



## Raising Kittens

Raising kittens can be an extremely gratifying experience or it may produce profound disappointment. The following information should help increase your chances of success when caring for young kittens.



### Do I need to help care for newborn kittens?

If the delivery was without incident, the queen, or mother cat, will spend most of her time with her kittens during the first few days after birth. For the first month of life, kittens require very little care from the owner because their mother will feed and care for them.

In fact, in the vast majority of cases, the pet owner should not interfere with the queen's care. Within a few hours of birth, kittens must receive **colostrum**, or the first milk, which is rich in antibodies and helps protect the newborns from infection. The kittens need to be kept warm and to nurse frequently; you should check them every few hours to make certain that they are warm and well-fed. You should also check the mother to make certain that she is producing adequate and normal-appearing milk.

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If the mother does not stay in the box, you should make sure the kittens stay warm. Kittens are not able to control their own body temperature and rely on the external environment to keep them warm. It may be necessary to provide supplemental heat. During the first four days of life, the newborns' box should be maintained at 89° to 93°F (32° to 34°C). The temperature may gradually be decreased to 80°F (26.7°C) by the seventh to the tenth day and 75°F (24°C) by the end of the fourth week. If the litter is large, the temperature need not be as high because they huddle together and their body heat provides additional warmth.

If the mother feels the kittens are in danger or if there is too much light, she may become anxious. Placing a sheet or cloth over the top of the box to obscure much of the light may resolve the problem. An enclosed box is also a solution. Some cats, especially first-time mothers, are more anxious than others are and may attempt to hide their young. She may continually move the kittens from place to place, which may endanger them if they are placed in a cold or drafty location. If your cat shows this behavior, you should cage her in a secluded area.

### What are the signs that the kittens are not doing well and what do I do?

Kittens should eat or sleep 90% of the time during the first two weeks of life. If they are crying during or after eating, it may indicate that they are ill, are not getting adequate milk, or the milk has become infected (**mastitis**). If excessive crying occurs, your veterinarian should examine the queen and her entire litter as soon as possible.

#### "Goats milk is not recommended as it is far too low in protein and fat."

When the mother's milk supply is inadequate, supplemental feeding one to six times per day is recommended; this should also be done routinely with any litter greater than five kittens. There are several excellent commercial milk replacers available. They require no preparation other than warming. These milk replacers should be warmed to 95° to 100°F (35° to 37.8°C) before feeding. Test the temperature on your forearm: it should be about the same temperature as your skin. The commercial products have feeding directions based on their nutritional constituents. If the kittens are still nursing from their mother, feed one-third to one-half the recommended amount. Supplemental feeding is needed until the kittens are old enough to eat kitten food, usually around two to four weeks of age. Goats milk is not recommended as it is far too low in protein and fat.



If the milk becomes infected, the kittens will also cry. If this occurs, the entire litter could die within twenty-four to forty-eight hours. Total replacement feeding, using the mentioned products, or fostering the kittens on another nursing mother is usually necessary. If replacement feeding is chosen, the amounts listed on the product should be fed. Kittens less than two weeks of age require feedings every two to four hours. Kittens two to four weeks of age need feedings every four to six hours. Weaning, as described below, should begin at three to four weeks of age.

In an emergency, you can substitute pasteurized goat's milk from the grocery store for a milk replacer. However, it is not nutritionally adequate for kittens and kitten milk replacer should be provided as soon as possible.

### What should I expect during the kittens' first few weeks of life?

Kittens are born with their eyes closed. Most kittens will begin to open their eyes within seven to fourteen days of birth. If you notice swelling, bulging, or discharge underneath the eyelids, the eyes should be opened manually. Ideally, you should take the kittens to your veterinarian, who will determine if this procedure is required. If this is not possible, you can use a cotton ball dampened with warm water to apply gentle pressure to the eyelids and open them. If the swelling is due to infection, you will see pus; in this case, a veterinarian should examine the kittens immediately. If the eyes have not opened within fourteen days of age, the kittens should be examined by a veterinarian.

Kittens should be observed for their rate of growth. They should double their birth weight in about one week. Routine daily to weekly weighing should be performed to ensure the kittens are growing normally. Failure to gain weight may indicate a problem and the need for veterinary care.

At two weeks of age, kittens should be alert and trying to stand. At three weeks, they generally try to climb out of their box. At four weeks, all of the kittens should be able to walk, run, and play.

Kittens should begin eating solid food about 3 1/2 to 4 1/2 weeks of age. Initially, make gruel by mixing milk replacer with a small amount of kitten food; place this mixture in a flat saucer. The kittens' noses should be carefully dipped into the mixture two or three times per day until

they begin to lap; this usually takes one to three days. The amount of milk replacer or supplemental moisture should be decreased daily until they are eating the canned or dry food with little or no moisture added (usually by four to six weeks of age).

### I have heard of milk fever. What exactly is it?

**Eclampsia** or milk fever is caused by depletion of calcium circulating in the bloodstream of the queen and is due to heavy milk production. It generally occurs when the kittens are three to five weeks old (just before weaning) and most often to mothers of large litters. Early signs include restlessness, panting, and loss of attention towards their kittens. It can progress to tremors, muscle spasms, and collapse. This condition can be fatal in thirty to sixty minutes, so your cat needs to see your veterinarian immediately. Prompt treatment with intravenous calcium will reverse the condition. If the queen develops milk fever, her kittens should be weaned as soon as possible.

### Do weaned kittens need a special diet?

Diet is extremely important for a growing kitten. Many commercial foods have been specially formulated to meet the unique nutritional requirements of kittens and should be fed until 12 months of age. Kitten foods are available in dry and canned formulations.

#### "Adult cat food does not provide the nutrition required for a kitten."

It is recommended that you buy a kitten diet that has gone through feeding trials for growth and development. Adult cat food does not provide the nutrition required for a kitten. Advertisements tend to promote taste, color, and shape rather than nutrition, so it is important not to be influenced by these ads. It is recommended that only food with the AAFCO (American Association of Feed Control Officials) certification is purchased. Usually, this information is very easily seen on the food label. AAFCO is an organization that oversees the entire pet food industry. It does not endorse any particular food, but it indicates if the food has met the minimum requirements for nutrition, which are set by the industry. Most of the commercial pet foods have the AAFCO label. You should never feed dog food to a cat since it is deficient in nutrients essential to cats and does not contain enough protein to meet the requirements of either kittens or adult cats. Table scraps should not be fed to a cat; although often more appealing than cat food, balanced and complete nutrition is usually compromised. If you wish to feed your cat a home-prepared diet, your cat's health needs to have the diet properly balanced by a veterinary nutritionist (see handout "Feeding Growing Kittens" for more information).

### When should vaccinations begin?

Kittens from a healthy mother will have passive immunity to some feline diseases before and shortly after birth. Before birth, the mother's antibodies cross the placenta and enter the kittens' circulation. Immediately after birth, the mother produces **colostrum**, or first milk, which is also rich in maternal antibodies. These maternal antibodies protect the kittens against the diseases to which the mother is immune. This explains why it is often recommended to booster the mother's vaccinations a few months before breeding.

#### "Although very protective, maternal antibodies last for only a few weeks; after this time, the kitten becomes susceptible to disease."

Although very protective, maternal antibodies last for only a few weeks; after this time, the kitten becomes susceptible to disease. The kitten should receive its first vaccines at about six to eight weeks of age. To provide strong immunity, one to three booster vaccines will be required to complete the kitten vaccine series. Kittens should be vaccinated against feline panleukopenia, feline viral rhinotracheitis, calicivirus, feline leukemia (FeLV), rabies, and possibly against *Chlamydomphila felis*. Your veterinarian will discuss your individual cat's needs at the time of the first visit for vaccinations. The specific vaccines and frequency of vaccination will be based on your cat's lifestyle and its potential risk of contracting an infection.

Maternal antibodies are passed in the mother's milk only during the first one to three days after delivery. If for any reason, the kittens won't nurse during this important period, their vaccinations should begin about four weeks of age or earlier if the risk of disease exposure is very high. Your veterinarian will make specific recommendations for each particular situation.

## Do all kittens have worms?

**Intestinal parasites** or worms are very common in kittens. Symptoms of intestinal parasites include generally poor condition, chronic soft or bloody stools, poor appetite, a pot-bellied appearance, loss of luster to the coat, and weight loss. Some parasites are transmitted from the mother to her offspring either *in utero* (while in the womb) or through her milk, while others are carried by fleas or other insects. The eggs and larval forms of some parasites are transmitted through the stool of an infected cat.

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Very few of these parasites are visible in the stool. However, a microscopic examination of the kitten's feces will reveal the eggs of most of these parasites. Generally, the stool is examined for intestinal parasites at the time of the first vaccinations. However, a fecal analysis may be performed as early as two to three weeks of age if an intestinal parasite problem is suspected. Treatment is based on the type of parasites found although some veterinarians elect to treat all kittens on the assumption that they will have worms. Occasionally, a fecal test will be falsely negative, due to the low numbers of parasite eggs shed in the feces of a young kitten. The Companion Animal Parasite Council recommends deworming kittens for roundworms and hookworms every 2 weeks starting at 2 weeks of age. Other treatment may be needed based on the results of a fecal examination. Consult your veterinarian for specific recommendations for your kitten. You should not administer any over-the-counter deworming compounds or herbal dewormers without first consulting your veterinary hospital.

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