Caring for Pregnant and Nursing Cats

Overview Since pregnant and nursing cats with litters can require a great deal of care and attention, they are part of the Neonatal Program. Usually, a mother cat can take care of herself and her babies.

When moms are sick or not lactating, they can require as much attention as our tiny bottle babies. When a nursing cat is not lactating, it is more difficult to find a foster for her and her litter because of the time demands on the foster. When a mother cat does not have milk or does not produce enough milk to feed her litter sufficiently, foster parents will bottle-feed the kittens and mom will do the rest of the work—she will love and comfort her babies, she will keep them warm, she will groom them, and she will stimulate them. When kittens are able to remain with their mother, they develop much better and are much happier.

If Lactating: Some mother cats may be lactating but are not making enough milk, so we must monitor their kittens for proper growth and development. Litters are cared for according to the age of the kittens when necessary.

- If the kittens are not gaining weight appropriately, supplement bottle babies with a bottle or syringe; supplement gruel babies with food in their crate or with a syringe.

If NOT Lactating: Some mother cats may be a little nervous when someone takes their babies away, but they usually get used to it quickly and are happy for the attention. Be gentle when approaching a mother's babies.

- If a mother cat is feral or has shown signs of aggression or extreme nervousness, extra caution should be taken.
- Litters with a mom are cared for according to the age of the kittens.

Always Remember To:

- Clean the litter box and refill as needed with non-clumping litter.
- Clean the interior of the crate and replace any soiled or wet bedding. Be sure to completely clean any feces or food matter.
- After feeding the kittens, give mom fresh food and water. If the mother cat is not eating, alert Katharyn Curtis at mas.rescue@memphistn.gov.
- Do not overfill food bowls for the mother cat; only feed as much as she will eat until the next feeding. Otherwise, the food will dry out and will have to be thrown away.
- If the kittens are not eating solid food yet, there is no need to place extra food in the crate for them; wait until they are transitioning to solid food. Otherwise, the food may not be eaten and it will have to be thrown away.

Neonatal Health and Medical Overview

Common Medical Issue Overview Neonates do not have fully developed immune systems and are susceptible to many illnesses and parasites, some of which they get from their mother at birth. Kittens need proper care and attention to ensure they grow up happy and healthy.

Katharyn Curtis at mas.rescue@memphistn.gov **if you notice:**

- Aspiration (milk coming out of nose during feeding)
- Sneezing
- Coughing
- Eye and/or nasal discharge
- Wheezing; difficulty breathing
- Diarrhea
- Vomiting
- Straining to urinate or defecate
- Bleeding from any part of the body
- Abnormal twitches
- Walking in circles; walking into things
- Loss or decrease of appetite
- Steadily losing weight
- Change in attitude or behavior
- Lethargic or depressed
- Head slumped in food or water bowl
- Any unusual behavior

Upper Respiratory Infection (URI) The term “upper respiratory infection” is used to refer to any illness that affects a cat’s upper respiratory system; it is basically a kitty cold. URIs are common in shelter cats. Common symptoms include sneezing, runny nose and/or eyes, fever, and loss of appetite. URIs are treated with antibiotics. If kittens are having difficulty breathing, they may also need a humidifier. Be certain to keep kittens warm until they have recovered from a URI. URIs are very contagious to other cats and kittens through direct contact and can also be airborne.

FeLV Feline leukemia virus (FeLV) suppresses the immune system and can cause cancer or other serious illnesses in susceptible cats. FeLV is fatal and the life expectancy of a mature, infected cat is 2–4 years; most FeLV+ kittens do not survive to maturity. FeLV is transmitted through saliva and nasal secretions, as well as through urine, feces, and milk from infected cats. The virus can also be transferred through a bite wound, mutual grooming, shared use of litter boxes and feeding dishes, sexual contact, and from a mother cat to her kittens while in utero or during birth. FeLV+ cats and kittens are not housed in the Neonatal Ward. Young kittens testing positive for FeLV are tested again when they are a little older to confirm the results of the first test, which commonly gives a false positive as antibodies from the mother can be detected in the kitten. FeLV does not survive long outside of the cat’s body, probably less than a few hours, so carefully adhering to established protocols should limit the possibility of transmission.

All kittens are tested for FeLV at time of spay/neuter surgery. Usually, if a mother cat has FeLV, it is assumed the kittens will also have it, since mother cats can transmit them to their babies during birth.

Calicivirus Calicivirus, also known as “calici,” is a viral infection that can occur in cats and kittens that are not vaccinated or are newly vaccinated. Calici is spread between cats through direct contact with eyes and noses, or through contact with contaminated objects that an infected cat has sneezed on or otherwise been in contact with, such as carriers, feeding dishes, and even food. Humans that have come in contact with an infected cat or kitten could potentially pass the virus through contact with other cats.

The virus can have multiple forms, the most common being an upper respiratory tract form. Other forms include the joint form, which can cause fever and swelling of the joints, and the mutant virulent form, which can cause URI signs and ulcers on the face, among other symptoms.

Due to the ease of transmission of this virus, cats and kittens with calici should be immediately quarantined in a separate area from healthy cats. Those who treat the affected cats and kittens must follow strict sanitation protocols to ensure that the virus is not spread.

Panleukopenia Panleukopenia, also known as “panleuk,” is a viral infection that most commonly affects kittens and young cats. It is transmitted through direct contact with saliva, vomit, and feces. An infected mother cat can also transmit panleuk to her kittens at birth. Left untreated, it is almost always fatal. This illness can be frustrating and difficult to deal with because the virus is very durable, can survive in the environment for up to a year, and is highly transmissible. This means that other unvaccinated cats can become infected with panleukopenia simply by coming into contact with places where an infected cat has been.

Symptoms of panleuk include vomiting, diarrhea, loss of appetite, and lethargy. Symptoms can take 3–10 days to present once a kitten has been infected. Once kittens are suspected or confirmed of having panleuk, they are put into quarantine or placed with a specialized foster for treatment.

● To clean all crates, supplies, and everything else that was touched by or was near infected kittens, use bleach diluted with water at a ratio of 1:32, bleach to water. A stronger dilution is not more effective and can lead to skin and respiratory problems for both kittens and humans. A weaker dilution is not effective.
● First, all surfaces must be hard-scrubbed with cleanser and water.
● Next, all surfaces must be soaked with diluted bleach for 10 minutes. Then, all surfaces must be wiped clean again with cleanser.

This process is repeated three times. So: scrub with cleanser, soak with diluted bleach for 10 minutes, wipe with cleanser; soak with diluted bleach for 10 minutes, wipe with cleanser; soak with diluted bleach for 10 minutes. After the third soak, thoroughly wipe the area clean, spray with disinfectant, and wipe clean again.

● When scrubbing, be sure to thoroughly clean any crevices; use a toothbrush for very small or tight spaces. All organic matter must be decontaminated and removed.
● Always wear gloves and a smock when decontaminating for panleukopenia.
● If a surface or an item cannot be effectively decontaminated, dispose of it.
● Laundry must be washed with soap and a cup of bleach and should not be washed with any laundry that has not been exposed to panleuk.
● While wearing gloves and a smock, place laundry loosely in the washer; if it is packed too tightly, the laundry will not be washed and sanitized thoroughly.
● If it is determined that the laundry item cannot be effectively decontaminated, dispose of it.

Fosters are strongly advised to have their personal pets vaccinated to prevent transmission of this deadly disease. Should a foster’s personal pets contract panleukopenia, MAS is not responsible for treatment or for the cost of treatment. The panleuk vaccine is considered very effective.

More information about panleukopenia can be found on this website:
http://www.veterinarypartner.com/Content.plx?P=A&S=0&C=0&A=1983

Eye infections Eye infections are quite common with kittens—sometimes a kitty cold can move into the kitten's eyes, and some kittens come to the nursery with eye ailments. These are usually treated easily with medicated eye drops or ointment.

● If you notice any eye discharge and the kitten is not currently being treated for any eye issues, email Katharyn Curtis at mas.rescue@memphistn.gov.
● Clean discharge matter from a kitten's eyes with a cotton ball or piece of gauze dampened with warm wate, wiping gently so as not to hurt the kitten's delicate eye area.
● **Never** double-dip a cotton ball or gauze in the warm water or medicated solution; always use clean gauze or cotton so as not to contaminate the water or solution.

If a kitten has something more serious than simple conjunctivitis, other eye medications or treatment may be required. Shelters often see kittens whose eye infections or injuries will leave them partially or completely blind, and in some cases even require removal of the eye itself. These kittens are still highly adoptable and adjust very well to their condition.

Vaccinations Most pet owners are used to having their kittens begin vaccinations around eight weeks of age, when the immunity a kitten gets from its mother starts to wear off. Since kittens living in a shelter do not have a mother, they have a different schedule for vaccinations so they are protected from contagions coming into the nursery.

● Kittens will be vaccinated at intake if their eyes are open.
●If one or more kitten in a litter is not ready to be vaccinated, vaccinations will be done when all kittens are ready so that the entire litter is on the same schedule.
● Kittens must have booster shots every two weeks.
● Katharyn Curtis is responsible for making sure kittens receive vaccinations at the right time and will maintain vaccination records for all kittens in the foster program.

Parasite Overview
Internal & External

Fleas Fleas are bloodsucking parasites and, as with ringworm, a flea infestation is a nuisance in a single animal but can be devastating in a shelter. On a mature cat, fleas are not particularly serious, but young kittens do not have that much blood and they are virtually defenseless; they do not groom themselves yet, so they are not scratching. Young kittens can easily get anemia from a flea infestation, which can be life-threatening.
● Flea treatments that are meant for older cats can kill a kitten, so if you find fleas or flea dirt on kittens of any age, alert Katharyn Curtis at mas.rescue@memphistn.gov so the correct treatment can be administered.
● Over-the-counter flea treatments are not used because they are not effective and are much more toxic than what our veterinarians use.

Ticks We rarely see ticks on our kittens or mother cats. If you think you see ticks, alert Katharyn Curtis at mas.rescue@memphistn.gov for further evaluation and treatment.

Ear Mites Ear mites are tiny parasites that live in the ear canal. If you see a dark brown discharge (which can look like dirt or coffee grounds) in a kitten's ears, it is probably ear mites.

- If you see dirt in a kitten's ears, alert Katharyn Curtis at mas.rescue@memphistn.gov so it can be evaluated and treated.
- Do not clean a kitten's ears without first checking with Katharyn Curtis. A kitten's ear canal can easily be damaged by the improper use of cotton swabs.
- Ear mites can be passed from one kitten to another, and transmission usually requires direct contact.

Roundworms, Tapeworms, and Hookworms Worms affect a cat's digestive system and are very common in kittens. You can sometimes see worms in or around a kitten's rectum; you may see a long worm or what looks like rice protruding from its anus. Indications of worms are a large belly, diarrhea, and an inability to gain weight even when eating well. If you see signs of worms, Katharyn Curtis at mas.rescue@memphistn.gov. There are various medications given to the kitten, depending on the type of worm, that easily take care of the problem. Worms can be passed through the feces to other animals.

Coccidia and Giardia Coccidia and Giardia are very common. They are protozoa that invade a kitten's digestive system and cause diarrhea. These are highly transmissible and can be spread through feces. These parasites are easily treated with oral medications.

Parasites can cause digestive problems as well as diarrhea for the kitten. Diarrhea can be dangerous for a kitten and should be treated as soon as it shows up. Not all diarrhea is related to illness or infection—sometimes it can be a result of a change in diet—but all diarrhea should be reported to the Katharyn Curtis at mas.rescue@memphistn.gov.

Ringworm Overview
Neonatal Specific

Overview Ringworm is a fungal infection affecting the skin, hair, and occasionally nails of animals and people. It is in the same family as athlete's foot and is not a life-threatening condition at all; in fact, it does not affect the health or well-being of animals or people. Three species of ringworm fungus most commonly affect cats and dogs. The species that affect cats and dogs can be passed between these two species, as well as passed to humans. It is contagious for people; the young, old, and immune-compromised are more likely to get it. Ringworm is also very contagious to other animals.

Most often it will cause a circular area of fur loss that is red and may be slightly raised. Ringworm can also have other characteristics but these circular, hairless lesions are most common.

Ringworm in an individual cat is a nuisance, but ringworm in an animal shelter can lead to almost unmanageable outbreaks, thousands of dollars in diagnostic and medical costs, spreading among adopters and staff, and an intolerable blow to shelter status in the community. It is vital to have a consistent and effective strategy in place to prevent and manage this problem.

Fosters can get ringworm from foster cats and can also pass it to their pets at home. If the following established procedures are followed, however, the risk of doing so is minimized.

Risk Factors

● Animals of any age are susceptible to ringworm, but animals less than one year old and geriatric animals have the highest risk. Cats have a greater risk than dogs.

● Animals with compromised immune systems and conditions such as FIV, FeLV, pregnancy and lactation, malnutrition, cancer, and stress, or those on anti-inflammatory drugs, can have a higher risk.

● Animals with preexisting conditions that compromise grooming, and those with external parasites such as fleas, are at an increased risk.

How is Ringworm Spread? Ringworm is most often spread through contact with an infected animal or a contaminated environment and therefore can be a serious problem in a shelter. Ringworm is very durable in the environment, and if left untreated, it can persist for months in carriers, furniture, carpets, dust, and so on; it can also infect animals housed in a contaminated environment. Ringworm can be spread readily through grooming implements, contaminated toys and bedding, or by humans' clothing and hands. It can be found on the hair of animals from a contaminated environment even when the animal itself is not showing any symptoms. In nature, the incubation period for ringworm is between 4 days and 4 weeks. Close contact with the infected animal or its bedding is usually required for transmission.

Signs and Treatment Irregularly shaped areas of fur loss; the skin in these areas can appear rough and scaly, and the bald patch is often round. Full-body dipping or spot treatment with a lyme sulfur dip is effective, but it takes time to eradicate the fungus

● Lymdip needs to be diluted at a ratio of 3.5ml of Lymdip into 1⁄4 cup of water

● Kittens under the age of six weeks should not be dipped

- Dab a cotton ball in the Lymdip and dot onto visible lesions

● When dipping kittens, make sure that they do not get chilled

- Allow to air dry in a warm kennel. Note that the dip will cause the fur on cats to yellow, but the color fades quickly

● The dip does have a "rotten egg"-like odor, so keep towels used during dipping separate from regular laundry and wear old clothes to dip. Also remove any jewelry or nice clothing that could come into contact with the solution.

Medication is sometimes used but not on very young cats, as it has a very damaging effect on the liver

Sanitation

● Use diluted bleach mixed at a ratio of 1:10, bleach to water, on any surface that you or the infected cats touch—bin, scale, table, pen, microwave, snuggle disc, refrigerator, your arms, etc. Leave it on for 10 minutes and then wipe with paper towels before moving to the next litter.

● Gloves may be worn with the understanding that they do not prevent the spread of ringworm.

Fading Kitten Syndrome

Overview Fading Kitten Syndrome is a life-threatening emergency in which a kitten, sometimes one that was previously healthy, “crashes” and begins to fade. This can occur with kittens who have a mother, as well as those who do not, so watch for mother cats pushing away a kitten and not caring for it. If not dealt with immediately, this can result in death. There is not always a clear reason for this condition. It has been linked to birth defects, environmental stress, and infectious disease. Early detection and treatment are imperative, but even with tube feeding, rehydration, and monitoring, many of these kittens will still die.

Symptoms

- Low body temperature; the kitten feels cool or cold to the touch
- Extreme lethargy; not getting up, unable to stand, not responding when pet, can’t hold its head up
- Gasping for breath; mouth breathing
- Meowing, crying out

When a kitten is fading, two things are happening: hypothermia (being too cold) and hypoglycemia (low blood sugar). You must get the kitten’s body temperature up and raise its blood sugar, or it will die.

Act Immediately!

Process

- Get the kitten warm.
    - Immediately wrap it up in a towel like a burrito, leaving only the kitten’s face exposed. Its whole body—tail, ears, and paws--should be in the towel. **Do not take the kitten out of the towel to adjust it or check on it.** Every time you take the kitten out, you will make it cold again, even if it is only for a second.
    - Wrap a heating pad set on low around the towel (to avoid burns) as an extra source of heat. Secure it around the towel so it stays in place.
        - The kitten’s body cannot warm itself with only a towel; you have to apply extra heat. Your own body heat won’t work because it is lower than what a kittens should be.
- As soon as the kitten is warmed, work on raising its blood sugar
    - Put some sugar or Karo syrup in warm water at a ratio of 1:1. Put some of this solution in a syringe and give the kitten three drops every three minutes.
        - If the kitten is not swallowing, try rubbing some Karo or sugar water on its gums and tongue.
        - Whatever sugar source you use, take care not to contaminate anything by double-dipping syringes.
    - Be sure you are administering the sugar every three minutes.

This is a true emergency. Take the kitten immediately to MAS during normal hours or AEC from 6pm-8am. If the kitten passes, follow the deceased kitten protocol and be sure to alert the Nursery Manager and/or Assistant Manager.

If the above steps are followed, we generally have success with these kittens. Keep in mind that it can sometimes take hours for them to come out of it and start acting normal again. Know that even with love, attention, and the perfect treatment, some fading kittens still won’t make it.

Deceased Kitten Protocol

Overview It is never easy to lose a kitten, and it affects each person differently. Understand that we are operating against nature most of the time, and the statistics are against us. If you ask a veterinarian, he will tell you that an orphan kitten has a less than 10% chance of survival. Even against the most incredible odds—remember, most of the kittens and cats we take into our program arrive sick or injured—our survival rates have been 80% and higher since the inception of this program. We focus on the positive outcome of the work we do, but we do not pretend that we can save every kitten we rescue.

Process

- Make sure the kitten has passed. A very cold, hypoglycemic kitten can appear to be dead, but may not be.
- Wrap the kitten in a cloth and place it inside a Ziplock bag or other bag.
- With a *Sharpie*, write the kitten's name and A# on the outside of the bag. This is very important, as all deceased kittens must be accurately reported in APA! records and must also be reported to AAC.
- If the kitten is not properly identified, someone will have to inspect the kitten later to determine its true identity. Please be sure the kitten is correctly identified and be sure to use a *Sharpie* to write the A# and name on the bag.
- Notify the Katharyn Curtis at mas.rescue@memphistn.gov that the kitten has passed.
- Bring the deceased kitten to MAS