



# Central Texas Veterinary SPECIALTY & EMERGENCY HOSPITAL

Powerful medicine. Exceptional care.

## ORPHANED PUPPIES

Raising an orphaned puppy is a noble and rewarding experience. The bonding that will occur in the first few days will likely last for many years. However, orphaned puppies are very fragile; raising them requires jumping numerous hurdles. Do not be disappointed if you are not successful.

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

Several critical problems must be addressed in caring for orphaned puppies. Among these are chilling, 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**

Chilling in newborn puppies can lead to significant mortality. A puppy will dissipate 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:** Too rapid warming of a chilled puppy may result in its death.

### **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 such as those discussed in this paper.

Experienced breeders can detect dehydration by the sense of touch. 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.



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**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 (abnormal decrease of sugar in the blood) are severe depression, muscle twitching and sometimes convulsions. If a puppy shows signs of hypoglycemia, a solution containing glucose will have to 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 moistened solid food.

#### **Preferred diets:**

1. A commercial puppy milk replacer
2. For short-term emergencies:

I cup of milk  
I tablespoon corn oil  
I pinch of salt  
3 egg yolks (no whites)  
Blend mixture uniformly

### **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 (35.0 to 37.8° ) for the best results. Testing the milk replacer's temperature on one's forearm (as for babies) is generally accurate enough. The milk replacer should be about the same temperature as one's skin or 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 liquids 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 this nipple may cause drowning of the puppy. 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 of the bottle. If you are having trouble enlarging the hole, heat a needle with a match and push it through the nipple several times.



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**Tube feeding** is the easiest, cleanest and most efficient method of hand feeding. However, it requires proper equipment and technique to prevent putting milk replacer into the puppy's lungs. If bottle feeding is not successful, we will supply 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 for the puppy's weight to be obtained properly in ounces or grams. The amounts on the labels are based on the puppy getting 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, equally spaced during 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 at first or the puppy will not consume very much. As the consumption of food increases, the amount of milk replacer can be gradually decreased.

By four to four and one-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 three and six weeks of age. Depending on the parasite load of the puppy and potential re-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 6-8 weeks of age. However, if your puppy did not nurse from its mother during the first 2-3 days after birth, there will be no protective immunity passed to it. If that is the case, the first vaccination should be given at about 2-3 weeks of age.