

kidney failure very late in the course of the condition when their BUN and creatinine levels are extremely elevated. Often, Shar-Pei owners miss the very subtle early changes and present their dogs when it's too late.

Diet does not appear to play a major role in prevention of kidney disease in Shar-Pei at this time. I think avoiding substances and situations which result in kidney damage are preventative steps that can be taken. Certain drugs such as aminoglycoside antibiotics can cause kidney damage and should be avoided, when possible. Decreased kidney blood flow can lead to kidney damage emphasizing the importance of IV fluids administered during anesthetic procedures and use of monitoring equipment. Situations, which result in low blood flow to the kidneys such as heat stroke, bloat, and shock must also be avoided. Infectious diseases can also result in kidney damage. These include bacterial kidney disease, heartworm, leptospirosis, Lyme disease, etc. Toxins such as ethylene glycol (antifreeze) and arsenic can cause kidney damage as well. To a large extent we can prevent some of these things. The major emphasis has to be monitoring the dogs so the onset of kidney failure is uncovered early in the course of the disease when dietary manipulations may be useful.

RAW FOOD DIETS

Due to the popularity of raw food

diets I feel I have to make a few comments. To make and balance a diet that meets the nutritional needs of your Shar-Pei is not something the average dog owner can do or has time to do. It is labor intensive, requires fresh ingredients and careful attention to hygiene and cleanliness. If you are going to do this please consult with a veterinary nutritionist or dietician. There have been several studies concerning contamination of raw food diets with Salmonella, E. coli and other bacteria. There is also a zoonotic aspect to these bacterial contaminants as people can be infected by handling these diets. It generally is easier, safer and nutritionally sound to use commercially available brand name dog food diets.

General Guidelines

1. I recommend feeding Shar-Pei at least twice a day. This decreases begging behavior and may decrease the incidence of bloat.
2. Obesity is a very common dog problem. It is essential to balance the dog's activity and food intake. It is common sense to understand that an inactive dog requires less calories to maintain body weight. The converse is also true — a very active dog requires more calories. Calories can only come from what we feed the dog — either from the amount of food fed and/or the protein level of the diet. Dogs will preferentially use protein for energy so a high protein diet in an inactive dog will result in weight gain. Also feeding too much food will result in weight gain. The solution is simple — feed according to your dog's activity level.
3. Realize that there are some dogs who do not eat every meal or even every day. This may represent the dog's way of maintaining its body weight. If we entice a dog such as this to eat every meal we may circumvent this nature tendency to be slim and trim.
4. Most Shar-Pei are less active in the winter and more active in the summer. This means we need to decrease the amount of food they get during the times of the year coinciding with decreased activity and increasing the amount of food when activity increases.
5. Older dogs tend to decrease their activity and we need to decrease the amount of food they get. Older dogs also tend to develop age-related joint problems which also decreases activity and requires diet adjustment.
6. Switching older dogs to a "senior" or "lite" diet is not the total answer. It is still sometimes necessary to decrease even the amounts of these diets in order to maintain body weight.
7. Vitamin supplements may become necessary in dieting dogs.
8. I find that "cutting" the diet with canned pumpkin (not pumpkin pie filling) is a good way to fill the dog up without increasing calories or "starving" the dog.
9. Measuring the food is extremely important! This allows us to make adjustments in amounts of food in an accurate way. It also helps your veterinarian to evaluate your feeding regimen.

Web site: www.drjvw.com



Diet and
Your
Chinese
Shar-Pei

Diet for the Shar-Pei

The proper diet is very important for the life and health of your Shar-Pei. Most pets become overweight and inactive if they are allowed to choose their own diet. A fat dog is not a healthy dog and will have a greatly decreased lifespan.

RECOMMENDATIONS:

1. Large-breed puppy diets with or without water are best until the pup is 4-6 months old. Stick with brand name diets such as Iams®, Purina®, Pedigree® and others. Don't feed according to the bag directions — usually 1 cup per 6 pounds of body weight is adequate. In the Shar-Pei a desired growth rate is 2-3 pounds a week.
2. In pups up to 3 months feed 3 meals per day. In pups from 3-6 months gradually change from 3 meals per day to 2 meals per day. In pups over 6 months feed 2 meals per day.
3. Try not to give canned dog foods. Most Shar-Pei will not overeat on dry food. If you do give canned foods, mix it with dry foods and make sure the mixture is at least 3 parts dry food to 1 part canned food. Mix the food together thoroughly so the dog will not eat only the canned food and leave the dry food.
4. Do not give tablescraps.
5. Never give steak, pork, chicken or turkey bones. The only bones permitted are large beef knuckle bones.
6. Nylon bones and raw hide bones make good toys. Raw hide bones should be large enough to last your dog 2-3 weeks. Don't use raw hide sticks or chips — don't let your dog eat rawhide. Avoid pig's ears and cow hooves — Shar-Pei usually eat these or swallow them and get into trouble.
7. What diet you feed your adult Shar-Pei should be based on the dog's activity level, coat quality, stool quality such as volume, consistency, frequency and the dog's general well-being. If you're not happy with any of these criteria then consider a diet change.
8. Avoid changing your dog's diet too often. If a

diet change is necessary do so gradually by mixing the foods over a 1-2 week period.

9. There is a myth concerning not feeding Shar-Pei soy-containing diets. I have not seen anything to substantiate this. Certainly food allergies can develop and special diets may become necessary. Feed your dog what it does well on.

10. There is no current research which justifies the feeding of a low protein diet to prevent kidney failure in Shar-Pei. Dietary modifications are necessary in Shar-Pei which are in kidney failure.

Dietary Protein and Kidney Failure

Much progress has been made in clinical nutrition in the past decade especially in the area of nutrition in the kidney failure patient. This is still an area of controversy between clinicians and nutritionists, but research is providing more insight concerning the role of dietary protein in the management of the kidney failure patient. What I hope to do here is provide a digest of this current state of affairs and let you make your own decisions.

- ◆ There is a link between dietary protein levels and the clinical signs of kidney failure. Once dogs have developed signs of uremia such as decreased appetite, vomiting, depression, electrolyte changes, GI ulceration, increased BUN and creatinine and weight loss, then decreasing the protein content of the diet is indicated these signs. Decreasing the protein content of the diet prior to the onset of clinical signs does not affect the progression of kidney failure. The pathogenesis of kidney failure is not clear and the rate of progression is variable.
- ◆ We know that increasing the protein in the diet results in increased blood flow to the kidneys – this occurs in both healthy dogs and those with decreased kidney function.
- ◆ Increased levels of dietary protein do not seem to change the rate of progression of kidney failure. Protein levels in the diet do not seem to affect mortality, rate of progression of uremia or

the development of kidney lesions.

- ◆ Decreased protein levels in the diet may impair immune responses, decrease hemoglobin levels, cause anemia, decrease total protein levels and result in muscle wasting.
- ◆ Phosphorus restriction is an important factor in management of dogs with kidney failure.
- ◆ 3/4 to 15/16 of the kidney mass must be lost before progression of kidney failure occurs.
- ◆ When protein restriction is initiated fat and carbohydrate levels must be increased to provide alternate energy sources.

Much of the research in kidney failure and diet have been done in rats, dogs who have had surgically induced kidney failure and geriatric dogs with progressive kidney failure due to age-related changes. Does this information pertain to dogs with amyloidosis, immune-mediated kidney diseases or inflammatory kidney diseases? Studies need to be done to address these scenarios. The information available can be used to formulate the following general guidelines:

- ◆ Feed a diet with a protein level which fits the dog's activity level. Couch potatoes on a high protein diet become obese leading to other problems.
- ◆ Dietary protein levels do not appear to be involved in the progression of renal disease or play a role in the prevention of kidney failure. However, I prefer to err on the conservative side. I think protein levels in the 20-24 % range are probably safe. Of course other factors enter in such as the protein source, the bioavailability of the protein, fat content, carbohydrate levels, etc. must be considered as well.

When the BUN is greater than 75mg/dl and/or signs of uremia develop, moderate protein restriction is indicated to decrease the BUN and the clinical signs. Phosphorus restriction is also indicated at this time. This is most easily done with the available commercial kidney diets on the market. What this also means is that these dogs must be monitored closely to follow changes in the BUN and creatinine levels. My experience in Shar-Pei indicates that they show clinical signs of