



We know that dry cat food kibble is easy and convenient, but there is an increasing trend among feline veterinary specialists towards advocating canned-food-only diets for cats. And it isn't a fad or a phase; it is a recommendation based on the actual biological make-up of cats, one that speaks to the fact that cats are true carnivores and need protein as their main energy source.

We have done research into this subject and, as a result, have switched two of our own personal feline pets completely over to wet (canned) food diets, and are now very persuaded that the argument for canned food over dry food for cats is superior. In this information leaflet, we will share with you what we have learned so that you can think about it and decide for yourself.



#### Our Creature & Sweetie

Our own two cats, Creature and Sweetie, used to be fed prescription dry food only. Creature, the male, became obese over a period of about eight months and because he is a Sphynx cat (a breed of cat which has no fur), we could see the rolls of fat building up with alarming speed! He has a sensitive stomach as well, so any change from the digestive prescription diet would result in profuse and smelly diarrhea which really was not a pleasant thing to live with! This made it difficult to switch him to a weight-loss diet, so when we discovered information about a new trend of moving cats away from dry kibble and over to wet canned cat food, we thought we would give it a try.

And what a discovery! The change from dry food to wet went very smoothly indeed for our cats ~ in fact, they seemed to relish the wet food more. This is not true for all cats, however, and some need a period of training and adjustment to a new diet which consists of wet food only. We fed Creature and Sweetle Fancy Feast tins and regularly switched between the "Turkey and Giblets" and "Classic Beef" flavours.

They immediately started urinating a lot more, which meant more cleaning out of the litter box of course, but on the very positive front, this also indicated better urinary tract health (which will be discussed in more detail later on). Both cats seemed more playful and energetic, and dear tubby Creature lost a lot of weight over a period of four months! He now looks lean and fit and also has not had

### The Key Advantages of Wet Food

We will be discussing the advantages of feeding wet food diets to cats in more detail further on, but for now they can be summarised briefly as follows:

- **1.** These diets combat obesity and therefore reduce the risk of diabetes.
- **2.** They reduce urinary tract disorders due to the high water intake with the diet.
- **3.** They promote kidney health for the same reasons.
- 4. They reduce the incidence of inflammatory bowel disease and asthma.

a drop of diarrhea since switching to canned food. Well, actually, he did have diarrhea just once... but that was after the rascal stole a piece of pizza from the garbage bin! The female, Sweetie, has always been slender, but it was interesting to see that she did not shed weight once moving onto the canned diet; she maintained her lean body mass, whereas Creature dropped all his excess fat.



Going back to nature: Why dry food is NOT as nature intended

It is important to fully realise that cats are true carnivores, unlike dogs which are omnivores. This means that they are reliant on nutrients found in animal tissues (i.e. meat) in order to satisfy their specific and unique nutritional requirements.

Cats are metabolically adapted to having a higher metabolism of proteins and lower utilisation of carbohydrates when compared to dogs and other omnivores. Even though cats can indeed use carbohydrates as an energy source, they are biologically dependent on proteins as their primary source, regardless of the store of carbohydrates they might have available to them. This means that although a dog or a human can use carbohydrates to function normally, a cat, in spite of being provided carbohydrates, will still need and use protein for that same purpose. In short, cats need protein, and more importantly, protein coming from animal meat, not plants! This is because our carnivorous cats have a greater need, when compared to omnivores, for specific amino acids in their diet. These are taurine, arginine, methionine and cysteine, and are all substances that they can neither synthesise themselves nor effectively conserve, which in turn means that these amino acids need to be ingested by the cat via its diet. It is interesting and important to note that all these amino acids are

abundant in animal tissues, which highlights the fact that protein in a cat's diet needs to come from an animal source. And why is this so important to note? Well, because

# although most dry food diets do contain protein, that protein is from plant sources, which in turn means that, in fact, they have low biological value for cats when compared to protein from animal sources;

and this value is lowered even further in dry foods by the production process itself, as the proteins are exposed to high cooking temperatures for extended periods of time. Cats have adapted, to a certain degree, to the consumption of dry diets, but the limitations inherent in substituting animal protein with plant proteins are becoming increasingly realised and well understood.

From an evolutionary perspective, it is relevant to know that the natural diet of cats in the wild

consists of meat in the form of rodents and birds. Cats are therefore metabolically adapted to use protein and fat, as opposed to carbohydrates. as energy sources. Adult cats require 2-3 times more protein in their diet than the adults of omnivores, and this is partly because they depend on protein for energy as well as for growth and repair of body tissues. Furthermore, it is



interesting to note that cats are at risk of developing protein malnutrition and other deficiencies when starved, injured or ill because, unlike dogs, cats cannot utilise carbohydrates instead of proteins for certain basic cellular functions; when an animal is ill, their metabolic requirements increase, and because a cat needs proteins to meet these requirements (a dog can utilise carbohydrates for this purpose), they can quickly develop protein malnutrition if they are either not fed at all or are fed diets containing insufficient amounts of protein.

And there are still more interesting facts about cats which support the argument for a high protein, low carbohydrate diet.

Amylase is an enzyme used for carbohydrate digestion; dogs and humans have it in their saliva ~ cats do not. Furthermore, cats also have low activities of this enzyme in their pancreas and small intestines, which highlights that they simply are not built to handle the digestion of complex carbohydrates such as grain. Still further, and most significantly, diets high in carbohydrates actually reduce a

cat's ability to digest protein, which, as we have hopefully made very clear by now, is all important to them. Finally, a cat's liver also has reduced amounts of enzymes used in carbohydrate metabolism, enzymes which are plentiful in the livers of omnivores (i.e. dogs and humans); this makes cats less able to rapidly reduce the level of glucose in their blood after a high carbohydrate meal, a factor that is relevant in the role and onset of diabetes in felines.

With all this in mind, it makes perfect sense to learn that the natural diet of cats in the wild has them obtaining only 3-5% of their calorie requirement from carbohydrates, yet the average dry food diet for domestic pet cats contains 35-50% carbohydrate calories, and some of the cheaper brands contain even higher levels! Conversely, a good quality canned food contains carbohydrate calories in that important range of 3-5% of total calorie intake, so is therefore much closer to a cat's natural dietary needs. (These numbers are not representative of all canned foods, however, so it is important to know how to read a label correctly and to understand the differences between brands.)



#### ...and then there is Obesity, IBD and Asthma

## Obesity is becoming increasingly problematic in cats and is one of the main risk factors for feline diabetes.

Other health problems associated with feline obesity include: joint disturbances, lameness, the development of feline lower urinary tract disease, non-allergic skin conditions and increased risk for the development of idiopathic hepatic lipidosis, which is a potentially fatal liver condition in cats. There are many factors that contribute to obesity: hormonal changes associated with neutering; lack of exercise due to indoor lifestyles; overeating due to boredom and the increased palatability of commercial diets; and simple overfeeding on the part of the owner. However, these commercial diets are increasingly scrutinised, resulting in the important insight that

## dry food diets for cats are generally very high in carbohydrates which become converted to fat when not used as energy,

and as we have detailed earlier, it is practically impossible for a cat to fully convert the high amount of carbohydrates in dry food to energy because of their biological make-up.

Studies have shown that cats lose weight, as well as preserve their lean body mass, when fed diets high in protein and low in carbohydrates. Traditional weight-loss diets, which are low in fat and high in fibre and appear on the surface to be doing the trick, actually shed weight at the expense of lean body mass, which is detrimental to the health of cats. Canned foods are best for providing the high protein, low carbohydrate combination they need, a combination which has also been shown in studies on diabetic cats to significantly reduce the amount of insulin needed. In fact, for one-third of the cats in these studies, this high protein, low carbs diet actually resulted in the curtailment of

insulin therapy altogether. It is important to remember that 65% of cats with diabetes have Type II diabetes (non-insulin dependent) and may be transiently or permanently dependent on insulin for therapy. It is clear, therefore, that diet and weight management are important in both the prevention and treatment of this disease.

It has also been suggested that feeding high protein and low carbohydrate diets to cats results in the reduction of the development of *Inflammatory Bowel Disease* (IBD) due to the fact that cats have higher numbers of bacteria in their intestines when compared to dogs. It is thought that high carbohydrate diets, such as dry kibble diets, may encourage inappropriate overgrowth of certain colonies of these bacteria which then predisposes the cat to the development of this condition.

Feline asthma has also been linked to these high carbohydrate diets because many of these patients improve when switched to meat-only diets.

More studies need to be carried out to provide additional important empirical evidence on these various related subjects, but we strongly believe that there is already more than enough evidence, both scientific and anecdotal, to be initially persuasive and, at the very least, to support and encourage further study. Most studies done in animal nutrition are funded by pet food companies, so it is no surprise that it may take some time before there is enough valuable, evidence-based data available about the benefits of wet food over dry for cats. Dry food is convenient and cheaper than wet food and many cats like it and refuse to eat canned food. We are certainly not saying that there is no place for dry food for cats in the market, only that based on the biological make up of cats and on the limited studies already available on high protein/low carbohydrate diets for this species, it seems logical and correct that they be fed diets suited to their biology. Looking at the pet food industry currently, this means wet or canned food diets would be best for cats.



#### Water, water everywhere! Why this matters to cats

We have discussed the limitations of the type of proteins used in dry cat food diets, as well as the amount of carbohydrates contained in them, both of which have negative health implications for cats.

## The third main problem with dry diets is, quite simply, the very fact that they are indeed dry and therefore do not have high moisture content.

Why is this a problem? Well, cats were originally desert dwelling animals and their strict carnivorous diet allowed them to obtain most of their water requirements from the consumption of prey. Cats have a far less sensitive response than dogs do to thirst and dehydration, and actually tend to adjust their water intake according to the dry matter content of their diet, as opposed to the moisture content. This means that the drier the diet, the less they drink, and vice versa. A cat's natural prey contains 70-75% water and, interestingly enough, a canned food diet contains approximately that same proportion of water. Dry food, on the other hand, contains only 7-10% water which means that a cat eating dry food ends up taking in significantly less water on the whole than a cat being fed wet food alone.

## All this means that feeding canned food will increase water intake and therefore increase urine volume.

This is important for cats when you consider how common kidney disease and bladder problems are in this species. The concentration of minerals that can form crystals and uroliths (stones) is decreased by this increased urine production, a factor that helps prevent cystilis and urethral obstruction. Cats, especially older ones, are at risk of developing kidney disease, and increasing water intake through canned diets is very helpful in reducing the likelihood of dehydration and the build-up of toxins that are normally secreted by these organs. Older cats tend to produce less concentrated urine, which means they lose more fluid through their urinary tracts, so the increased water intake through canned food is also important in counteracting this effect.



#### The dental debate... Isn't wet food bad for teeth?

It has long been suggested that canned food diets promote dental tartar build-up and therefore hasten periodontal disease, whereas dry food diets are better because they clean the teeth.

Firstly, it is true that canned food is not the same consistency as a cat's natural prey, so certainly will not be helpful in terms of providing abrasive action for the purpose of cleaning teeth. However, how sure can one be that crunching on dry food is better? Do we humans clean our teeth by eating biscuits? Surely it makes more sense for us to attempt to mimic what a cat would experience in the wild in our effort to reduce dental tartar through diet

Cats chew down on bones, sinew and tendons when they eat prey, so we recommend that you feed your cat a small amount of muscle meat (raw or parboiled) every day to encourage them to chew vigorously, as they would in the wild. And in fact, this is believed to promote dental health in cats more effectively than dry kibble diets.



#### So which canned food do you choose?

So, now that we've convinced you to switch to wet food for your precious puddy tat, which canned food do you choose? Well, due to the fact that canned food is high in both moisture and protein, while low in carbohydrates, we are suggesting that ANY canned food is better for your cat than even the most expensive and respected dry kibble.

However, it is advisable to know and understand the differences between various canned diets, and a useful rule of thumb is to choose one where your cat will not get more than 10% of its calories from carbohydrates. Unfortunately, this information is not readily available on the cans, but you can get help with this at:

This website offers a nutrition analysis of commercially available canned cat foods. This list contains many brands not available in the UAE, so you will have to work through it, but we did find that certain Fancy Feast and some Friskies pate brands were within the recommended 10% of calories from carbohydrates, and these products are indeed available in the UAE.

When reading labels in the shop, a good tip is to look for muscle meat as the first, and therefore main, ingredient in the list. For example, choose "chicken" or "beef" as opposed to a byproduct such as chicken broth or an organ such as liver. Grain products should be towards the end of the ingredients list and in the smallest possible quantities. Generally speaking, as you probably know, ingredients are always listed in order of how much they make up the diet, so avoid products which have maize near the top of the list but don't be too concerned if it is listed right at the end.

More and more veterinarians and board certified veterinary specialists in the USA are advocating the use of canned diets for cats, as opposed to dry kibble.

We hope this leaflet has helped you understand why and has given you enough information to make it possible for you to decide if it is something you want to pursue for your own cat. It can sometimes be difficult to transition a cat from dry to wet food but there are a large number of useful step-by-step tips you can read and implement on this website:

#### www.catinfo.org

This said, it is true that feeding only canned food is typically significantly more expensive in the UAE, especially if you have many cats, so this website also has links to home-cooked diets for cats which might help make the feeding adjustment you want to make, while at the same time hopefully helping you keep the cost of that decision down. These can be prepared and frozen in advance and may be a more cost-effective alternative for a multi-cat household. The author of the website is a highly respected American feline veterinary specialist and she believes her cats have never been healthier since she started preparing their food at home for them. And as you can tell from what you have read here, we are very happy with the results seen in our lovely Creature and Sweetie ~ they have never been healthier since we turned to canned wet food.

Ultimately, the proof will probably be in you trying out a canned food diet for your cat and seeing if the lifestyle change and subsequent anticipated health benefits for your cat make sense to you or not.

#### **References:**

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