



Stanhope Park Veterinary Hospital

HAND-REARING KITTENS

Raising orphaned kittens can be a very rewarding experience, however, kittens are very fragile, and raising them can be difficult, time consuming, and not always successful. Kittens would normally have their environmental and nutritional requirements met by their mother, and replacing her is not easy, and may preclude you doing much else, especially if the kittens are very young. Total dedication and commitment by the carer is required, as kittens, like babies will need to be with you at all times.

There are several basic functions to be addressed when hand-rearing kittens, to include the provision of a suitable clean, warm environment, suitable feeding regime, attention to urination and defaecation, and attention to general health. The major problems encountered when hand-rearing kittens are chilling, dehydration and starvation. Kittens are very fragile and so can become ill and die very quickly.

ENVIRONMENT

- Warmth is a primary essential for new-born kittens which would normally be obtained by direct body contact with the mother. Kittens cannot react to cold by shivering and cannot control their own body temperature.
- The temperature in the kitten box with no queen should initially be maintained at 29 – 32°C, but the box should be large enough for the kittens to move away from the heat if they become too hot. If the litter is large, the temperature can be reduced since the kittens will generate extra heat when huddled together. The temperature can be gradually reduced to 26°C by 7 - 10 days, and to 22°C by the end of the first month. Try to also maintain an ambient room temperature of 23°C.
- Kittens' bodies should be relaxed when asleep and feel pleasantly warm to the touch, and you should notice gentle body jerks as they rest.
- A clean, safe, and warm nest, can be provided by lining a cardboard box with vet-bed and using a heat pad, placed away from drafts.



FEEDING

- Never use cow's or goat's milk as the protein and fat levels are too low, instead always use a replacement queen's milk formula. Make up the solution following the instructions using a level measure, not heaped. If kittens are still gaining some milk from their mother, then a reduced volume of replacement formula will be needed. The amount directed on the label is usually given as 'per 24 hours', so the volume should therefore be divided into a number of feeds.
- When hungry, kittens will move about in search of milk. If left they will soon get tired and fall asleep again which is undesirable and not recommended, and so interval times between feeds should not be exceeded.
- Formula should be warmed to 35-37.8 °C before feeding (*about the same temperature as the skin of the human forearm*), so temperature can be easily checked on the wrist or back of the hand.

Feeding intervals:

- 0 – 2 weeks: 10 feeds in 24 hours at 2 – 2.5 hour intervals
- 2 – 4 weeks: 7 feeds in 24 hours at 2.5 – 3.5 hour intervals
- 4 – 5 weeks: 5 feeds in 24 hours at 2.5 – 5 hour intervals



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- Baby bottles specially designed for kittens are recommended, with the size of the hole in the nipple being critical. If when the bottle is turned upside down the milk drips from the nipple, then the hole is too large and you risk drowning the kitten. If when the bottle is turned upside down the milk only comes out after considerable squeezing of the bottle, the hole is too small, and its use may result in the kitten becoming discouraged and refusing to nurse. The correct size hole allows the milk to drip from the nipple with minimal squeezing of the bottle.
- To bottle feed, place the kitten in sternal recumbency (*normal standing position*) with the head elevated to 45°. This is comfortable and secure for the kitten and a natural angle to suckle milk. Kittens will naturally cease suckling when full and will pull away from the nipple. Never force a kitten to take extra milk as this risks lung inhalation and drowning. Remember that consumption guidelines are just that – often kittens will consume more and they are all individuals and will let you know when full.
- Normal kittens should eat or sleep for 90% of the time for the first 2 weeks of life. If they cry excessively or fail to suckle, they are usually ill or receiving insufficient milk. Since young kittens can die very quickly, they (*and their mother if still present*), should be examined by a vet as soon as possible to ensure that nothing serious is going on.
- Hypoglycaemia (*low blood sugar*) results from inadequate or infrequent feeding. It can cause severe depression, muscle twitching, and occasionally leads to convulsions. If a kitten refuses to feed, prompt action and veterinary care is required, as kittens have no reserves and will go downhill rapidly. If a kitten shows signs of hypoglycaemia, a few drops of sugar solution placed on the tongue can be life-saving. The amount of frequency of routine feeding should then be increased.
- Weaning should begin at 3 – 4 weeks of age. Initially kittens should be offered milk replacer diluted 1:1 with water in a flat shallow dish. At 3 weeks introduce either moistened dry or tinned growth diet mixed with a small amount of milk solution.

TOILETING

- Kittens less than 2 weeks of age will need stimulating to urinate and defecate, as the voiding reflex would normally be initiated by the queen licking the kittens' ano-genital region. Toileting must be maintained by the carer for approximately 4 weeks or until the kitten is independent. It is quite normal for a distressed cry to be heard prior to defaecation, with crying ceasing upon evacuation. Fragrance-free wet-wipes for new-born babies and soft tissue is useful. Stimulate the ano-genital area both pre- and post- feeding, as kittens feed better with an empty bladder and bowels.
- From 3 weeks of age the reflex should begin to be triggered whilst the kitten is placed in a small litter tray to start toilet training. Leaving a small amount of soiled litter within the tray will serve as a reminder to the kittens of where to perform. It is safer to use wood-chip type litter as opposed to bentonite (*clay*) to start with whilst learning, as some kittens will try to eat the litter, but they very soon get the hang of things.

OTHER

- Hygiene is of utmost importance for feeding and measuring equipment, as well as the carer's personal hygiene in preparing feeds and toileting kittens. Orphaned kittens are very prone to infections, so they must always be kept clean and utensils used for preparing or administering the milk should be sterile.
- It is advisable to monitor the kitten's growth rate by weighing them regularly, ideally daily and at the same time each day. Keeping weight records is good practice and allows weak kittens to be spotted promptly. Kittens should double their birth weight in the first 7 – 10 days, then continue to gain weight steadily.

