

HAND-REARING OF EXOTIC FELID SPECIES: Part 2

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Choice of Milk formula or replacer

Widely used formulas include Pet-Ag's KMR (kitten milk replacer) and Esbilac (puppy milk replacer) (www.petag.com). While KMR is specifically formulated for felids, there have been some reports of diarrhoea and some institutions prefer Esbilac. The recent replacement of the coconut oil by butterfat in both formulations has led to gastro intestinal problems in some exotic animals. The original KMR and Esbilac formulation are now marketed under Pet-Ag's ZOOLOGIC MILK MATRIX line of products as 42/25 and 33/40 and are recommended by the author. We have successfully reared both Arabian leopard and cheetah cubs on the Milk Matrix 42/25 formula. It is important to choose one brand of milk replacer as changes in the milk formula could cause gastro intestinal upset.

Feeding

Milk formula should be gradually introduced to the cub. The first feed should be pure electrolytes (Pedialyte®) followed by a dilute formula (25% formula / 75% electrolytes) that should increase in strength over the following 24 to 36 hours. Cubs consume between 15-20% of their body weight per day however the amount of formula offered at each feed should not exceed 5 - 7% of the neonate's body weight as this is the comfortable stomach capacity of carnivores. Thus divide the total daily volume of feed required by the number of feeds required each day. Decrease the number of feedings as the cub grows (see table 1) Formula can be prepared every 24 hours and kept refrigerated but should be heated to approximately 37.8°C before feeding. Formula can be reheated if necessary during a feed, but any heated formula must be discarded after each feed. Bottled drinking water should be used to make up the formula. Any neonate with diarrhoea should be bottle-fed electrolytes for one or two feeds before gradually reintroducing the full strength formula over 24 to 36 hours. A veterinarian should examine the neonate to determine the cause of the diarrhoea. Felid neonates should be fed while lying on their stomachs with the neck extended and the head up to reduce the risk of aspiration. Neonates that have fed from the mother often resist being bottle-fed and patience is required. Droplets of milk can be placed on their tongue allowing them to swallow and they may be more accepting of the nipple if it inserted into their mouth when they are half asleep.

Elimination

Neonates require massage of the anogenital region with a ball of moist cotton wool to stimulate urination and defaecation. Applying petroleum jelly to the ano-genital area after stimulation may help reduce irritation.

Some prefer to elicit elimination before the feed to make more space in the stomach for formula, others prefer to stimulate them after feeding to reduce the risk of milk contamination.

Weight gain

Weigh the neonate daily. While hand rearing on milk, expect a weight gain of 5% of the neonate's body weight per day and 8 to 10% once they are on solid foods. Occasionally neonates will not gain weight over a 24-hour period, but weight loss or no gain over a 48-hour period indicates a need to worry.

| Age | 1 to 6 days | 7 to 20 days | 21 to 41 days | 42 days |
|---------------------|---|--|--|-----------------------------|
| Feeds over 24 hours | 8: The 00h00 feed is eliminated first if the cub is sleeping. | 6 | 5: Meat is gradually introduced from day 28. | 4 |
| Times | 03h00, 06h00, 09h00, 12h30, 15h30, 19h00, 22h30, 00h00. | 06h00, 09h00, 13h00, 16h00, 18h00 & 22h00. | 06h00, 10h00, 14h30, 19h00 & 22h00. | 06h45, 11h00, 15h00 & 19h30 |

Table 1: Recommended feeding frequencies for a healthy cub; adjustments should be made for each individual animal.

Weaning

Introduce solid food from 7-8 weeks, either by hand feeding small pieces of meat or by mixing meat in a bowl with milk formula. There is no fixed duration for the weaning process but cubs should be eating solids by 10 to 12 weeks of age. Once weaned the cub is fed 10% of its body weight per day which should be divided into 4 meals. Fresh quail and guinea fowl without the feathers or bones are minced up for the initial weaning diet and can be alternated with minced camel or beef. As the cub matures the degree to which the meat is minced can be reduced and at two to three months of age the cub can be fed meat on the bone. A vitamin and mineral supplement for carnivores (CARMIX® www.arielok.nl), manufactured specifically for carnivores should be added to the meat. The stool texture and consistency will change and darken once solid food is introduced to their diet.

Behavioural enrichment

The neonate's behavioural needs should be considered of equal importance to hygiene and diet. An enriched hand-rearing environment aims to meet the behavioural needs of the neonate and foster normal development. Rearing cubs with littermates is one method of achieving this. Never encourage a hand-reared felid to play with humans, imprinted wild felids can be dangerous animals. Cubs enjoy wrestling with cardboard rolls and boxes. Large soft toys can be played with while under supervision and inedible toys can be left with the cub to play with at other times. Ensure that the cub cannot ingest any part of the toy.



Arabian leopard cub © J Strick