

A Dog's Dinner - Diet and Behaviour

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Introduction

The way we manage what and how we feed our dogs can have a dramatic effect on their behaviour and mood, and it is only recently that more interest has been placed upon the effect of diet on the behaviour of our pet dogs. Many people never give a thought to what they are feeding their dogs. They can be influenced by a cute pet food commercial, or by Mrs Smith in the pet shop who must know what she is talking about because she sells the stuff!

We are already aware that humans can alter their mental and emotional state by having a coffee, a cigarette, an alcoholic drink or by taking drugs (be they prescribed or recreational).

Chemicals affect intellectual ability and mood, and food is made up of chemicals both natural and unnatural; if you doubt it, remember the effect that 'E numbers' have on children! So, are our dogs any different? The answer of course is no!

In the past, little emphasis has been placed on how diet can affect canine behaviour, and it is interesting that in many specialist dog books, nutrition is only referred to within the context of clinical disease.

It is, however, becoming increasingly obvious that those working in the field of animal behaviour and training must be familiar with the use of dietary manipulation in the treatment of certain behavioural problems, and it should form part of their behaviour modification toolkit.

The Importance of a Balanced Diet

Appropriate nutrition requires that all nutrients - carbohydrates, fats, proteins, minerals, vitamins and water - are consumed in adequate amounts and in correct proportions. This is essential for normal organ development and function, reproduction, repair of body tissues and combating stress and disease.

Like their lifelong companion man, dogs can thrive on a large number of very different food materials. This is because animals require nutrients rather than foods and it is therefore the mixture of nutrients contained in the food that is important. The dog is classified zoologically in the order of Carnivore but, in a nutritional sense, it is better defined as an Omnivore as it can utilise food from both animal and plant sources.

The quantity of food required by any dog will determine how much of each nutrient is taken in. A complete and balanced diet must contain all essential nutrients under the following defined conditions:

1. In the correct ratio to each other
2. Within the optimum range
3. In the correct ratio to the energy content of the food
4. In a form which is usable by the animal

Furthermore, the food must be palatable so that eating is a pleasurable experience and the dog continues to enjoy eating it day after day. The palatability of food, its smell, taste and

texture, will play an important part in the absorption and digestion of food - food cannot be digested unless the animal is willing to consume it in the first place!

It is worth noting that foods manufactured as complete foods are just that - complete!

This means they are nutritionally complete and balanced according to the amount of food the dog takes in. Owners that add other foodstuffs to complete diets or mix several types of complete food together can create potential nutritional and behavioural problems in their dogs.

Nutrients

Carbohydrates

Carbohydrates (starch and sugar) are the best source of energy for all bodily functions, especially the brain and central nervous system, and for muscle exertion. All carbohydrates are broken down into glucose that is used as fuel, and any surplus glucose is converted into glycogen and stored in the liver for later use.

Fats

Fats are the most concentrated source of energy in the diet. The function of fat to the body is vital but too much can be a problem. The diet must be designed to include the essential amounts and avoid any excess that may lead to future health problems. Fats are made up of fatty acids, and although most can be synthesised within the body from other nutrients, there are three essential fatty acids that must be taken in adequate amounts via the diet.

These are linoleic, linolenic and arachidonic acids. They are responsible for normal growth, healthy blood, arteries and nerves.

Proteins

Proteins are one of the most important elements for the maintenance of good health. All the tissues, bones and nerves are made up mostly of proteins, and normal brain function depends on adequate amounts of protein being consumed in the diet.

During digestion, the large molecules of proteins are broken down into small units known as amino acids. Amino acids are necessary for the synthesis of complete body proteins and many other tissue constituents, as well as providing the substances used to transmit information around the brain. The body requires approximately 22 amino acids, and all but nine of these amino acids can be produced in the body. The nine that cannot be produced are called essential amino acids because they must be supplied in the diet.

These are: methionine, threonine, tryptophan, leucine, isoleucine, lysine, valine, phenylalanine and histidine

Vitamins

With a few exceptions, the body cannot make its own vitamins. They must be supplied in the diet, and they heal, maintain health and prevent disease. Vitamins are found in special combinations in food.

Minerals

Only 4-5% of bodyweight is mineral matter; however, minerals are vital for overall mental and physical wellbeing. All tissues and internal fluids contain varying quantities of minerals.

Minerals are constituents of the bones, teeth, soft tissue, muscle, blood and nerve cells. They are important factors in maintaining physiological processes, strengthening skeletal structures and preserving the vigour of the heart and brain, as well as muscle and nerve systems.

Water

Water is essential for life. It must be provided in adequate amounts and should be freely available. Some water is consumed in food, but the majority of a domestic dog's requirements are provided in a bowl!

The effect of food on canine behaviour

Before considering the more complex effects of diet on behaviour, it is important to recognise that what you feed, how you feed, and where you feed your dog may have an impact on his behaviour.

Amount of food

The amount of food consumed in relation to the energy requirements of the dog is important. The amount of exercise a dog receives will have a direct influence on its ability to utilise food. If a dog is being fed large quantities of food but receiving little or no exercise it will inevitably become lethargic and unresponsive – and will accumulate glucose, which can no longer be stored in the liver, so is stored under the skin and throughout the body as fat.

As well as the obvious risks to general health, certain behavioural changes can also take place.

Excessive intake of proteins promotes the excretion of calcium, which depletes the bones of minerals and may also cause fluid imbalances. A dog may begin to drink a lot more and therefore house training may break down. Bone or joint pain may result in lameness and/or a reluctance to exercise – and the pain may cause the dog to become uncharacteristically aggressive or anxious when approached or handled.

Large amounts of fats will cause abnormally slow digestion and absorption, resulting in indigestion. A dog may show a reluctance to eat and possibly aggression or abnormal behaviour after eating a meal due to the pain of indigestion. Changes in the rate of digestion may also cause a change in toilet habits or even a breakdown of house training.

On the other end of the scale, if a dog is leading a very active life or is working but is not receiving enough food or an adequate amount of energy producing nutrients, depletion of the

body's reserves may result in many behavioural changes as well as an obvious unwillingness/inability to work and a lack of stamina.

A lack of carbohydrate may cause the body to produce toxic compounds that can cause brain damage, loss of energy, depression and apathy. In low carbohydrate diets, protein will be burned for energy and the kidneys can become overworked as they attempt to quickly rid the body of toxins. Large amounts of water are needed to stabilise this process. Aggressive or abnormal behaviour may be seen, coupled with an increase in drinking which may also cause a breakdown in house training.

A lack of adequate protein results in the body breaking down its own valuable protein to supply its energy needs. In young dogs, loss of hair, swelling of the joints and weakening of muscles may be seen. In older dogs, lack of vigour and stamina, mental depression, general weakness and poor resistance to infection can result.

In all such cases, an evaluation of the quantity and type of food being given is needed. It may be necessary to adjust the frequency of feeds, reduce or increase the amount being fed and/or alter the type of food according to the problem.

Type/breed specific traits

Dogs have evolved over many thousands of years to be scavengers and opportunists as far as food is concerned. They are able to digest vegetables, plants and meat, and are programmed to work for long periods of time searching for food, relying on small frequent meals throughout the day. They will also eat small mammals, reptiles, insects, berries and a variety of other vegetable matter - as many pet owners have found to their dismay!

Due to selective breeding (or natural selection in a specific environment), dogs have developed very specific behavioural traits. If these traits are over-developed but not satisfied, then behavioural problems can result. The use of food to satisfy these natural instincts and to provide mental stimulation can be very useful.

Dogs can be taught to work for their food just as they would naturally. Dry food may be scattered around or thrown on a walk (or even around the house and garden) so that the dog has to search and find its food.

As an example, this is especially useful for gundog-types that have gone 'self-employed' and begun to bring back the neighbour's chickens!

Sight hounds can be taught to 'mark' and then locate food that has been placed in a certain area.

Other dogs can be asked to track (follow a scent which leads to their dinner) for food.

This may be the only mental activity that some dogs receive, and so not only provides a natural outlet for type-specific behaviour, but also provides an enjoyable activity in which both dog and owner can take part.

This has the obvious additional benefit of improving the relationship between dog and owner.

Chewing

Is it any wonder that by providing our pet dogs with just one nutritionally balanced meal a day they are bored? Chewing is part of the consummatory act of eating - chewing and swallowing are internally rewarding, even though they do not produce satiety. Therefore, hungry or bored dogs may begin to chew to relieve these unpleasant feelings.

Providing an opportunity to work for food and chew at the same time by giving a dog a stuffed Kong toy or sterilised bone, can often go a long way to solving chewing problems.

Daily routine

In an average companion dog's day, mealtimes may well be the highlight of his existence.

Many owned dogs do not have much more to look forward to other than a meal and hopefully a walk.

By just dividing the dog's daily food up into several small meals, we can provide many highlights during the day. Attention seeking behaviour and over excitability can be reduced, whilst excessive reactivity can be improved by increasing the dog's general contentment and feeling of wellbeing.

The use of food in this way can help build or rebuild relationships between dog and owner and also to mould behaviour. For example, portions of food can be used to train and improve recalls.

Specific training tasks, such as sits, downs, give a paw (in fact, anything) can be practised around feeding time. By using the dog's anticipation and attentiveness towards food, owners can begin to develop co-operation from a previously non-co-operative dog, and relationships can be improved without confrontation.

Again, this serves to improve the bond between the dog and owner, by making the owner an active participant in the most important part of their dog's day.

Type of food

It is important that food is palatable; however, very palatable food or coveted food-related items (such as rawhide chews, bones etc) can precipitate aggression in dogs that are otherwise amicable.

Feeding a bland food and placing very small amounts of more desirable food into the bowl as the dog finishes eating can reduce the dog's desire to guard the food bowl and teach him to accept the approach of people. Please note this is a very simplistic overview and detailed advice should be sought from a pet behaviour specialist regarding this subject.

Feeding a bland diet can also reduce competition, squabbles and fights over food between dogs in the same household, but the most successful way of treating this problem is to feed dogs separately!

Very palatable and 'rich' foods are not always fully digested by the time they are excreted from the body, and therefore can taste and smell just as good to the dog the second time around! Coprophagia is a true case of recycling but usually considered unacceptable behaviour by owners! No matter how distasteful owners find it, it is worth remembering that this is a natural behaviour. Bitches clean faeces from the nest and, during the domestic process, dogs used to congregate around the latrines of human settlements cleaning up human faeces.

Changing the diet to a bland food or altering the protein content of the food have proved useful when treating coprophagia. Certain medical disorders, however, may cause malabsorption of nutrients that can also precipitate coprophagia because non-absorbed nutrients will be excreted in faeces.

Obviously, this requires veterinary treatment - and is a good reminder that all behaviour work that includes diet changes or manipulation should be done in association with the dog's vet.

Protein levels

The amount of protein contained in the diet is important. This is not a case of simply looking on the label of the bag or can of food. The true protein content depends on the amount of moisture contained in the food. Dry foods contain very little moisture, but canned foods often contain a great deal of moisture that can significantly alter the protein content from that displayed on the label.

Food that has a very high protein content can cause aggressive behaviour and/or over-activity/excitability as well as several digestive problems. It is well worth calculating the true protein content of food when treating behaviour problems.

Here is an example:

Say a dry complete food contains 30% protein and 10% moisture; there is 90% dry matter (100% less 10% moisture) of which 30% is protein. Therefore, to calculate the actual % protein

$$30 \times 100 = 33.3\%$$

90

Say a canned food contained 9% protein and 80% moisture; there is 20% dry matter (100% less 80% moisture) of which 9% is protein. Therefore, to calculate the actual protein

$$9 \times 100 = 45\%$$

20

Surprising isn't it?

Where

Dogs often sleep and eat in the kitchen. For dogs that covet resources such as their bed, food and the area in which they are found, aggressive behaviour can become associated with each individual item as well as the whole of the kitchen.

Changing the place that the dog is fed (e.g. not feeding in the kitchen) can help devalue the importance of the area and thus reduce the dog's desire to guard the resource.

Raising the bowl off the floor can reduce specific food bowl guarding, as many dogs not only guard their bowl but also the floor area around it.

Resource guarding can become dangerous and needs the help of a qualified behaviour specialist.

How?

Remember dogs are social creatures, in general they enjoy company, and this includes when they are eating (except those dogs who are so protective of their food they will not let their owners into the kitchen!). Some dogs do not like being alone and will not eat if they are isolated.

Just as for humans, meal times for a dog should be pleasant and calm. Eating while agitated, tired or worried may give rise to gastrointestinal disturbances and reduction in food

consumption. A stressful, over-busy environment may cause a dog to avoid its food. This can be improved by feeding the dog at a less busy time.

Dogs can develop an aversion to specific foods, which may then be avoided for life. For example, if a dog associates an unpleasant event, such as vomiting, illness, being given a pill or a bitter taste with a novel food, that food may always be avoided. If, however, a dog experiences a very traumatic event while eating, he may associate the consummatory act of eating with that particular event and could avoid eating altogether.

If you suspect a dog has an aversion towards eating, changing the environment where the dog is fed or, if the dog has made a negative association with a particular person making sure that the individual is not present when the dog is fed, can be helpful.

Owners can teach their dogs to be fussy eaters. If a dog does not consume its food, many owners immediately add some human-grade food to encourage the dog to eat. Very quickly the dog learns that if he ignores his own food he will soon be offered something better.

Educating owners is the difficult task, but if uneaten food is removed after 10-15 minutes and no more food is offered until the next mealtime a dog will learn to eat what is offered. Starvation is not a very good survival strategy!

Before doing this, however, owners need to first ensure the dog is healthy, and that the food is palatable.

Fluctuations in appetite

Dogs will eat more when the ambient temperature is cool and less when it is hot, therefore the amount of food available should be altered accordingly.

A depressed appetite can be seen in many bitches when they are in season and in males who are hopeful of reaching such bitches!

Certain medical conditions or drug treatments can cause a depressed appetite; however, owners are usually advised of this by the consulting veterinary surgeon.

One of the most common reasons for a depressed appetite is painful teeth and/or gums. A healthy mouth is essential for eating and therefore regular checks of the mouth and gums are essential, otherwise veterinary intervention will be required.

Pica

Pica is the eating of non-food items, and the most common element of pica is the eating of articles that belong to or symbolise the owner. This often occurs when the dog is left alone and indicates a separation problem rather than that of inadequate nutrition.

The dog's digestive system, however, is designed to eat carcasses - including hair, skin, gristle and fat – and, therefore, the diet needs to contain a sufficient amount of good, natural roughage.

The persistent ingestion of non-food items (particularly grass, sticks, tissues etc.) suggests an inadequate supply, or an inability to digest fibre. In such cases, a change of diet is required, or the addition of extra fibre may be necessary.

Stress

The gastrointestinal tract is sensitive and responsive to conditions within the environment.

Nervousness and anxiety affect the movements of the stomach. Eating while agitated, fatigued or worried may give rise to gastrointestinal disturbances.

During stress, digestive secretions are reduced, and the blood is routed to the muscles more than the digestive tract. This action impairs efficient absorption of nutrients. To digest and absorb food the dog should be relaxed and tranquil at meal times. Hurried meals under tense conditions are not beneficial to normal digestion and may cause a variety of abnormal behaviours.

It may be necessary to alter the time the dog is fed to a quieter period and also change the room in which the dog is fed to reduce any negative associations.

Allergic reactions and food sensitivity/intolerance

Food sensitivity and intolerance are actually allergic reactions to specific constituents of the diet and should be treated as being much the same as a normal allergic reaction.

The process of an allergic reaction may take many forms: it may be localised surface scratching, irritation or sneezing, skin complaints, a more serious febrile reaction or even anaphylactic shock.

Food intolerance denotes an abnormal response to a food that can result from an inability to digest the substance adequately, or from pharmacological reactions. True food hypersensitivity is an immunologically mediated phenomenon. Dietary sensitivity is usually seen as a wide range of dermatological and/or gastrointestinal signs, coupled with behavioural changes.

It is always the case that there will be isolated areas of sensitivity, and this may be in particular organs or body systems. Airborne allergens will affect the olfactory and respiratory systems (some food allergens can be airborne). Food and food additives may affect isolated organs, but because they will be absorbed into the blood stream they may affect the whole body and all its systems. The brain itself may be affected and may not function correctly in the presence of a particular allergen. Allergens gain access to the brain through the circulation - the most common route of entry being through the gut. The effects of allergic reactions on the brain are either secondary to reactions in the vessels supplying blood to the nerve cells or due to direct effect on the cells of the brain itself.

Symptoms of allergic reaction may include: increased activity and/or an increase in aggression due to the changing levels of circulatory chemicals and hormones, a drop in blood pressure due to dilation of blood vessels, and confusion and anxiety due to the reduction of blood flow to the brain.

Altered respiratory routine (due to the lowering of oxygen to the tissues) and gastrointestinal distress may also occur. A desire to eat fibrous material, and increased appetite as a result of an inability to absorb appropriate nutrients due to gastrointestinal impairment, may also be seen. One or more of these symptoms may be evident in varying degrees.

Obviously, a change of diet is required in these cases. It is usual to introduce a natural diet, or one of the proprietary hypoallergenic diets now available and to monitor any changes in behaviour.

Veterinary advice should be sought for persistent digestive problems as they may be the result of a specific allergy such as gluten sensitivity and may require the use of prescription diets.

Blood sugar

It is well known that the brain is very sensitive to any change in the level of sugar in the blood, and therefore this is usually under very careful control. If, however, there is a fault in the mechanism controlling the levels of blood sugar and they fall causing a hypoglycaemic state, then the function of the brain becomes impaired and certain physical and behavioural changes take place.

Following a meal, the levels of sugar in the blood rise. In response to this, insulin is secreted, and glucose is diverted to the liver where it is stored in the form of glycogen. This process is reversed when blood sugar levels are low. The liver is continually secreting glucose back into the blood stream to balance the body tissues' needs for a constant input of glucose to convert to energy that is vital for their function.

The amount of glycogen stored in the liver is insufficient to maintain the normal levels of blood sugar for more than a short time. During periods of deprivation of available glucose, the tissues gain their energy from various non-carbohydrate sources, but this deprives the brain of vital amino acids. Nervous tissue, however, is peculiarly dependent on a constant supply of glucose and the ability of the liver to provide this is very important. Adrenalin is responsible for mobilising reserves of glycogen from the liver, just as in the flight/fight response. This further shuts down the digestion and prepares the body for action.

Some dogs may not be able to tolerate periods of fasting. They may have impaired liver function or are not being fed adequate amounts of good quality food compared with their energy requirements.

Each dog's dietary and exercise requirements are different and their utility components within their food will vary, but these factors will have a direct influence on their behaviour. Low blood sugar can result in a reduced level of response, shallow breathing, muscle tremors and a change from otherwise normal behaviour such as confusion, agitation and aggression. In extreme cases, unconsciousness results.

Low blood sugar levels could give an indication of the cause of some aggressive behaviour where no other cause has been identified. Lowered blood sugar levels may be partly responsible for some dogs rising from deep sleep in an aggressive state, as the brain will have insufficient energy to make rational decisions. Only the primitive areas of the brain, which control basic survival instincts (fight/flight) will then be active.

A review of the type and amount of food in relation to the energy requirements of the dog may be necessary. However, the best course of action is to feed the dog frequently throughout the day (3-4 times) to minimise fluctuations in blood sugar.

The effect of dietary amino acid content

It has been shown in humans and other species that some amino acids in the diet directly influence brain activity and behaviour by enhancing or reducing the rate of synthesis of different neurotransmitters. Dietary intake of the amino acids tryptophan and tyrosine, and the other large neutral amino acids, significantly influences the biosynthesis and concentration of a group of neurotransmitters – serotonin, noradrenalin and dopamine – which are collectively known as the Monoamines.

Noradrenalin induces high states of arousal and has been implicated in the generation of aggression. Dopamine is involved in motor co-ordination, attention, reinforcement and reaction time.

Serotonin plays a role in the regulation of mood, the control of sleep and arousal, the regulation of pain and in the control of eating. Low serotonin levels have been demonstrated in individuals showing impulsivity, aggressive behaviour, anti-social behaviour, attention-deficit hyperactivity disorder (ADHD), anxiety, and learning problems.

A lack of serotonin causes a reduction of the reward cascade, which means new or alternative behaviours cannot be learnt, and also depresses the release of encephalins (the body's natural analgesics) causing an increase in touch sensitivity.

Low serotonin levels may also be responsible for contributing to several behaviour problems seen in dogs. Aggression, anxiety, over activity/excitability, the inability to learn new behaviours, and general touch sensitivity may all be improved by raising serotonin levels in the brain.

Tryptophan is the precursor of the indolamine serotonin whilst tyrosine is the precursor of the catecholamines noradrenaline and dopamine. Therefore, the manipulation of these precursor amino acids in the diet is likely to have an effect, via specific neurotransmitter systems, on the functional activity of the brain.

The concentration of an amino acid in the brain does not reflect its level in the blood. A complex group of blood-brain barrier mechanisms closely controls both the kinds of substances that enter the extra-cellular fluid of the brain and the rate at which they enter.

Glucose and amino acids, amongst other important substrates, use an active transport mechanism, combining with transport proteins, to cross the blood-brain barrier.

Within each carrier group, individual amino acids compete with each other for uptake. Hence a treatment such as meal ingestion can influence the level in the brain of a given amino acid by modifying its concentration in the blood, and/or the blood concentration of other amino acids that compete with it for uptake.

Therefore, the ratio of tyrosine or tryptophan to the sum of the other large neutral amino acids in the circulation will effectively control the amount of the amino acid taken across the blood-brain barrier. Competition between tryptophan and other large neutral amino acids is very important and is a dominant determinate of tryptophan uptake into the brain.

Tryptophan is present in relatively lower amounts in high protein foods compared to other large neutral amino acids such as tyrosine, and therefore when a meal that contains a high concentration of protein is ingested, tyrosine gains a competitive edge for entry into the brain.

Conversely, following a high carbohydrate load, tryptophan enters the brain. However, brain tryptophan can only be significantly raised by carbohydrate intake if the carbohydrate meal is given within two or three hours of protein ingestion.

Insulin is secreted in response to carbohydrate ingestion to regulate plasma glucose levels. Insulin also diverts other large neutral amino acids to peripheral skeletal tissues where they are involved in energy and immune system pathways.

Serotonin in the brain is synthesised from tryptophan; however, its synthesis depends upon certain co-factors being present.

Amongst their other various functions, the B-group vitamins maintain the functional integrity of the mammalian nervous system. The enzymes involved in serotonin synthesis are B6 and riboflavin dependent, as these act as co-factors. As the B-group vitamins are water soluble, an adequate concentration needs to be provided in the daily diet.

Practical diet manipulation in practise

From a behavioural point of view, increasing the levels of serotonin in the brain will assist in the treatment of a number of behaviour problems and aid in the learning of alternative or new behaviours.

Daily treatment should be as follows:

1. Two meals of a high quality complete and balanced diet, containing an easily digested high quality protein source
2. To each of these meals add vitamin B6 (suggested dose 1mg/kg)
3. Approximately three hours after each of these meals feed a small saucer (amount dependent on weight of dog – approximately 2oz for an average Labrador) of pure carbohydrate e.g. boiled potatoes or boiled white pasta.

It is recommended that a dog should remain on this regime for up to three months, during which other behavioural and training exercises should be undertaken, to allow sufficient time for new responses to be fully learned.

Signs of improvement can often be seen within 7-10 days of beginning the diet manipulation.

Case history examples

Aggression/over-reactivity

Kelly: Black Cocker Spaniel; 1-year-old bitch

First signs of aggression at 8 weeks old, now guards anything, including her lead. The owners only have to pass her and if there is an object nearby she will fly at them. She enjoys playing fetch but does not let go of the article. Kelly will sit when asked and come when called but this is the extent of her training.

Behavioural advice so far: Change to a lower protein diet, specific retrieve games to gain more co-operation and Kelly has been taught to run into the kitchen and sit for a reward every time she is seen going into a rage.

After 4 weeks, Kelly's behaviour has improved but if the owners do not catch her rage in time, her behaviour is just as bad.

Practical diet manipulation is introduced.

Result: Within 7 days Kelly's delighted owners report that 'tantrums' have stopped; the only episode had been one growl. 80% improvement in one week!

Attention Deficit Hyperactivity Disorder

Fred: Crossbreed; 4-year-old male (n)

Fred was obtained from a rescue centre three years' ago and is continually active. He will pace, bark, jump up and paw in an effort to gain attention and will attempt to escape from any

open door or window. Fred can keep up this behaviour for 18 hours a day. Basic training has proven difficult, as Fred does not appear to have the capacity to retain information.

Behaviour advice so far: Fred is being given periods of 'time out' in an effort to signal to him when he can and cannot gain attention, coupled with simple obedience exercises. After two weeks, Fred's owners report only minimal improvement, therefore practical diet manipulation is introduced.

Result: Within four days Fred is lying calmly whenever the 'time out' signal is given, and his general activity has reduced to such an extent that his owners can now watch their favourite TV programmes in peace. Fred has also begun to respond well to basic training and is learning new commands every day – his owners are delighted!

Separation Related Problem

Kim: German Shorthaired Pointer; 7-month-old bitch

Kim was obtained from a breeder at 14 weeks old, and since she has been with her owners she has found being left alone very difficult. She howls and barks and the longer she is left the more agitated she becomes, pulling down curtains and other items. Kim appears 'wild-eyed' when her owners return.

Behavioural advice so far: Kim is being put on a 'learn to earn' regime where she has to earn all her attention, coupled with short periods of 'alone time' to habituate her to periods of isolation. After 3 weeks, Kim has made a slight improvement but can only be left for a maximum of 15 minutes before she starts howling and being destructive.

Practical diet manipulation is introduced, and the owners asked to make contact after 7 days.

Result: After 14 days no contact from the owners. After 21 days a telephone call results in an ecstatic owner stating he thought he should only call if there were any further problems! Kim is now confident at being left for anything up to 3 hours and on her owners' return she is often lying quietly and sometimes is even asleep!