you read that right: ingestion of unbaked bread can lead to alcohol poisoning. Read on to learn more!

## Bread Dough (Unbaked Bread)

Before bread is baked, the dough is placed in a warm, moist environment to allow the yeast within it to expand. If bread dough is consumed during the time it is rising, two quite different types of toxicity can result.

The first syndrome results from the dough rising within the warm, moist environment of the dog's stomach. This produces carbon dioxide gas, which causes distension of the abdomen, which can cause pain or worse yet - BLOAT! Bloat can progress in some animals to gastric dilatation and volvulus (GDV), which is a swollen, twisted stomach and can be life-threatening.



**Yes, bread dough can cause potentially fatal bloat or GDV in a dog.**

Initial clinical signs include vomiting or non-productive retching and an elevated heart rate. This can cause significant respiratory compromise as the expanding stomach pushes up on the diaphragm and interferes with lung expansion. The unfortunate outcome of this can be weakness, collapse and death. Due to the potential severity of this condition, it should be considered to be a veterinary emergency and animals should be presented to a veterinarian immediately for treatment.

The second issue with raw dough is that the rising process is a fermentation process, which causes the dough to produce alcohol, which as noted previously, can be toxic to dogs in sufficient doses.

The obvious way to avoid this problem is to make sure that any unbaked bread dough is kept well out of your dog's reach.

## Macadamia Nuts

**Macadamia nuts can cause toxicity in dogs, causing muscle, gastrointestinal and nervous system problems.**

The exact mechanism of toxicity from macadamias is not known. Dogs need to ingest more than approximately 2g per kilogram of bodyweight before any signs of toxicity are seen. These signs normally commence within 3-12 hours of ingestion and resolve – with or without treatment – within 24-48 hours.

The clinical signs can include lethargy, vomiting, high temperature initially, progressing to difficulty walking, abdominal pain, pale





gums, stiffness, lameness, joint stiffness, tremors, weakness (especially in the hindlimbs), paralysis and depression.

Most other nuts tend to be less toxic for dogs, but are very high in fat, which can lead to pancreatitis (see later under 'fat') and can cause obstructions in the gut.

Beware of black walnuts which have been contaminated by a fungus or mould that attacks the walnuts after they get wet (from rain or sprinklers) as these *can be* highly toxic to dogs. The culprit is a tremorgenic mycotoxin, which can cause signs including vomiting, trembling, drooling, lack of coordination, lethargy, loss of appetite, and jaundice (yellowing eyes and gums due to liver damage and a build-up of toxins in the body) and seizures. Avoid these!

## Fruit pits

The seeds or pits of stone and pome fruits such as apples, cherries, peaches, pears, plums and apricots can be toxic to dogs. These all contain a cyanide containing compound (called amygdalin), which can be highly toxic. The concentration of cyanide in different fruits varies.



**If the seeds/stones are swallowed whole, the cyanide will not be released from the pits, but if bitten into, the cyanide will be released and can cause toxic signs.**

Toxic signs can develop within an hour of ingestion and can include dilated pupils, apprehensiveness, salivation, vomiting, urination, defaecation, breathing difficulties, muscle spasms, shock or death, in severe cases. The gums of affected animals will be bright red initially, then turn a bluish colour. Once clinical signs develop, they typically progress very quickly, so if the animal has survived for an hour, it will likely survive the poisoning.

So how likely is it that a dog will be poisoned by eating whole apples for example? Apple seeds contain up to 700mg/kg of cyanide. The average apple seed is approximately 0.7g, which means that it will contain about 0.5mg of cyanogenic compounds. An average apple contains about 8 seeds; so that means that it will contain about 4mg of cyanogenic compounds. The toxic dose for most animals is in the realm of about 2mg/kg. So for a small dog less than 2kg, one apple could be toxic, assuming it bit into every seed to release the cyanide. For larger animals, multiple apples would be required for any toxic signs.

On the flip side, whilst it may mean no cyanide is released, swallowing the whole pits of large stonefruit such as peaches or plums can cause a foreign body obstruction, partially or completely blocking the intestines.

## Baking Powder and Baking Soda

While baking powder and baking soda are not foods in themselves, they are common items in many kitchens. They are both used in cooking to create a gas, which causes doughs and batters to rise.

Baking soda is the chemical compound sodium bicarbonate. Baking powder is baking soda combined with either cream of tartar, sodium aluminum sulphate or calcium acid phosphate (or a combination of the three).

**If a dog eats a large amount of either baking powder or baking soda, it will likely induce vomiting, but it can also lead to electrolyte imbalances, muscle spasms and even congestive heart failure.**

Clearly it is vital to keep these substances out of your dog's reach. Any spilt powders should be cleaned up immediately.

## Xylitol

Pure xylitol is a white crystalline substance that looks and tastes like sugar. It is a naturally occurring carbohydrate that is extracted or derived from plant material such as corn cobs hardwood trees and fruits such as plums. Xylitol is used as a sweetener in foods and is often found in human diet products, such as sugar free gum or mints, diet drinks, as well as toothpaste, mouthwash and cough syrup.

It is as sweet as 'normal' sugar (sucrose), but contains less than half the calories because it is only slowly absorbed and partially utilised by the body – it has a much lower glycaemic index (GI) than other sweet carbohydrates. The human body does not require insulin to metabolise xylitol, which means that it is commonly used as a sweetener for diabetics. And the reason it appears in so many dental products is that it is recognised as a cavity fighter.

However, this diet sweetener, while safe for most humans (excess consumption can have a laxative effect), can be very harmful to dogs because they do not metabolise this in the same way that humans do.

In humans, as mentioned above, xylitol does not require, nor does it stimulate release of insulin from the pancreas. But in dogs, it causes a potent release of insulin from the pancreas, which results in a rapid and profound drop in the dog's blood sugar within 10-60 minutes of consumption.

**Xylitol can cause a sudden drop in blood sugar, resulting in depression, loss of coordination and seizures, as well as liver failure or even death in dogs.**

Unless treatment is given quickly, the dog could die. The toxic dose is estimated at approximately 100mg/kg bodyweight. A significant blood sugar drop can result from a 20kg dog consuming between 2 and 9 pieces of sugar free gum (depending on the brand). The higher the dose, the greater the risk of liver failure – this can occur doses of 500mg/kg, which can occur with consumption of 10-45 pieces of gum by a 20kg dog (again depending on the brand). Where liver toxicity occurs, dogs often suffer from concomitant blood clotting problems, and can suffer from internal bleeding.

The clinical signs of xylitol poisoning usually occur in 15 – 30 minutes of ingestion (but can be delayed for up to 12 hours) and can include vomiting, weakness, incoordination and an unsteady gait, depression or lethargy, collapse, black tarry faeces, tremors or seizures or a coma, which can progress to death.

Any dog suspected to have consumed xylitol should be immediately presented to a veterinarian. But the bottom line with xylitol-containing products is to keep them well away from pets!

## Fat



Dogs and cats love rich and fatty foods. A *little* bit fat attached to a piece of meat is probably fine for the average dog. However, too much fat (e.g. some extremely fatty mince or a piece of meat that is mostly fat) can be harmful to pets.

Dogs will often source fatty material or grease from the garbage can. Sometimes they are given very fatty foods as treats or the left-overs are dished out to the dogs when the humans have finished eating.

**Long-term, just as in humans, too much fat can lead to obesity. But too much fat or fried foods can cause pancreatitis in dogs.**

Overweight dogs are at a higher risk of pancreatitis, as are some breeds of dog, including Miniature and Toy Poodles, Cocker Spaniels, Yorkshire Terriers and Miniature Schnauzers.

Pancreatitis signs include abdominal pain, acute onset of vomiting, diarrhea, loss of appetite, depression and lethargy, and a fever. The pain can show through a hunched posture when being picked up or “splinting” of the abdomen. This condition requires immediate veterinary attention, typically including intensive fluid and antibiotic therapy and pain relief.

## Wild Mushrooms

As with humans, some types of mushrooms can be toxic or fatal to dogs.



Essentially, poisonous mushrooms can be broken down into three groups:

Those which can be fatal

Those which can cause serious illness

Those which cause hallucinations.

Wild mushrooms can cause abdominal pain, salivation, liver damage, kidney damage, vomiting, diarrhoea, convulsions, coma, or death.

#### **Fatal mushrooms:**

The most toxic mushroom in Australia is the death cap (*Amanita phalloides*), which is potentially fatal if eaten. Typically, no clinical signs are noted until about 6-24 hours after ingestion, then a bout of severe abdominal pain and gastroenteritis, followed by salivation, vomiting and diarrhoea occur. This appears to have resolved (called a false recovery period), but only for 12 – 24 hours, during which time the toxin is destroying the kidneys and liver. This develops 36-72 hours post-exposure and is fatal within 3-7 days in many cases. This mushroom is responsible for most of the reported fatal mushroom toxicity cases in dogs (and humans).

There are other Australian mushrooms which have very similar toxins to the death cap, but are less likely to be fatal. These include many species of *Galerina*, *Gyromitra*, *Lepiota* and *Cortinarius*.

#### **Mushrooms which can cause serious illness:**

The yellow stainer (*Agaricus xanthodermus*) is probably the most commonly ingested poisonous mushroom in Australia by humans, primarily because it closely resembles field and cultivated mushrooms and is often mistaken for these. The clinical signs in dogs closely mimic the symptoms in humans: abdominal cramps, nausea, vomiting and diarrhoea (usually within 30 minutes to two hours of consumption), and occasionally drowsiness or lethargy and unsteadiness. These signs tend to be self-limiting and resolve within 1- 2 days.

Other mushroom species can cause allergies or sensitisation. One notable example is *Paxillus involutus*, which can cause acute sensitisation, which can be so severe that it causes death in some cases.

#### **Hallucinogenic mushrooms:**

*Psilocybe subaeruginosa*, often known as 'Golden Tops' are the most common psychotropic mushroom in Australia. *Conocybe* spp mushrooms also occur here. These types of mushrooms are referred to colloquially as 'magic mushrooms'. Both of these species contain the toxin psilocybin and/or psilocin, which is a hallucinogen in humans. It can be very difficult to ascertain if a dog is suffering from hallucinations, but clinical signs can occur within 30 minutes to 4 hours after ingestion, including anxiety, muscle weakness, enlarged pupils, agitation, disorientation, howling, aggression, rapid heart rate, increased blood pressure and seizures can be noted in affected animals. This is typically not life-threatening, and the prognosis for recovery is good.

Another species of *Amanita*, other than the death cap, called the fly agaric, also produces a toxin with psychoactive properties. Clinical signs of this toxin commence within 30 minutes to 12 hours of ingestion and include various types of nervous signs – either depressant or stimulant – including salivation, sedation, unsteady gait, disorientation, pinpoint pupils, paddling, paresis, hyperflexion of the neck, balance problems, tremors, seizures, respiratory depression, coma and rarely, death.

The bottom line is, dogs should not eat mushrooms.

## Cooked Bones



Many people wonder whether or not they should feed bones to their pet. And advice can be mixed. This will help to clarify that advice.

Remember that dogs and cats are carnivores and nature intended for them to eat meat AND bones. Their wild ancestor's ate this way for many thousands of years and even through evolution to a domestic dog (or cat), their digestive systems are still designed to perform at their best on a diet based on raw meaty bones. The key word in the sentence is RAW: dogs and cats should never be fed cooked bones as these not only lack nutritional benefit, they can also be a hazard to their health.

**Cooked bones can splinter and damage or tear through a dog's mouth, oesophagus or the remainder of the gastro-intestinal tract and cause a life-threatening intestinal perforation and peritonitis.**

**Cooked bones can also absorb moisture from the gut and set like concrete in the large bowel and cause an obstruction which completely blocks up the intestines, which can also be life-threatening.**

Basically, cooked bones are an absolute no-no.

By way of contrast, raw meaty bones are the “staple food item” in the Evolutionary Programme of Nutrition for dogs and cats. The ideal bones to feed dogs and cats are what we call “edible bones”: the soft raw bones and cartilage from young animals such as chickens, ideally necks wings. These are hollow, non-weight bearing bones which do not contain any marrow – they are soft and pliable and full of important nutrients such as calcium and phosphorus and other trace minerals.



Some larger bones such as lamb femurs can be suitable as occasional recreational bones, especially for large dogs whose jaws can fit around these – raw of course. These are not intended to supply nutrition, but instead are meant to be gnawed on to help keep teeth clean, and to stimulate the mind and body. Dogs should always be supervised (from a distance – some dogs can become quite territorial over bones) while eating these sort of bones to ensure that they are not swallowed in chunks (as they too can cause a blockage). These sort of bones which contain marrow are not suitable for dogs prone to pancreatitis, in case the marrow is swallowed as it is very high in fat and could trigger a flare up of this disease.

Note that in Doctor B's BARF, we include crushed up raw meaty chicken bones, to provide all the important nutrients, but remove any danger of blockages from bone pieces or damage to the intestinal tract by sharp bone edges, so observing your pet enjoying a meal of Doctor B's BARF is not necessary (although totally acceptable if you do wish to!).