

Rethinking The Ferret Diet

By Susan Brown, DVM

A nutritious and balanced diet is the foundation of good health for all creatures including ferrets. Ferrets have been kept in captivity since 300 BC, but it is only in the last 40 years that we have changed their diet from raw foods to commercially processed foods. We have made the change primarily because we, the public, have demanded a uniformly easy to feed and hopefully nutritious food that allows us to successfully keep ferrets in our homes. I think everyone would agree that it is easier to pour little bits of food out of a bag than to go out and find whole prey items to feed. But the question is are we really providing a healthy ferret diet using processed foods? Is it really possible to take raw food, grind it up, heat it to high temperatures, add ingredients that are not part of the normal diet, add back nutrients altered or destroyed during processing, press it into amusing shapes and have this be the equivalent of the natural diet? I liken it to the Wonder Bread that I ate as a child. It was highly processed and stripped of many nutrients, then the nutrients were put back in chemically and it was put in an eye-catching package announcing its nutritional value. And didn't we love that package with the little colorful balloons telling us we were buying a healthy product? And don't we love the ferret food packages with cute pictures of ferrets everywhere? The food must be good if it has a ferret picture on it...shouldn't that be the case?

I have been an exotic animal veterinarian for the past 25 years and I have seen the damage that has been done in a number of species when we moved away from a raw, more natural diet, to processed diets. Two glaring examples are pet rabbits and pet birds. We have seen over the years that feeding a diet that is completely processed has caused innumerable ailments and premature death in both of these groups. When we returned them to foods that are more in tune with their physiology we saw a tremendous reduction in the incidence of specific diseases and we conversely have not seen any new diseases as a result of this change. There are a growing number of animal health professionals as well as pet owners that believe that processed dog and cat diets create disease as well. Changing these pets over to a balanced raw diet has shown incredible benefits. I have fed my own four dogs ranging in size from 200 pounds to 5 pounds an all raw diet for the past two years and I will never go back to processed. In my own case there were several problems that were cleared up in the "pack" with diet change alone including anal gland disease, skin problems, ear problems, obesity and gastrointestinal disease. I personally know a number of people who have made the same switch with both dogs and cats and the results are truly remarkable. Most animals experience a dramatic increase in energy level and a reduction in excess body weight. Some pets have been able to stop or reduce medication intake. Of course diet is not a miracle cure for all diseases, but it makes sense that if the body is nourished properly it can cope with disease and utilize needed medications more effectively.

I do not want to spend time in this article examining the pet food industry. I don't believe it is inherently "evil" as some would like to have us believe. There are of course people whose sole purpose is monetary gain at the expense of our pet's health but there are also involved and dedicated individuals and companies who sincerely want to produce a healthy and easy to use product. And who can fault them for this noble goal? My concern is whether we can, in reality, achieve this goal going the completely cooked, processed food route. I believe we should be rethinking our idea of what is appropriate pet food. There are even now a small number of pet food companies who are already going down the more natural pet food path. The bottom line is that the pet food companies are going to respond to what the consumers demand and it will ultimately be up to us to force the appropriate changes.

So what should a ferret be eating? Let's look at ferret gastrointestinal (GI) physiology to find out. **Ferrets are strict carnivores, meaning they are designed to eat whole prey items, which includes all parts of the killed animal.** The only nonmeat items they might encounter in their diet would be in the stomach and intestinal tract of their prey, where it is partially digested. This might include small amounts of grains, fruits and vegetables. Ferrets have a very short GI tract and the flora (the organisms living in the GI tract) are very simple, unlike animals that eat more vegetation. It takes about 3 to 4 hours for food to go from one end to the other and thus they absorb food rather inefficiently. Ferrets tend to eat several smaller meals and carry any excess to their dens to eat later. Did you ever have a ferret that took food and tucked it away in the corner of the cage, or a chair?

Because of the short GI tract and the poor absorption of nutrients, ferrets require a diet that is highly concentrated with FAT as the main source of calories (energy) and highly digestible MEAT-BASED PROTEIN. This would match the basic composition of a prey animal not excluding the essential vitamins and minerals it also contains. Ferrets should never be fed carbohydrates (such as vegetable, fruit or grains) as the main source of energy in the diet. Ferrets cannot digest fiber, as is found in some vegetable and fruit sources. If there is a significant amount of fiber in the diet it serves to lower the nutritional value of the food. As mentioned, ferrets need a highly digestible meat-based protein in the diet. Vegetable protein is poorly utilized. In the presence of excess vegetable protein the ferret can suffer from such diseases as bladder stones, poor coat and skin quality, eosinophilic gastroenteritis (wasting, diarrhea, ulcerations of the skin and ear tips and swollen feet) poor growth of kits and decreased reproduction. Dog food and vegetarian-type pet foods are completely inappropriate for use in ferrets

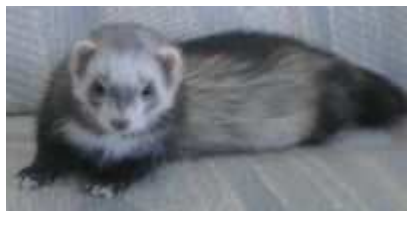
because of the high level of vegetable protein and fiber. **The bottom line is that ferrets use fat for energy not carbohydrates and they need a highly digestible meat-based protein not vegetable protein.**

Another concern regarding the feeding of high carbohydrate foods to ferrets is the stress that may be created in the beta cells of the pancreas. Unfortunately, insulinoma, which is a cancer of the beta cells, is extremely common in ferrets over two years of age in the U.S. The main function of the beta cell is to respond to increases in glucose in the blood stream by producing insulin to control it. If normal beta cells are bombarded with higher than normal levels of glucose (which comes from carbohydrates) they can become hypertrophied (overactive) trying to keep up with insulin demand. If the high carbohydrate diet continues, the result may be a complete burnout of the cells, which is what happens when a pet or a person develops diet-induced diabetes. However, another possibility is that instead of the cells burning out, they go from hypertrophy to neoplasia (cancer). Neoplasia is an abnormal growth of cells and can be preceded by a hyperplastic condition. I would like to stress that this exact mechanism has not been scientifically proven in ferrets to date, but the scenario is entirely within the realm of possibility. It has been disturbing to note that over the years in countries where ferrets were fed a raw carnivore-type diet insulinoma was a rare occurrence but now in these same countries where processed diets are becoming popular, cases of insulinoma are on the rise. Regardless, do we need to be feeding our ferrets diets laced with inappropriate materials?

Now comes the question of what is the most appropriate diet for a ferret? Many of you will cringe when I say (and I have been saying for years) **that a whole prey diet is the most balanced diet for a ferret.** We would like to believe that we have a pet that doesn't touch such "nasty" stuff, but they are carnivorous predators and no amount of packaging or advertising can change that fact. Personally I think we should appreciate them for just those predator qualities that make them the special pets they are and stop trying to make them into something they can never be!

Available prey animals of appropriate size would include mice, rats or chicks. This diet provides all the necessary nutrients in a highly digestible form as well as providing beneficial exercise for the muscles of the neck and jaw and providing material to keep the teeth and gums healthy. The stool volume is greatly reduced because most of the nutrients are utilized and not excreted. In addition there is valuable mental stimulation when eating a diet that takes effort and has a variety of textures and tastes as opposed to a uniformly sized pellet. This is the diet that has been fed for centuries to pet ferrets before processed foods came along. This is the diet I fed my last group of ferrets years ago. I have never seen ferrets more excited by their food and or efficient at cleaning up every scrap!

There are several concerns about feeding a raw diet that need to be addressed, however. One is whether feeding a raw diet will make a ferret more aggressive towards humans?



The answer to that is an emphatic NO. There is no connection between feeding a diet that is natural to a ferret and aggression towards humans. I can tell you this from my own personal experience and the experience of others both in present times and historically. The second concern is about passing diseases from the prey animal to the ferret. This is an excellent question and indeed there are some diseases that could be transmitted, however currently there are many clean sources of prey food available so this need not be a concern. It does mean, though, that you need to be careful about where you obtain the prey food and that you won't be feeding, say the mouse you trapped in our house. I have listed two

sources of prey animals at the end of the article, but there are many more available. Most companies can deliver frozen rats, mice or chicks to your door! We have these sources of prey animals due to an increasing interest in carnivorous reptiles that must eat these animals to survive, because there is no alternate processed food choice. The final concern is whether to feed the prey animal to the ferrets dead or alive. I think we do not need to feed live prey and a reputable source of prey animals will kill them humanely solving the problem for us.

Most Americans will not feed a whole prey diet to their pets primarily for aesthetic reasons. I do understand that there are emotional issues to deal with. However, we need to remember that when we feed any processed food to a ferret we are still essentially feeding the body parts of some animal that was killed for that purpose. The only difference is that we didn't have to look at the cow or chicken when we feed it, like we have to look at a cute little mouse. Even if you are not going to feed this sort of diet all the time, you still might consider an occasional mouse "treat" for your ferret from time to time.

The next best choice to feeding a whole prey diet is to feed a balanced raw carnivore diet. There are more and more of these diets available in either freeze-dried or frozen form as pet food companies realize that heat processing the food and making little baked kibbles may not be the answer. Several of these diets have been successfully used in ferrets. One of my current favorites is the *Archetype Diet* by Wysong. It is cold-processed, contains beef, lamb and chicken meat products, is well accepted and comes in small chunks so it is easy to feed. You should look for diets that they are made from meat suitable for human consumption (preferably organic) containing all

the parts of the animal (organ meat, muscle, fat and bone), a high level of fat with no grain or grain products, sweeteners or chemical preservatives. Do not use diets designed for dogs that contain vegetables and grains. I have listed Internet sources at the end of the article that will lead you to a whole host of companies where you can research your options. I believe that the production of raw, balanced, organic pet foods is the path of the future for pet food companies. It can give us a "sanitized" alternative to the whole prey diet.

Now we come to dry, processed ferret diets, the very diet most veterinarians, myself included, have used for years. Although there have been tremendous strides made in the quality of these diets in the 25 years I have been in practice, I have yet to see one that I believe is completely appropriate for ferrets. Let's take a look at the composition of these diets and compare that to what we know of ferret nutrition. We have discussed that ferrets are carnivores and need a high protein, high fat diet with minimal carbohydrates. To use numbers, a dry ferret diet should contain at least 30 – 40 % crude protein and 15 –20% fat. The protein should be of animal origin and highly digestible.

Unfortunately, pet food labels do not indicate digestibility of the components and the protein percent you read may contain both animal and plant sources of protein. In addition, grains, such as corn wheat or rice, are used not only to increase protein but as a "filler" and as a means of binding the final product together. Ingredients on a pet food label are given in order of their amount in the diet, starting with the largest. For ferrets, the first three ingredients should be meat-based. In a survey I did of 12 processed dry ferret foods currently on the market, only one had the first three ingredients as meat-based but it was quickly followed by corn, more corn and sweeteners. Some of the foods had a grain as the second ingredient, and they all had grain as a significant part of the composition. The majority of the foods had a sweetener of some kind such as molasses, dextrose, raisin juice or corn syrup. Remember what I said about the pancreas? What do you think this sugar, no matter how small, might be doing to those beta cells? Processed dry foods are heated during production and in the process nutrients can be destroyed or altered and then have to be replaced artificially. In addition, other additives may be used to keep the food from spoiling. To add insult to injury, several of the diets had dried fruits and vegetables in them. Ferrets do not need these items and in addition the dried form can make them nearly impossible to process. We have already had one case of a ferret that needed emergency surgery to remove a piece of dried carrot blocking his intestine that he consumed in a "ferret diet". Clearly, these diets are packaged to appeal to human consumers and may have little to do with appropriate ferret nutrition.

The worst examples of processed diets are the ferret treat foods. **Nine out of ten ferret-specific treat foods I examined had no meat products whatsoever and were comprised entirely of sweeteners and grains, with some fruits and vegetables thrown in. This is not only not healthy it is dangerous.** In addition, people who use treats often use too many because it is emotionally appealing to watch a ferret enjoy a snack. So if the pet enjoys one treat why not give him five or six? In an animal with such a small body size, five or six treats might make up a good portion of his food for the day. Of course ferrets love the treats because they are attracted to sweets, but that does not mean it is good for them? I like chocolate, but if I ate chocolate as 25% of my diet, I would have some serious health problems including diabetes! Again, the packaging is for the human and as long as we keep buying it, companies will keep making it.

Ferrets do not need supplements if they are on a balanced raw or whole prey diet. Overuse of fatty acid supplements can lead to obesity. What should we then feed as treat foods? First of all humans, not ferrets, have an emotional need for treat foods, so it is not necessary to feed ferrets treats. But if you must give a treat, how about a nice piece of raw liver or heart, a bit of raw muscle meat, raw egg or maybe a mouse?

If you decide to make a change, you may find that adult ferrets can be very particular and will resist change. I do not believe that it is necessary to "wean" a ferret off of a less digestible and gradually introduce him to a more digestible diet. I just change "cold turkey". If you keep offering the old diet, there may never be a change. It will probably be necessary to let your pet get hungry before he makes a change. Temporarily coating a new food with a fatty acid supplement as an enticement may help. Only ferrets that have insulinomas should not be fasted for more than 6 hours. If your ferret is currently being treated for any illness, consult your veterinarian first

If you finish this article and do nothing more than start reading labels and shopping more effectively, I will have accomplished an important goal. If I have caused you to rethink how we should be feeding our ferrets entirely, that is even better, but I am well aware that change takes considerable time. Feeding a healthier diet will probably cost you a little more and it will take more effort to get the items you need, but if it saves you money spent on veterinary bills and prolongs the life of your pet, isn't it worth it? Pet food manufacturers are not going to stop marketing inappropriate foods until we stop buying them. We have the technology to come up with reasonable alternatives to the natural diet, we just have to demand it as the consumer. Be an informed consumer and decide for yourself what is best for your pet.

INTERNET SITES FOR MORE INFORMATION ON ALTERNATIVE PET DIETS

www.wysong.net – Producers of Archetype diet and other healthy alternative diets

www.barfdiet.com – excellent site about raw diets for dogs and other pets and a full page with links to 25 commercial pet food sites offering raw diets

www.rawmeatybones.com – source of information on raw diets for dogs including information from veterinarians

www.petdiets.com – information on natural diets, part of Veterinary Nutritional Consultants who will provide information on appropriate homemade diet

www.belfield.com – article about raw diets by veterinarian

www.miceonice.com – source of healthy, humanely killed rodents

www.gourmetrodent.com – source of healthy humanely killed rodents and chicks

www.Rodentpro.com - source of healthy humanely killed rodents and chicks

www.Hare-today.com - source of whole raw, ground and whole prey

The sites highlighted are who I use. I can't vouch for the others. Scarlett

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