

# **HAND-RAISING ORPHANED OR RESCUED KITTENS**

**Presented by Foothill Felines Bengals & Savannahs**



**THIS ARTICLE IS INTENDED TO HELP PROVIDE BASIC INFORMATION ABOUT THE HAND-RAISING AND CARE OF TINY, ORPHANED OR RESCUED KITTENS. We strongly encourage you to seek professional veterinary help when undertaking this time-consuming, but extremely rewarding labor of love.**

## **THE BIG PICTURE**

**The best possible mother for any kitten is ... their own natural mother!!!** However, there are times when human intervention, to varying degrees, is necessary to save a kitten's life. Those times may occur when the mother cat (called a "queen") gives birth to too many kittens in her litter to adequately care for them all, or when she may not make enough milk to feed them. Occasionally, the queen may contract an infection, such as mastitis, and be unable to nurse, or she may even die. When a queen has to deliver by way of Cesarean section, this often upsets the natural flow of her milk, and she needs to be allowed to heal before allowing her kittens to nurse. Sometimes, the kittens themselves may be sick with a viral or bacterial infection that upsets their instincts to nurse, or they may not be able to nurse due to a blocked nose, and not being able to smell their mother or her milk. And, rarely, a queen may abandon her litter, or reject her kittens.

**When orphaned or rescued kittens are without their natural mother, the next best thing for them is to find another female cat who is nursing her own litter and is willing to accept the newcomers.** Of course, this is not always possible, and when that is the case, YOU must become the mother. Your ultimate goal is to make sure that the kitten or kittens grow into a strong, healthy, loving adult cat. It will take a great deal of your time and attention to reach this goal; however, your dedication will be rewarded with one of the most enriching experiences in your life.

**You will need to focus on three main areas when raising your kittens.** You will want to create a warm, dry, clean and safe environment for them; you will need to feed them the most healthful nutrition you possibly can in the right amounts, and at the right times for their optimal growth and development; and, you will need to provide close attention to all the factors that contribute to giving your kittens the proper overall care. Kittens need love,

and a LOT of it!! Without their mother, they look to you for that love, as well as for guidance.

**Keep a journal.** We really like the idea of keeping as detailed records as possible as to each kitten's individual progress. You will be awfully busy taking care of them, and writing down their daily weights, hydration status, stool appearance, and their overall appearance will provide invaluable information to you as they grow.

## MATERIALS YOU WILL NEED

You will need to be sure you have the right supplies on hand. You will need to have (or make) an incubator (or, nesting box); and you will also need a heating pad; room thermometer; sterile cotton balls and gauze; an accurate gram scale; nurser kits with bottles, nipples, and cleaning brush; Pedialyte unflavored liquid; high quality Kitten Milk Replacer formula (while the powder is more economical, we only use and recommend the liquid form in the cans); and, in case you need to do tube feeding, you will need several syringes (usually 3cc, 5cc, 12cc and 20cc), and your tube feeder, which can be purchased through veterinary clinics or supply houses. Many breeders recommend the butterfly needle infusion sets as the tube is very pliable, and soft. The 0.6mm (outer) diameter tube is most popular, and the rubber catheters you will need can be found at most major drugstores. You will need a #5 French catheter for kittens up to 2 weeks old, and you can use a #8 French for older kittens.

## MAKING THE INCUBATOR (NEST BOX)

The incubator, or as we refer to it, "nesting box" needs to be a safe, clean, warm, dry place for kittens to get the tremendous amount of sleep they need to grow and develop in the critical first few weeks. The nest box does not have to be elaborate, and using a cardboard box works just fine!! Warmth is going to be especially vital in the first two weeks of a kitten's life, as they are not able to shiver, and you cannot tell when they are cold. When using the heating pad, be sure to keep it on the lowest setting, and wrap it well with towels and waterproof pads. Set the heating pad BELOW the box itself, to one side or corner under the nest box, so that the kittens can move to a cooler area inside their box if it becomes too warm for them.

You will want the nest box to be in a quiet, private, draft-free location, with the sides of the box high enough to keep the kittens in, and the overall box size large enough to allow for some exercise. Be sure that the kittens can not get stuck under some pads in the sides or corners of the box, or that they cannot climb under the layers of towels and get directly on to the heating pad (which is why we recommend placing the pad itself under, not in, the box). Some breeders recommend placing an open container of water near the box (not IN the box!!) to allow some moisture in the air. The ideal air temperature for young kittens from birth to 7 days old is 88° to 92°F; from 8 days to 14 days old is 80° to 85°F; from 15 days to 28 days old is 80°F; from 29 days to 35 days old is 75°F, and from 35 days on (approximately 5 weeks old on) is 70°F.



Photo by: Rich Poeschel (Foothill Felines 3 week old kitten!)

## BOTTLE FEEDING

**Bottle feeding a kitten requires special nursers designed for hand-feeding kittens.** Gently insert the nipple into the mouth of the kitten - preferably while it is resting on its stomach - - then slowly pull up and forward on the bottle so that the kitten will have its head slightly elevated and extended while nursing. Be sure that the kitten is actually suckling by checking the level of formula in the nurser bottle.

**How much to actually bottle feed the kittens?** It is actually better to under-feed rather than over-feed a kitten in the first few days. A bottle-fed kitten will usually stop nursing when it is full. If, however, you notice milk coming out of its nose, the milk is being delivered too fast, which means that the hole in the nipple is too large. (If the kitten continues to bubble its formula out of its nose each feeding, you will want to have a vet check the kitten carefully to be sure the inside palate are of its mouth has fully developed.) You will want to warm the formula before giving it to the kitten, to 99°-101°F (the body temperature of cats), and it is recommended that you do this by putting the sterilized bottle into a warm bowl of water to warm it rather than using the microwave, which can cause "hot spots" in the formula.

**At Foothill Felines, we have found it is easier to start young kittens off using a plastic syringe (without the needle of course!) instead of a small bottle.** From the newborn stage until the kittens are about 1 1/2 weeks old, use a 3 cc. syringe, and feed every 2 hours. At 1 1/2 weeks old, they are ready for the 6 cc. syringe size and feeding every 3 hours, and at about 3 weeks old, move them up to a 12 cc. syringe, feeding them at least every 4 hours. An average meal for a 3 week old kitten can vary from a single syringe full (12 fluid cc) to three syringes full (36 fluid cc) for a large and hungry kitten!!! We like and use the KMR (Kitten Milk Replacer) formula, available in most large pet and feed supply stores. While the powdered form is more economical, it does not always reconstitute as lump-free as needed to flow through the syringes (best method is to mix a small amount with cold water first, similar to the process of making lump-free gravy, then add the mixture to the rest of the batch), so we always use and recommend the LIQUID FORM IN THE CANS. If you shop around, you can find the best economical source for purchasing the formula in your area. If you are unable to locate or purchase KMR in your area, we have nutritious "kitten glop" recipes on this website that you can make from ingredients at home.

**How much formula to give?** Normally, it is recommended that you give 2 tablespoons of liquid formula for every 4 ounces of body weight per day. For very young kittens, you will

need to divide their total daily amount into six equal sized feedings, and yes, this does mean during the night, also!! As the kittens grow, the number of feedings and their frequency can be decreased. Also as they grow, they can let you know better when they are actually hungry. Kittens that are not getting enough nourishment may cry continuously, suck on each other or on themselves, and they may have prominent hips or backbones.

**Do I need to burp the kitten?** After each feeding, you will need to hold the kitten against your shoulder and gently burp it. Another technique is to hold the kitten so its back is against your chest and gently cuddle it under your neck while rubbing its tummy. A steady weight gain of about 10 grams (or 1/3 of an ounce) per day is recommended, but do not be surprised if a kitten may stay at the same weight for a day or two, then suddenly the weight gains are seen. After feeding, burping and weighing the kitten, check to see if the bedding in the nest box needs to be changed, and that the temperature is correct. Then, put the kitten back in the box so that it can sleep. A properly fed kitten will sleep through to the next feeding.



Photo by: Rich Poeschel (Foothill Felines 3 week old kitten!)

## STIMULATING ELIMINATION

Normally, kittens will have a couple of firm, yellowish stools per day if they are being properly fed. Also after each feeding, you will need to gently massage and stimulate the anal and genital area with a sterile cotton ball or piece of gauze dipped in warm water. This will cause the kitten to urinate and have bowel movements, and it is very important that you continue to do this for the kitten until it is definitely using the litterbox on its own, even though most kittens can control their own bowel movements at about 10 days old. The skin area is very delicate and may become raw or sore from your efforts. If this happens, apply a tiny dab of Preparation H ointment to the affected area after each stimulation. Keep in mind that your kitten will probably not have a bowel movement every feeding, and sometimes even skip a day. This should be fine as long as the kitten is growing, eating well, not showing any signs of distress, and urinating.

**Young kittens must be protected from disease!!** ALWAYS wash your hands before and after handling the kittens, and ALWAYS clean and sterilize your bottles, nipples, brushes, or tube feeders in boiling water after each use!! If your kittens did not receive their mother's colostrum (the watery milk the queen produces in the first couple of days after giving birth), your kittens are at an even higher risk as they did not receive the antibodies present in the colostrum. In that case, be sure to keep them separated from any other animals, also.

## DIARRHEA/CONSTIPATION

**What does a loose and/or yellow stool mean?** This may indicate a mild case of overfeeding. Try diluting the formula strength with liquid, unflavored Pedialyte by about 1/3 until the stool returns to normal, then gradually bring the formula back to full strength.

**What does a loose and/or greenish color stool mean?** This would be indicative that the food is moving too quickly through the kitten's system, and the bile is not being absorbed, and is probably attributed to moderate overfeeding. Cut the formula back with the Pedialyte or bottled water, and check with your vet first to see if they recommend using 2 to 3 drops of Kaopectate every four hours until this problem clears up.

**What about stools that look like cottage cheese?** Either the formula strength is too rich, there is severe overfeeding, or the kitten may have a bacterial infection. Check with your veterinarian who may recommend that you cut the formula in half with bottled water and/or Pedialyte liquid, and start the kitten on antibiotics. If the kitten is seriously dehydrated, fluids can be given under the skin.

**Constipated or straining kittens?** In this case, you would want to increase the strength of the formula, and feed slightly smaller amounts, but feed more frequently. If the kitten has a swollen abdomen and hasn't passed a bowel movement in over a day, you may want to try mineral oil given by mouth (3 drops per ounce of body weight). You may want to discuss with your vet whether or not a warm, soap-water enema can or should be given.

## TUBE FEEDING

**Sometimes, tube feeding a kitten is the only way to save its life.** Tube feeding should be undertaken only as a last resort to save a kitten, and should be done with an experienced veterinarian or vet tech initially, although many people have learned to do this from a technical manual with excellent illustrations. Sometimes, kittens are just too weak to nurse from a bottle, due to dehydration, cold or illness, and tube feeding needs to be done. You will use the same type of formula as in bottle feeding, and the calculation for amount of formula to tube feed is generally 8cc of formula per ounce of body weight *per day*.

**How to Begin.** Lay the tube against the kitten's body, and locate the kitten's last rib. This is where the kitten's stomach is. Mark the tube with a permanent ink marker or piece of tape, so you will know how far to advance the tube into the kitten before you are in the kitten's stomach. Attach the tube to the size syringe appropriate for the kitten's age/size, and warm the formula to 99°-101°F by placing the filled syringe in a heated cup of water. Micro-waving the formula itself could cause a chemical change to the formula, and also could cause irregularities in the temperature, so should be avoided.

**The Next Step.** Make sure there are no large air bubbles or pockets as you draw the warmed formula into the syringe. Hold the kitten upright, wrapped in a small, clean and dry washcloth, in one hand. Moisten the end of the tube with the formula, then VERY GENTLY pass the tube over the kitten's tongue and into his throat. Using a light, slow but steady movement, advance the tube until you reach the mark you made earlier. Before injecting the formula, depress a very small amount of formula in and wait just a few seconds. If the kitten immediately starts coughing, you have the tube in the kitten's windpipe instead of stomach, and will need to try again. Once you are sure you are in the stomach, very slowly, inject the formula. Once the formula is in, crimp the tube (like a toothpaste tube) to prevent the formula from flowing back in to the tube, and slowly remove the tube from the kitten. When you have a little experience and confidence, the entire tube feeding of a

single kitten should take about two to two and a half minutes. When kittens are tube fed, you do not need to burp them, but you can if you want to have that extra handling and cuddling time with them after the feeding.

**Tube Feeding an Older Kitten or Sick Adult.** Wrap the kitten or cat securely to prevent them from scratching you. Talk to your vet about using a hard plastic open-ended tube, such as a hypodermic syringe container, held in the mouth that the kitten or cat can bite down on. That way, you can thread the feeding tube through this hard tube and down the open throat of the animal, without the animal being able to bit down or bite off the rubber tube.

**The Most Common Problems.** Tube feeding is not to be undertaken lightly, and can cause serious and fatal complications such as pneumonia and aspiration, and constipation/blockage of the intestines. This is a last resort, but often highly effective, method of trying to save a kitten.

## INTRODUCING SOLID FOODS

Kittens even from the same litter can differ widely as to when they start accepting solid foods (the weaning process). At about four weeks old, most kittens express some interest in solid foods. Be sure to treat this weaning time as a positive experience, so the kitten will not be frightened. Start by offering some formula on your finger. If the kitten does not lick it off, then you should gently smear the formula on its mouth, being careful not to get the formula on its nose or restrict its breathing. The kitten will definitely clean itself, and get the formula that way.

**It is important to remember how delicate the kitten's digestive system is and how easily it can get upset.** Taking it very slowly, continue to work on the kitten's lapping skills, by using your finger, and encouraging the kitten to lap up formula from your finger. The next step is to gradually add some slightly warmed baby food to the formula, making a "gruel" out of it. Some of you may have heard that baby food is dangerous to kittens due to the dehydrated onion that is used; the major baby food brands such as Gerbers and Beechnut have eliminated those ingredients from their recipes, and you can use the baby food with confidence. One of the reasons baby food (we recommend the lamb, chicken or turkey flavors...start with lamb and stay with it if possible) works so well with kittens is that it is easy for them to lap up, but more importantly, it has a high degree of odor to it, which stimulates the kitten's appetite and encourages it to eat, when it is young or sick, and not able to smell properly or understand that it is hungry.

**Be patient.** Some kittens do not even express interest in solid foods until they are seven weeks old...that is extreme, but it can happen. Continue working with the kitten a minimum of four times a day, and supplement with a bottle or syringe to be sure the kitten is getting adequate nutrition per day. As the kitten learns to eat solids, you want to gradually introduce the wet food that you want to have your kitten eat, such as Iams Lamb and Rice canned food. Lamb and rice is popular as it is the easiest mixture for kittens to digest. Keep the "gruel" very moist with bottled water or Pedialyte, and gradually decrease the amount of baby food and increase the amount of canned cat food. Also, be sure you are offering a high quality, scientifically formulated dry food for your kittens available at ALL TIMES. Some kittens will actually prefer the dry food to the wet food, and will enjoy teething and crunching on the small kibble pieces.

## OTHER TIPS & KITTEN GLOP RECIPES

**Make sure your kitten does not get dehydrated.** The easiest way to check how hydrated your kitten is, is to grasp the skin firmly but gently between the kitten's shoulder blades, and lift it straight up with a twisting motion as you release it. Kitten skin that is well hydrated pops back within a second or less. The longer it takes the skin to return to its place, the more fluids your kitten needs. In severely dehydrated kittens, you and your vet may decide to inject water or a special veterinary formulated electrolyte solution under the kitten's skin, for faster absorption. In some cases, slightly older kittens who have been nursing from their mother but are suddenly unable to do so (such as if the mother becomes ill, hurt, or dies) may not take easily to the bottle or to the KMR formula. Or, you may not be able to find or purchase KMR in your area. Or, your lactating mother may need additional nutrition. There are several variations of a home-made, highly nutritious formula commonly referred to as "GLOP", which we offer on our website. GLOP formulas can literally be life-savers in cases like these. [CLICK HERE FOR THE GLOP RECIPES.](#)

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