



## **BRIARPOINTE VETERINARY CLINIC**

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### **ORPHANED PUPPIES**

Raising an orphaned puppy is a noble and rewarding experience. The bonding that occurs between you and the newborn puppies during the first few days will likely last for many years. However, orphaned puppies are very fragile and raising them can be challenging. Do not be disappointed if you are unsuccessful. The fact that you are trying to help is often reward enough.

#### ***What problems am I likely to encounter?***

Several critical problems must be addressed in caring for orphaned puppies. Among these are hypothermia, dehydration, and hypoglycemia. These problems are interrelated and may often exist at the same time. Close observation and prompt attention if any of these problems develop are essential to survival. Of course, proper feeding of the orphaned puppy is extremely important.

#### **Chilling or Hypothermia**

Chilling or hypothermia in newborn puppies can lead to significant mortality. A puppy will lose far more body heat per pound of body weight than an adult dog. The normal newborn puppy depends upon radiant heat from its mother to help maintain its body temperature. In the absence of the mother, various methods of providing heat, such as incubators, heat lamps, or hot water bottles can be used.



Rectal temperatures in a normal newborn puppy range from 95° to 99°F (35° to 37.2°C) for the first week, 97° to 100°F (36.1° to 37.8°C) for the second and third weeks, and reach the normal temperature of an adult (100° to 102°F) (37.8° to 38.9°C) by the fourth week.

When the rectal temperature drops below 94°F (34.3°C), the accompanying metabolic alterations are life-threatening. Therefore, immediate action is necessary to provide the warmth the puppy needs to survive. A healthy newborn can usually survive chilling if warmed slowly.

During the first four days of its life, the orphaned puppy should be maintained in an environmental temperature of 85° to 90°F (29.4° to 32.2°C). The temperature may gradually be decreased to 80°F (26.7°C) by the seventh to tenth day and to 72°F (22.2°C) by the end of the

fourth week. If the litter is large, the temperature need not be as high. As puppies huddle together, their body heat provides additional warmth.

**Caution:** Rapidly warming a chilled puppy may result in its death. Gradually warm a hypothermic puppy over thirty to sixty minutes.

### **Dehydration**

The lack of regular liquid intake or the exposure of the puppy to a low humidity environment can easily result in dehydration. The inefficiency of the digestion and metabolism of a chilled puppy may also lead to dehydration and other changes.

Two signs of dehydration are the loss of elasticity in the skin and dry and sticky mucous membranes (gums) in the mouth.

An environmental relative humidity of 55 to 65 percent is adequate to prevent drying of the skin in a normal newborn puppy. However, a relative humidity of 85 to 90 percent is more effective in



maintaining puppies if they are small and weak. Place a warm, wet washcloth in the puppies' box to help maintain humidity. A humidifier is also an excellent tool to maintain proper humidity for the puppies.

**Caution:** The environmental temperature should not exceed 90°F (32.2°C) when high humidity is provided. A temperature of 95°F (35.0°C) coupled with relative humidity of 95 percent can lead to respiratory distress.

### **Hypoglycemia**

Signs of hypoglycemia or low blood sugar are severe depression, muscle twitching and convulsions. If a puppy shows signs of hypoglycemia, a solution containing glucose must be administered. A few drops of corn syrup on the tongue can be life saving.

### ***What do I feed my orphaned puppy?***

Total nutrition for the newborn orphans must be supplied by a milk replacer until the puppies are about three weeks of age. At this age, the puppies are ready to start nibbling solid food moistened with mild replacer.

Preferred diets:

1. A commercial puppy milk replacer – we can give you specific recommendations based on readily available products. Canine milk replacer is the preferred method for feeding orphaned puppies

### ***Is the temperature of the food important?***

Since the newborn may have trouble generating enough heat to maintain its body temperature, the milk replacer should be warmed to 95° to 100° F (35 to 37.8°) for best results. Test the milk replacer's temperature on your forearm (as for babies) before feeding. The milk replacer should be about the same temperature as your skin or only slightly warmer. As the puppies grow older, the milk replacer can be fed at room temperature.

### ***How do I feed my puppy?***

**Spoon feeding** is slow and requires great patience. Each spoonful must be slowly "poured" into the puppy's mouth to prevent liquid from entering the lungs. The puppy's head must not be elevated, or the lungs may fill with fluids. Newborn puppies usually do not have a well-developed gag reflex to signal this.

**Dropper feeding** accomplishes the same result as spoon feeding but is somewhat cleaner and generally speedier.

**Baby bottles** made for puppies can be used quite successfully in most situations. The size of the hole in the nipple is critical for success. If the bottle is turned upside down and milk replacer drips from the nipple, the hole is too large. Use of a nipple that is too large may cause drowning. If the bottle is turned upside down and milk replacer comes out only after considerable squeezing of the bottle, the hole is too small. Use of this nipple will result in the puppy becoming discouraged and refusing to nurse. The hole is the proper size if the bottle is turned upside down and milk replacer drips from the nipple with minimal squeezing. If you are having trouble enlarging the hole, heat a needle with a match and push it through the nipple several times.



**Tube or gavage feeding** is the easiest, cleanest and most efficient method of hand feeding very young puppies. However, it requires proper equipment and technique to prevent putting milk replacer into the puppy's lungs. If food gets into a newborn puppy's lungs, death usually results. If bottle feeding is not successful, we will supply you with the equipment and demonstrate the proper technique. This is not a difficult procedure, so do not hesitate to ask about it if it is needed.

### ***When and how much do I feed?***

Commercial milk replacers have directions on their labels for proper amounts to feed. It is necessary to weigh the puppies accurately. The amounts on the labels are based on the puppy being fed only the milk replacer. The amounts given are also for a 24-hour period. That quantity should be divided by the number of feedings per 24 hours. Four meals spaced equally over a 24-hour period are ample for feeding a puppy when adequate nutrients are provided. Six or more feedings may be necessary if the puppy is small or weak. Hand feeding can generally be ended by the third week and certainly by the fourth. By this time the puppy can consume food, free choice, from a dish (see below).

### ***How do I get the puppy to urinate and defecate?***

The puppy's genital area must be stimulated after feeding to cause urination and defecation. The genital area should be massaged with a moist cloth or cotton ball to stimulate action. This cleaning should continue during the first two weeks. If this procedure is not followed, the puppy may become constipated.

### ***When does the puppy start to eat from a bowl?***

By three weeks, the puppy can start to eat food from the dish along with the milk replacer. A gruel can be made by thoroughly mixing a puppy food (canned or dry) with the milk replacer to

reach the consistency of a thick milk shake. The mixture should not be too thick or the puppy will not eat very much. As the consumption of food increases, the amount of milk replacer can be gradually decreased.

By four to four and a half weeks, the orphaned puppy can consume enough moistened solid food to meet its needs.

It is better to avoid starting a puppy on a baby food regimen. This creates extra work and can also create a finicky eater. Many such foods will not meet the nutritional needs of a growing puppy.

### ***Should my puppy be treated for worms?***

We routinely treat puppies for worms at two or three and four or six weeks of age. Depending on the parasite load of the puppy and potential exposure to parasites, additional dewormings may be recommended. We need to see the puppy at the appropriate ages so that it can be accurately weighed.

### ***When is the first vaccination given?***

The first vaccination is normally given to puppies at eight weeks of age. However, if your puppy did not nurse from its mother during the first two to three days after birth, there will be no protective immunity passed to it. If that is the case, the first vaccination should be given at an earlier age. We will advise you about the appropriate timing.

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*Edited by John S. Parker, DVM*  
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