

Hypoglycemia and How Stress plays a part

Puppies can stress when shipping or adjusting to new homes. Stress can also be caused by too much handling. Do not overtire your new puppy. You should not allow your puppy to run and play for periods longer than 1 hour at a time. The puppy needs quiet time to rest and eat. A playpen works well for this purpose.

Food and water should be available **AT ALL TIMES**. Puppies (especially teacups) eat a small amount at a time and need to replace this frequently to prevent hypoglycemia. Do not just assume your puppy is eating. The best way to make sure is to put a small handful of food on or close to pups bed several times a day and if this disappears you know the puppy is eating something. You can also soften some dry food with warm water to entice your puppy to eat until it is adjusted. **PUPPY MUST EAT**. If you feel puppy is not eating enough, you can get some prescription diet canned AD from your vet to use until puppy is adjusted and eating well. No other brand canned is recommended.

ALWAYS keep white karo syrup on hand for emergency situations with blood sugar. Give puppy 1 inch of nutri cal morning and night for the first couple of months to help maintain sugar levels through the night. It can also be given mid day if you feel puppy is acting tired or sluggish. You can also mix 1 cap of white karo in puppys bowl of water for the first week or two to provide extra sugar while pup is adjusting.

Hypoglycemia

Hypoglycemia (low blood sugar) can occur without warning when a puppy goes to a new home, misses a meal, becomes chilled overtired or exhausted from too much handling or playing.

Tiny breed puppies are more likely to develop hypoglycemia because they have less ability to store and mobilize glucose. Puppies need frequent meals to prevent hypoglycemic crises.

The signs and symptoms of hypoglycemia include depression, lethargy, glassy eyes, weakness, unsteady walk, seizures, nervousness, tremors. In severe cases the puppy may become unconscious or comatose which **can lead to death if not treated immediately**.

If your puppy shows any of the signs above, give a small amount of white karo syrup ($\frac{1}{2}$ **teaspoon**). If puppy is unconscious, rub white karo syrup on gums. Warm puppy on heating pad. Puppy should respond within 5 to 10 minutes. If puppy responds, follow up with some softened puppy food or prescription diet canned AD (available from your vet). You should take puppy to your vet so that he can make sure sugar level is normal and do a fecal to check for coccidian or other intestinal parasites.

Hypoglycemia

by Annette Davis

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Hypoglycemia or low blood sugar is a possible problem with all toy breed puppies. Veterinarians unfamiliar with toys often mis-diagnose the condition as viral hepatitis or

encephalitis. As a toy breeder or pet owner, it is important to recognize the symptoms of hypoglycemia and know how to treat it. Hypoglycemia is easily treatable in the early stages, but fatal if allowed to progress. Many puppies are lost needlessly to hypoglycemia because of (ignorance) on the part of their owner or veterinarian.

The first sign of hypoglycemia is the puppy slowing down and then acting listless. The puppy will then begin to tremble or shiver. This is a reaction caused as the brain is starved for glucose. The trembling is followed by a blank stare and the puppy lying on his side. He may also experience convulsions. After a time, the puppy will become comatose. His body will be limp, lifeless, and the tongue and gums will be a grayish/blue color. The body temperature will be subnormal. The puppy may even appear to be dead.

If caught in the early stages, treatment is simple. Rub Nutri-Cal (Caro syrup will do if you have no Nutri-Cal) on the puppy's gums, under the tongue, and on the roof of the mouth. (Caution: do not use honey.) Get a heating pad or heating blanket and slowly warm the puppy to proper body temperature. If the puppy responds, all is well. Feed a quality canned food right away (you may want to mix it with egg yolk) and then monitor the puppy to be sure that the condition does not recur. Be sure to eliminate the stress that caused the episode if at all possible.

If caught in the more advanced stages, treatment is more complicated. Always assume that the puppy is alive. Rub Nutri-Cal or Caro in the mouth, and carefully insert a small amount in the rectum. Slowly warm the puppy to normal body temperature (101-102 degrees F) and keep him warm continuously with light heat. If the puppy still does not respond, carefully eye dropper dextrose solution or Caro water into the mouth, a little at a time. Call your veterinarian and inform him that you have a hypoglycemic puppy. He will prepare a warmed dextrose solution to inject subcutaneously and may put your puppy on an IV drip. Request a fecal exam. Your puppy may have intestinal parasites such as worms, coccidia, or giardia that need to be eliminated immediately. A bacterial or viral infection may also be present and antibiotic treatment necessary. If your puppy has been given glucose injections, it is probably a good idea to treat him with antibiotics so that infection does not occur. Your vet will likely recommend a prescription canned food such as a/d to give as your puppy recovers. You can finger feed the a/d 'as is' from the can and add Pedialyte to the drinking water. You must also keep the puppy warm at all times. Of course use prudence, and do not overheat or dehydration will occur. In severe cases you may need to force feed a/d for a time and give Pedialyte with a dropper. Give B vitamins to stimulate appetite. As your puppy improves he will begin to eat in his own and then you can gradually phase back in his regular food.

It is important to understand that just because a puppy has an episode of hypoglycemia, it does not mean that the puppy is truly "hypoglycemic." True hypoglycemia is a chronic condition caused by overproduction of insulin by the pancreas. Even though the pancreas may normally function properly, toy puppies can still have an isolated hypoglycemic incident in reaction to stress. Hypoglycemic incidents are almost always preceded by a stress of some kind. Some examples of common stresses include: weaning, teething, vaccinations, a change in environment, shipping, over-handling, cold temperatures, intestinal parasites, infections, anorexia, etc. Many puppies simply play too hard and stress their system or forget to eat. I have heard of young males experiencing hypoglycemia when a female in heat is around. They become so worked up over the female that they do not eat and their blood sugar drops.

Tiny dogs often do not have the fat reserves to supply adequate glucose in times of stress or when they do not eat regularly. Hypoglycemia most often occurs when the puppy has not eaten for several hours. This is not always the case, however. A puppy can have eaten recently and still show signs of hypoglycemia if his system is stressed and the food has not been digested and assimilated. It is important to "free feed" toy puppies a high quality food. Toy puppies simply have too high of an energy level to be restricted to scheduled feedings. Most do fine if switched to scheduled feedings when they reach adulthood, but they must have access to food and water at all times when they are puppies. If you like to give your puppy canned food, you can schedule the feeding of the canned, but allow access to kibble at all times.

A summary of important reminders is as follows:

1) Always keep Nutri-Cal or Caro (Corn Syrup) on hand. This is the quickest way to revive a hypoglycemic puppy.

2) If you ever see your puppy becoming listless, or laying on his side and acting unresponsive IMMEDIATELY rub Nutri-Cal or Caro on his gums, under his tongue, and on the roof of the mouth. Slowly warm him to normal body temperature with a heating pad. Feed him as soon as he responds. Call your veterinarian if the puppy does not quickly respond.

3) Keep your puppy from chilling, free of parasites, and minimize stress.

4) See that your puppy eats often and maintains a proper body weight.

5) Do not over-handle your puppy. Be sure to allow him rest time and alone time. Like all babies, puppies need to have a regular schedule of rest, meals, play