

FACT SHEET

Feeding For Health

A massive experiment

Mammals have been on this Earth for many thousands of years and we have all evolved to survive and thrive on the food sources naturally available. A fundamental law of nature is that no species has ever existed without food sources already available to sustain it. Life has evolved to thrive on the nutrients in natural foodstuffs, and has also developed protective mechanisms against natural toxins. Evolution is a gradual natural process.

The immune system of all living creatures is designed to protect the body from invasion by foreign/unrecognised proteins, such as viral toxins, bacteria and chemicals; 'killer' cells of the immune system automatically destroy all of these. Normal, healthy body cells carry a genetic 'fingerprint' that allows the immune system to recognise them as 'self', hence, you may expect the body to reject the proteins found in food. But one of the inherent laws of survival is that the immune resources have developed a 'tolerance' to normal protein sources found in natural foods.

We are however very concerned about the 'new' highly processed foods being developed today to which our pets and we have no natural tolerance. The extensive processing that is used to make most dried foods, and the various chemicals and processing used to make tinned food look attractive on the shelves, dramatically changes the wholesome starting ingredients into something completely new.

Most physicians and veterinary surgeons now recognise that many of the new diseases over the last two decades can be related to one cause – UNNATURAL or INAPPROPRIATE DIET. Without exception, all can be directly correlated to the advent of highly processed foods some 40 years ago. Food intolerance, allergy etc. was unheard of 40 years ago!

Introduction

"Whole chicken", "Choice cuts of beef", "Whole brown rice", "Wholesome", "Natural", "Complete." This is what pet food manufacturers want us to believe, with the images they create in carefully worded advertisements.

What they do not tell you is that instead of whole chicken, they have substituted chicken heads, necks, feet, bones, intestines and bowels; the choice cuts of beef have been replaced with oesophagi and foetal tissue dangerously high in hormones; the whole grains are usually 'cereal by-products', many of which have had the starch removed and the oil extracted – usually through chemical processing.

To ensure the food is nutritious it is fortified with vitamins and minerals by the pet food manufacturers. We have to ask ourselves why? Because the ingredients they use are not wholesome and the harsh manufacturing processes like that of extrusion which is used to expand the cereals in dry complete diets, destroys what little nutritional value the food once had.

In the United Kingdom more than 95% of pets now have a single source of nutrition – processed pet food.

Veterinary surgeons and those involved in pathology statistics now realise that most of the new and prevalent diseases of today's pets have only one cause – poor quality or unnatural diet. The rapid decline in pet health can be directly correlated with the advent of highly processed pet food and chemical additives some 40 years ago.

Ingredients

It is no coincidence that 4 of the 5 major pet food companies are subsidiaries of multinational food companies: Colgate-Palmolive, Heinz, Nestle and Mars, (Ralston-Purina moved all its consumer products, except for pet food, to a separate company in 1994). From a business point of view, multinational food companies who own pet food manufacturers are an ideal relationship.

Today, pet food science has advanced to entice pets to eat ingredients that they would never normally eat. Science has learnt that you can take a mixture of inedible cereals and by-products, fortify it with artificial vitamins and minerals and make it palatable with chemical flavour enhancers, then embalm it with rendered fat laced with chemical antioxidants so that it can sit on a shelf for a year. Colouring is then added to make it look appetising (for the owners, not the pet) and extrude it at torturously high temperatures into appealing shapes (again for the owner, not the pet), it is then called 'Natural', 'Wholesome' and 'Complete'? This is legally permissible, but it is highly economical with the truth.

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We care what goes into our food, because you care what goes into your pet

So what does go into the pet food? In his 1986 book 'PET ALLERGIES', American veterinary surgeon Al Plecher said; **"Condemned parts and animals rejected for human consumption are routinely re-routed for pet foods. A similar fate applies to the so-called 4-D animals. These are feed animals picked up dead, dying, diseased or disabled"**.

In many countries, 12 years later the same is still true, although in the UK these materials are technically no longer available to pet food manufacturers. However, with the blessing of our government, knacker's meats (meat from dead, dying and diseased animals collected from farms) are allowed to be sold as pet food.

Meat by-products, meals and digests

When cattle, pigs, chickens, lambs or any number of other animals meet their end at a slaughterhouse, the choice cuts – lean muscle tissue and organs prized by humans – are trimmed away from the carcass for human consumption. That which remains on the carcass – bones, blood, intestines, bowels, ligaments, fat, horn, beaks etc. – are, according to the Animal Feeding Stuffs Regulations, perfectly fit for pet food. Some by-product from human consumption food production is suitable for use in pet food but most other remnants are of low quality and provide a questionable source of nutrition for our animals.

'Meat by-products' is a misnomer since these by-products may contain little or no meat. By-products are those parts of the animal left over after the meat has been stripped away from the bone. Chicken by-products include the head, lungs, spleen, kidneys, liver, stomachs, bones, blood and intestines. Feet used to be included but no longer, as the Chinese market now buy them as a delicacy.

When is meat not a meat? – When it is a meat meal

Meat meals are made from the above by-products but they undergo further processing to be dried and made into a powder form, with the protein being severely de-natured during this process. The de-naturing changes the protein structure and it is this change that can often lead to allergic reactions and food sensitivities that are so prevalent today.

Why this happens is very logical; the immune system of all living creatures is designed to protect the body from invasion by foreign proteins such as viral toxins, bacteria and chemicals, all of which must be destroyed or eliminated.

Normal healthy body cells carry a genetic 'fingerprint' that allows for them to be recognised as 'self', belonging to the body. You may expect the body to automatically reject proteins found in foodstuffs, but the immune systems have evolved to 'tolerate' normal protein substances found in natural foods. Hence, you may deduce that the 'changed and de-natured' proteins found in meat meals and other highly processed foods are seen as 'foreign' by the immune system. It will mount a response to the 'attack', showing a variety of symptoms like colitis, diarrhoea, and skin inflammation while trying to rid the body of the unrecognised protein.

Dry foods use mainly meat meal or a combination of fresh animal by-product slurry and dried meat meal.

'Digest' is the slurry of bacterially digested animal or poultry guts and contents; this is used as a flavour enhancer in many dried foods to make the otherwise unpalatable ingredients 'tasty'. It is generally sprayed onto the finished product.

Animal and poultry fat

Poultry and animal fats are rendered fats that may include restaurant grease, which is usually blended with vegetable fat. Restaurant grease is fat that has been heated and re-heated many times to high temperatures; it contains trans-fatty acids that are known to be carcinogenic. Fats can rapidly become rancid and are generally preserved by chemical preservatives and chemical antioxidants, some manufacturers claim to have preserved through the use of natural Vitamin E, but fail to disclose that the raw materials were treated with chemicals at source.

Wheat, soya, peanut hulls and other vegetable protein

Wheat

Many animals and people are allergic or intolerant to wheat and wheat proteins. It is not a natural grain to dogs and cats, but it is a cheap bulking agent widely used in pet food manufacture. Wheat gluten is a complex protein that is easily damaged and changed during the processing. One experiment showed that wheat gluten sensitive people reacted less aggressively to organic sources of the protein. It can be concluded from this that it is likely to be that the changes made during processing that causes the problem.

Soya

Soya is another common ingredient in many pet foods, but it is virtually unusable by the animal's body. Cats have little ability to digest soya protein, and dogs lack the required amino acid to allow for its digestion. Soya has been linked to bloating and gas in many dogs, but is used by manufacturers to boost the claimed protein level and add bulk. It is not always easy to identify the presence of soya in pet food, as it can be present in the 'meaty chunks', vegetable derivatives or textured vegetable protein, and need not be declared as an ingredient in its own right.

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Corn

Corn is widely used in pet foods. It can appear on the label as maize, corn, yellow corn or corn gluten meal, and is also unnatural in the dog diet with a large number showing corn intolerance. The other problem now is that maize is genetically engineered in many countries, particularly the U.S., and may be present in foods manufactured there. This brings with it a host of new problems including new toxins with unpredictable health damaging effects.

Corn syrup and corn gluten meal are widely used as humectants (ingredients that bind water molecules in order to prevent oxidation) – in doing so they also bind the water in such a way that the food becomes very sticky in the large intestine and may cause a blockage.

Peanut Hulls

Used as a fibre source mainly in American products, peanuts are very susceptible to mycotoxin contamination – aflatoxin & vomitoxin. These fungal infections of the shells and cereal products can cause severe poisoning in the animal's consuming the affected diets.

Rice

Rice is a popular ingredient in pet foods as it is a single grain item that rarely causes allergic reactions. The biggest problem arises from many manufacturers using large quantities of rice bran, which in itself is not a bad product but the rice bran used in pet food is usually poor quality as it is a remnant of the cattle food industry, and it also contains 'phytates' that bind the availability of calcium and phosphorus in the food. If fed over long periods, this phytate content can result in the animal becoming calcium and phosphorus deficient, symptoms of which include a ravenous appetite, craving indigestibles, and faecal eating. The chronic signs of deficiency manifest as bone and nervous disorders.

The solvent-extracted rice bran is probably the worst; this is a waste product of the petroleum industry and is used as a cheap bulking agent in some cheap pet foods. The oil is solvent-extracted using Benzene – one of the most toxic hydrocarbons.

Hydrolysed Feather Meal

This is a cheap ingredient made from dried and processed feathers; it is a very high protein substance, but not one that is easily utilised by the body. Some manufacturers, making cheap food, use feather meal to boost the protein level, but if there were an adequate amount of meat content, this would be unnecessary. Feathermeal is not declared on the labeling of the petfood – who would buy feathermeal for their pet? It is normally declared within 'meat and meat derivatives' or another non-specific category.

Chemical Antioxidants

All dried foods and many of the tinned contain antioxidants. These prevent meat, fish and oils from becoming rancid and give an otherwise highly perishable product, shelf life of up to a year. Natural antioxidants are available but are far more expensive than their chemical counterparts. The most commonly used chemical antioxidants in pet food manufacture are; BHA, BHT, Ethoxyquin and Propyl gallate.

Ethoxyquin was invented in 1921 as a rubber stabiliser, and soon after its discovery it was also found to be a superior food antioxidant. It has been used in the pet food industry for over 40 years and is added to almost all meat meals, oils, fats and fat soluble vitamins in their initial preparation as raw materials before they reach the pet food manufacturer. Ethoxyquin is an exceptionally potent and cost effective preservative, but is it safe?

Trials were carried out, some 40 years ago, the results of which allowed it to be widely used in food manufacture, but have since been declared 'deficient'. There have been several research studies completed that have concluded that Ethoxyquin should be classified as a poison! Pressure from top breeders in America has virtually precluded its use in pet foods in the States, but it is still used in the UK.

The most comprehensive study on Ethoxyquin was carried out by the Department of Pathology, City University of Nagoya Medical School and was entitled 'Studies on Antioxidants, their carcinogenic and modifying effects on chemical carcinogenesis'. This study was initially set up to prove the modifying and beneficial effects of Ethoxyquin, but instead found:

- Ethoxyquin induced stomach hyperplasia and cytotoxicity (cancer)
- Ethoxyquin significantly increased the incidence of stomach tumours
- Ethoxyquin increased the incidence of bladder carcinogenesis (cancer)
- Ethoxyquin promoted kidney carcinogenesis (cancer)
- Ethoxyquin increased the number of colon tumours

No modifying or beneficial effects were found.

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Dogs were found to be the most susceptible species to Ethoxyquin induced pathology. In early use Ethoxyquin was deemed 'safe' at levels up to 90ppm, for the last 35 years it has been used in pet food at levels up to 150ppm.

Very recently, DEFRA has written to the Pet Food Manufacturers Association requesting 'a suitable reduction to the levels of Ethoxyquin used in pet foods', with a suggested level of 75ppm – a level at which its effectiveness is questionable.

But beware. There are products that declare 'No Added Ethoxyquin' and 'Free from Artificial Preservatives' – but these can still contain Ethoxyquin. Manufacturers do not have to declare the make-up of their raw materials, only ingredients added as they are during the manufacture process.

BHA, Butylated Hydroxyanisole is made from p-methoxyphenol and isobutene and is not permitted in foods intended specifically for babies or young children, except to preserve added vitamin A: reasoning behind this is due to many people feeding the same food to a baby every day whereas adult humans tend to consume a variety of foods: dogs and cats in most cases are fed the same food day in, day out for up to years at a time! The fore mentioned Japanese study found that BHA and BHT levels were cumulative in the body and that both induced excess tissue growth in the stomach and were found to promote cancer of the fore-stomach in rats by inhibiting communications between cells, especially the growth regulatory signals. Man, cats and dogs do not have fore-stomachs but we do have similar cells lining our mouths, throats and gullets.

BHT, Butylated Hydroxytoluene is prepared synthetically from p-cresol and isobutylene, it was developed initially as an antioxidant for use with petroleum and rubber products. It is much cheaper than BHA, though the two are generally used together. BHT has been found to cause cells to divide rapidly, with various reports linking it with reproductive failures. It is not permitted in food intended for babies or young children.

Propyl Gallate. Propyl 3,4,5 trihydrobenzoate is derived from propyl ester of gallic acid, which is produced from tannins extracted from nutgalls. Alternatively it may be produced through the hydrolysis of the enzyme tannins that occur in spent fungal broths of *Aspergillus Niger* and *Penicillium Glaucum*. Propyl Gallate is more effective on numerous types of fat than BHA, but it loses much of its activity when used in baked goods, as it is unstable at high temperatures. All Propyl Gallates may cause gastric or skin irritations.

Author John Cargill wrote a series of articles in 1984 demonstrating that all the above four commonly used synthetic antioxidants actually increase the toxicity of other chemicals, increase the mutagen activity, increase the sensitivity of organisms exposed to radioactivity, and increase tumour yield from chemical carcinogens. He concluded: "Beyond any doubt, at some level of ingestion, synthetic antioxidants are inducers or promoters of cancer." True safety and toxic levels are not well known or adequately researched in canine models.

Other preservatives in pet foods

There are over 45 other permitted preservatives widely used in pet foods, they are most prevalent in dried food as the packaging is not airtight. Three-quarters of pet food manufactured in the UK contain synthetic preservatives added by the manufacturer, of the remaining quarter, 95% include ingredients already stabilised by synthetic preservatives. Space does not permit me to go into detail on each individual preservative, but I can recommend the book 'E for Additives' by Maurice Hanssen as a source of information on particular preservatives. Wherever you look though, the story is the same – deemed 'safe' until proven otherwise...Propylene glycol, for instance, was frequently used in cat food until it was found to cause blood abnormalities leading to central nervous system depression and kidney damage. Safety legislation came into effect only after the damage had been done.

Flavourings

Digests have been referred to earlier on in this article and are the commonest form of flavour-enhancement used in pet food. Sugar, caramel and other sugar products are used in cat food to tempt the fussy feline, but cats become easily addicted to sweet flavours even though their bodies are not designed to readily absorb sugars. Pure sugar overworks the pancreas and vets are suddenly seeing cats with diabetes and pancreatitis – diseases not previously documented in felines! Dry foods are usually sprayed with a coating of rendered fat, because dry food is highly unpalatable without this coating.

Colourings

There are numerous permitted colourings, with most dry and tinned foods using one form or another to make the food more appealing (this is for the owners as cats and dogs do not see colours as we do). Some colours are synthetic, some termed 'natural' like beetroot red, but is it natural to the dog and cat?

Sodium nitrate is both a preservative and a colouring agent, turning the meat red to make it more appealing, it has however been found to combine with the natural stomach and food chemicals to produce Nitrosamines – powerful cancer-causing agents. The American Food and Drugs Administration tried to ban its use, on its potential carcinogenic properties; however, food manufacturers lobbied successfully to have the ban overturned pleading that there was no alternative on the market. Convenience rated higher than safety.

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Fillers, binders and emulsifiers

There are approximately 58 permitted emulsifiers, stabilisers, thickeners and gelling agents. Some are deemed natural like carrageen, but one must consider the process used in manufacture, others like polyoxypropylene polymers are distinctly man-made. Chemicals, even those with GRAS status (Generally Recognised As Safe) are not natural substances, and the body is not designed to naturally absorb them. Hence they place a major burden on organs such as the liver and kidneys, whose resources are called upon to detoxify all unnatural molecules.

Processing

Extrusion

Dry food is made with a machine called an extruder that cooks the food under extreme temperature and pressure with most of the ingredients already highly processed prior to undergoing this torture. The ingredients are blended together using steam or water, this mixture then goes through the extruder where a die forces it into the desired shape and cooks it at high temperatures for a short period of time, usually 10-15 minutes.

Another 30-40 minutes is devoted to drying the food, after which it is sprayed with digest of fat and pre-digested foods to make it palatable. The reality is that this processing destroys enzymes naturally present in the food. These enzymes aid the normal digestive enzymes in the body in digestion of the food; if they are not present, the pancreas is called upon to produce additional digestive enzymes, and this effectively overworks the organ.

Experiments have shown that animals fed on dry and highly processed foods over a long period of time have a severely enlarged pancreas, and are far more prone to diseases of the pancreas.

Many extruded pet foods use meat meals as their source of protein. These undergo a rendering process to dry them out into a meal, which includes extreme temperature processing. At this point, preservatives may be added that need not be declared in the final finished product, as the manufacturer can claim no added preservatives if they have not added it themselves.

These meals are then subjected to a further high temperature treatment in the extrusion process. The outcome of all this, leads to the structure of the proteins are severely de-natured resulting in the animal's immune system possibly not fully recognising the protein molecule, leading to an immune response and sensitivity to that protein source.

Tinned or canned food

Canned food begins with ground ingredients blended with additives. If chunks are required, a special extruder is used to form the chunks; the mixture is then cooked at very high temperatures and canned. Once sealed, the cans are put in a pressure cooker where commercial sterilisation occurs.

As with extrusion, this processing can include the addition of many additives to enhance the texture, colour and flavour of the food, along with gelling agents to bind the large amounts of added water, and destroy the enzymes and nutrients.

Diet has changed in the last 100 years

Dogs have lived with humans for approximately 15,000 years. The traditional, natural diet of our companions for the last several millennia has consisted of unprocessed, mostly raw food, or food left over from our tables. The advent of highly processed chemical laden foods around 40 years ago suddenly shifted the nutritional base of our pet's food, an abrupt change from the natural diet that had lasted thousands of years.

Prior to the late 1950s, pet food contained more meat and fewer remnants of post-human food production. Today, with competing demand for many of these ingredients, pet food manufacturers look to other sources for the ingredients of pet food. Nutrition has come a long way in the last 100 years, but our understanding of it is far from complete, with medical journals continually issuing new information. But the reality is that all our pets are individuals with different capacities of assimilation and certain susceptibility's to influence that are modified by varying factors. Nutrition is not an exact science and never will be.

While manufacturers claim that millions of pets thrive on a diet of commercial pet food, research and a number of concerned veterinary surgeons implicate processed food as a source of disease or as an exacerbating agent for a number of degenerative diseases. Kidney disease is now one of the top three killers of our pets. According to Plecher, "Nature never designed canine or feline kidneys to handle the volume of impurities that come their way. The result is fatigued, irritated, damaged and deteriorated kidneys after several years of life. Left untreated, the toxic build-up leads to vomiting, loss of appetite, uraemic poisoning and death."

In the last few years large statistical studies have shown a direct link between diet and a variety of degenerative diseases including cancer, heart disease, allergies, arthritis, obesity, dental disease etc and processed foods.

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What can you do?

Choosing a Pet Food

There are hundreds of manufacturers and hundreds of brands of pet foods. It is one of the largest industries in the UK, second only to breakfast cereals, with competition between the manufacturers being vigorous; their marketing strategies are designed to tell consumers what they want to hear. Couple this with non-specific terminology on the labels, such as 'animal derivatives', and it is not easy to make an informed choice regarding the best food to feed your pet. But if you care about the health of your pet, it pays to be informed.

You need to be objective and use the following criteria in evaluating the many pet food products available:

- The manufacturers motivation – profit over health benefits
- The ingredients used
- The processing methods

Our motivation

Naturediet was founded upon, and continues to be motivated by a commitment to enhancing pet health through natural feeding. Naturediet is a privately owned, family run company, capable of implementing healthful innovations instantly. We are not a multi-national with interests in many other foods and commodities, often utilising waste products from allied companies. We would like to see ethical care and responsibility replace the "profit orientated" regime, which is so prevalent in the industry today.

Every pet owner has one overriding concern – to do the best they can for their pet. We feel that pet owners should have access to accurate information in order to be in a position to make an informed choice. Our customer helpline is available to help and advise you with any issues relating to health and nutritional matters.

Processing

It is one thing to start with good ingredients, and quite another to retain good nutrition after processing. Modern pet food manufacturers use milling, extruding, pelleting and drying processes, all of which have the potential to damage or denature the nutrients.

Food is a fragile substance, the very high temperatures and pressures under which it is processed effectively torture it. Denaturing changes the proteins in such a way that the body cannot correctly assimilate them, undigested protein has to be broken down by the liver and excreted by the kidneys, which places an enormous burden on their resources. This may be the reason that kidney and liver disease is so prevalent today.

Most manufacturers display pictures of the original natural ingredients and the finished display packaging in their advertisements, but keep very quiet about what goes on in the middle.

But processing is not all bad. Correct processing can destroy food-borne pathogens (bacteria and viruses), increase the digestibility of plant starches and proteins and inactivate chemicals that would otherwise be toxic and interfere with digestive processes.

Naturediet products are minimally processed. Ingredients from natural sources are quickly steam sterilised. Our cooking plant has been specifically designed to optimise the nutritional value of the food. We maximise the good and minimise the bad.

Unfortunately, those who write the legislation on health and safety issues in the UK adopt the policy "innocent until proven guilty". Remember X-rays – hailed as miraculous, safe and revolutionary – until two years later most of the radiographers had all contracted Leukaemia from unprotected machine usage. The safety warnings were implemented after the damage had been done...and thalidomide...BSE...and how about pet food ingredients such as Ethoxyquin.

First and foremost, read the ingredients on every packet, tin or bag you buy. Compare the ingredients listed with the details in this report, and then make up your mind. If the labeling is unclear, ask the manufacturer to detail the ingredients and additives used.

Cook fresh food, which is a tremendous effort, or use a food like Naturediet, which uses only natural, high quality, wholesome ingredients.

This document has been produced by Naturediet to help you make an informed choice about the food you are feeding your pet.

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