

# Guide to Raising Unweaned & Underage Kittens

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### Abstract

This guidebook is designed to provide information on the care of unweaned/underage kittens and is applicable to foster parents, rescue groups, and animal sheltering facilities.

This guidebook was updated with the assistance and expertise of Marnie Russ, Neonatal Kitten College Program Administrator, Animal Welfare League of Arlington. It is part of a resource library maintained jointly by the Shelter Medicine Programs at the University of Wisconsin and UC Davis. The latest version of this document and all other shared resources can be found at their respective websites.

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## Alternatives to Shelter Intake

During kitten season, many well-meaning members of the public swoop in to “save” litters of kittens that they see and then bring them to over-crowded shelters that do not have the capacity to provide 24 hour care because they think it is the right thing to do. Prior to kitten season, let the public know what to do if they find kittens outside. Provide information on [your website](#) and social media pages and to the media through a press release. A [flowchart](#) can help guide staff and the public. Be sure to provide descriptions and photos of what healthy and unhealthy kittens look like to help finders decide if they need to intervene or not. If the kittens appear healthy encourage members of the public to wait (up to 4- 6 hours) and watch for mom before picking up any found kittens. Mom may just be away briefly, but she will not come back if they stay near the kittens; they should monitor from afar. If the kittens do not appear healthy, mom does not return or if she is known to be deceased, then it is appropriate to intervene. If intervention is required, ensure all of your messaging advises finders to call the shelter for advice before moving them. The only animals who should be brought to the shelter are those who would be best served by that pathway. Try to recruit “foster finders” and create partnerships with other organizations and rescue groups in your area to create a [network](#) for underage kitten care. For more information, refer to the online Learniverse Course [Responding to Kittens](#) (This course was created in relation to COVID, however, most of the information is relevant and helpful in general.)

### Foster Finders

One source of future foster parents are the people who find the kittens who were determined to be truly orphaned and want to bring them to the shelter. By their actions, they've shown they care about the lives of these kittens and may be willing to keep them in their homes but are often unsure they can provide the necessary care.

When a shelter provides the means and knowledge to care for kittens, foster care programs start

growing. The training for potential fosters should include an easy-to-follow kitten care guide, foster coordinator's contact information, and a kit containing the items needed to set up a little nursery at their home. A kit should contain syringes for syringe feeding, kitten milk replacer, canned kitten food, a small litter box, litter, a small double diner dish and a kitten care guide. If finances allow, include a heating source like a Snuggle Safe disk and a small kitchen scale for daily weighing. If you can't include a heat source or a small scale, then encourage foster parents to acquire these. These foster finders also need to know what the shelter will provide, such as medical care, food and litter, and whether they are allowed/expected to find the adoptive home(s) or if the kitten(s) will return to the shelter for placement.

## Home Nursery Kit Contents

- Nursing kit
- Syringes
- Kitten Care Guide
- Kitten milk replacer
- Canned kitten food
- Small litter box
- Non-clumping litter
- Small double diner
- Digital kitchen scale
- Baby Cat dry food
- Heat source (e.g. Snuggle Safe disk)
- Foster Coordinator Contact Information
- Cotton rounds or fragrance-free baby wipes to clean eyes
- Flea Comb

# Caring for Kittens from Birth to Eight Weeks

## 5 Requirements for Kitten Care:

- Keep kittens warm.
- Provide kittens with adequate hydration and nutrition.
- Keep kittens clean.
- Provide socialization with people and with foster mates.
- Do your best to protect them from infectious disease.

## Body Warmth

We cannot overemphasize the need for a heat source in orphaned kittens. The queen would have provided a nice 100 – 103 F (38 – 39 C) environment for them. Continue to provide a heat source for orphaned kittens until four to six weeks of age. Although kittens over four weeks old may start avoiding the warmed bed, if the room is cool, even older kittens will seek out a warm spot. For this reason, as well as for socialization, consider appropriately pairing new single kittens of the same age so they can share body heat and be less likely to experience hypothermia.

Provide a warm, non-drafty room for the kittens. Place a blanket over the entire bottom of the cage and provide a bed (made from a small litterbox or cardboard box) as well as a litterbox. A towel covering the crate or front of the cage prevents drafts and keeps kittens under 4 weeks of age nice and warm. Ideally, kitten rooms should be kept around 85 F or 29 C but that it isn't always practical. A kitten over 6 weeks of age only needs the availability of a warm, cozy spot.

Since kittens under four weeks of age do not have the ability to thermoregulate, we must help them maintain body warmth. One method is to place a warmed Snuggle Safe disk at the opening of the cage

or crate. This disk then provides the needed warmth for 8 hours. Instructions for how long to heat the Snuggle Safe disk depending on the wattage of the microwave are printed on each disk. If you are unsure what wattage the microwave is, heat the disk for 5 minutes, then check the temperature with your hands. Make sure it does not feel too hot before covering it with a soft blanket and placing it in the cage or crate. Make sure the kitten cannot directly contact the disk. If no heating disk is available, place a heating pad on the low setting under the crate or on the bottom of the cage, then place a soft folded towel or blanket between the kitten and the heating pad. Do not use terrycloth towels with unattended kittens under 6 weeks of age as they do not have the ability to retract their claws and they can get a claw caught in the loop of the towel possibly leading to a shoulder dislocation. If no heating disk is available, consider a pet heating pad wrapped in a soft blanket. Most pet stores now carry pet heating pads that only reach a low temp and do not have an automatic shut off. These are ideal assuming there is always a plug close by.

Check the heat source frequently to ensure it is not too hot or too cold. Make sure some area of the cage does not contain a disk or have a heating pad under it so kittens can move away from the heat source if too hot. Kittens also like a nice nest in their cage or crate so bundle them in a nice fleece that they can crawl into and out of.

## Kitten Feeding

Just like humans, every kitten is different. They will eat different amounts, gain weight differently, and prefer different foods. Daily weight gain of any amount is an indication that the diet is meeting the kittens' nutritional needs. Weigh kittens at the same time daily, under the same circumstances (i.e. before feeding and stimulation or after feeding and stimulation). Kittens should gain about ½ ounce (14 grams) per day or 4 ounces (113 grams) per week. Keep in mind these numbers will fluctuate from kitten to kitten based on resources. Again, the most important indicator is weight gain. Younger kittens recently taken from their mother are more accustomed to receiving smaller amounts of food slowly and more often through the process of nursing.

When bottle feeding kittens, we are delivering larger volumes of milk at a much faster rate than a nursing mother. Healthy kittens do not need to be fed every two hours. Allow kittens to sleep for longer periods and do not wake a kitten to feed it. After a few feedings this will stretch their stomach to allow for more milk to be taken in at each feeding, which in turn will require less feedings than the previous practice of every two hours.

Guidelines for bottle feeding kittens:

- Kittens must be warm, they cannot digest properly if their body temperature is low.
- Prepare kitten milk replacer according to the packaging. (NEVER give them cow's milk and keep them on the same formula)
- On average, kittens should eat 2 tablespoons or 30 ccs of formula per 4 ounces of body weight within a 24-hour period. However, if a kitten is gaining weight, they are meeting their nutritional needs
- Kittens that have recently left a nursing mother will need time to lessen the frequency at which they are fed
- After a first few initial feedings, even the youngest of kittens should not require a feeding of every 2 hours.
- Feed weak kittens, ill kittens or ones not gaining weight more frequently. They will be at a greater risk for hypoglycemia.
- Never wake a sleeping kitten to feed it unless a significant amount of time has passed. Uninterrupted sleep is vital to growing kittens.
- Kittens tend to sleep longer and deeper at night when vibrations and disruptions are minimal.

[Click here](#) for a video from Maddie's Institute on Orphaned Kitten Care and bottle feeding

## General Feeding Guidelines

Test the temperature of the formula before feeding, it should be warm (around 100 F or 38 C), but not hot.

Warm the bottle by placing it in hot water for a few minutes or by putting it in the microwave until it reaches the correct temperature.

A brief time in the microwave is fine but can warm too quickly so always err on the side of not warm enough. When microwaving, be sure to gently mix (to avoid bubbles) well before feeding to eliminate hot spots that naturally occur in microwaved liquids. Test on your wrist after you have shaken the microwaved formula.

Always properly position a kitten for feeding. NEVER recline a kitten on their back while feeding. This can cause them to aspirate, which means the kitten inhales the formula into their respiratory tract rather than swallowing. Aspiration can lead to a reactive pneumonia and be fatal. Think of how they nurse when they are on the mother, they are in the prone position, leaning forward or flat on their belly while feeding. To achieve this position, place the kitten on their stomach on a towel or cloth so the kitten can cling to the material and knead instinctually. If the kitten is acting frantic while nursing, try wrapping the kitten in a towel while feeding it. When bottle feeding, gently open the kitten's mouth with the tip of your finger and slip in the nipple. Once the kitten learns what is coming, it will search out the nipple enthusiastically. You will feel a vacuum effect when the kitten gets into suckle mode. Watch for bubbles in the bottle during suckling and ears wiggling. These movements mean the kitten is suckling successfully. To keep air from getting into its stomach, hold the bottle at a 45-degree angle, keeping a slight pull on the bottle. Allow kittens to suck at their own pace. If a kitten refuses to take the nipple or will not suckle, try rubbing it vigorously on the forehead or stroking its back much as its mom would. Using a toothbrush to stroke the kitten can simulate the feeling that it would get from the queen's tongue. If you still cannot get them to nurse from the bottle, syringe feed the kitten to make sure they get adequate nutrition. If a kitten requires syringe feeding, be aware that the milk needs to be administered from the side of the mouth to ensure that all milk swallowed by the kitten is completely under their own control. Inserting the syringe at the front of the mouth can easily lead to aspiration.

If syringe feeding is necessary, have a plan in place for who foster parents should contact. See "Kitten Weight Gain and Developmental Milestones" section for instructions on how to syringe feed.

If feeding multiple kittens, it is often easiest to give all of them a full turn at the bottle, drinking until they spit out the nipple, then stimulate the kitten and allow them to rest while you feed remaining foster mates. After each has had one turn at the bottle, go back to the first and repeat the process. This will ensure that you get the kitten as full as possible allowing for longer rest periods between feedings. You cannot over feed a kitten, but you can feed a kitten too often. Forcing a kitten to eat when they aren't hungry or asking for food, can stress them and give them diarrhea. A full kitten should have a pear-shaped abdomen when it is held up under their front legs.

Kittens that seem too weak to nurse may have an underlying medical issue. A kitten refusing to nurse beyond the first few "getting the hang of it" times may indicate illness and the need to be examined by a veterinarian. Have a plan in place to for who foster parents should contact.

After each feeding session, give each kitten a full-body once over with a barely damp, warm washcloth. Use short strokes like their mom would use. This activity keeps the kitten's fur clean, teaches them how to groom and provides needed socialization. Make sure the kitten is completely dry before placing them back in their cage. Cover the cage with a blanket.

We highly recommend taking a warm cotton round and stroking a kitten's eyes twice a day. This is the first place that bacteria can enter the body for kittens as they grow and their eyes begin to open. Queens keep this area very clean so we need to pay close attention to it as well to reduce the risk of eye infection.

Kittens naturally suckle as an act of self-soothing. Sometimes kittens begin suckling on each other after or before a meal. This may be a sign that the frequency of feedings needs to be increased or the kittens are stressed. If littermate suckling becomes problematic, especially around the genital area, temporarily separate the kittens as soon as you can. This can become a very dangerous habit. Check each kitten's genitals to ensure sucking activity is not causing problems (redness, irritation, penis hanging out, etc.). Suckling on genitals can lead to the urethra swelling shut and having to be surgically reopened. If any of

this occurs, have a plan in place for who foster parents should contact. Kittens that have to be separated from littermates should still be allowed supervised playtime with siblings and sleep in close proximity to still get the recognizable scent of littermates. In most cases temporary separation is only needed for about a week or so until the kittens mature and suckling reflex dies down.

## Weaning

A kitten is ready for the weaning process when they are litter box trained and begin biting the nipple often and forcefully. Continue bottle feeding through the weaning process to ensure kittens get adequate nutrition and are not overly stressed.

The first step of the weaning process is to get the kitten to lap up formula or gruel/pate from your finger and then a spoon. Once they master this skill, put formula in a flat dish. Introduce the kitten to solid food by mixing warm canned kitten food and prepared kitten formula into a thin gruel. Gradually reduce the amount of formula mixed with canned food until the kitten is eating just the food.

Place the food in a shallow dish. Some kittens begin lapping right away; others prefer to lick the gruel from your fingers. Allow them to do so and slowly lower your finger to the dish. The kittens may bite the edge of the dish or walk in the food. Sometimes it takes several meals before they catch on. If a kitten does not seem interested in the gruel, try gently opening the kitten's mouth and rubbing a little of the food on its tongue or teeth. Be patient, the weaning process takes time. As the kittens catch on, thicken the gruel. When kittens are eating thicker gruel, they should always have fresh water available in a low spill-resistant bowl.

Kittens often walk through their food. Make sure the kittens are clean and DRY before putting them in their cages. Most weaning kittens are messy eaters so you may not be able to leave gruel or water in their cages at first. Wet kittens can rapidly lose body temperature.

Some kittens will simply refuse wet food. Make sure you have a small kibble, highly scented option like Royal Canin Babycat. The scent creates interest, and the kibble size makes it easy to eat. This can be available at all times through the weaning process. At the same time you make kibble available, place shallow water bowls out. If a kitten turns down wet food and sticks to dry, they need more hydration available to them.

[Click here](#) for a video from Maddie's Institute on weaning orphaned kittens onto solid foods.

## Stimulation for Urination and Defecation

Mother cats groom their kittens to stimulate urination and defecation on a regular basis. If you are acting as their foster parent, you get this important duty. Very young orphan kittens will not be able to urinate and defecate without your help, so this is a crucial part of neonatal kitten care. Before and after each feeding, gently rub the kitten on their lower abdomen, as well as the genitals and rectum with a cotton round, or toilet paper dipped in warm water or an alcohol and fragrance-free baby wipe. Whatever you stimulate your kitten with, make sure it is white so you see the color of the elimination. Pale yellow urine is ideal. The darker the urine, the more dehydrated your kitten may be. Consider adding more water or Pedialyte to your formula. Make sure to rub only enough to get the kitten to eliminate because overstimulation will irritate the area. Keep an eye out for chafing and lingering dirt and do not let the kitten get chilled. Kittens should (and almost always will) urinate during each stimulation. They should defecate at least once daily. It is normal for a kitten that just comes into your care to not defecate for up to 48 hours. Transitions stress their system resulting in a delayed bowel movement.

General guidelines are:

- Kittens need to be stimulated until about 3 weeks of age.
- Kittens should be stimulated before and after each feeding.
- Kitten should urinate every time and defecate at least once daily.

When kittens are 3 – 4 weeks old, they no longer need help eliminating body wastes. Place a litter box in the crate or cage and fill with non-clumping litter or shredded newspaper.

At the same time as introducing a litterbox, you may need to start providing some dry kitten food so the kittens can chew on the food and not the litter. When teaching a kitten to use a litterbox, placing their feces in the box so they smell it there often helps. If you have a kitten that defecates on its towel instead of in the box, move the feces to the box instead of completely cleaning it out of the cage.

[Click here](#) for a video from Maddie's Institute on how to stimulate a kitten to urinate and defecate.

## Kitten Weight Gain and Developmental Milestones

Kittens should gain about ½ ounce (14 grams) every day or 4 ounces (113 grams) per week. Weigh them at the same time every day with a kitchen or small postal scale. Lack of weight gain in a 24 hour period is cause for concern. Begin syringe feeding the kitten and have a plan in place for who foster parents should contact. To syringe feed the kitten, mix up the formula as usual and then draw it up in a syringe. Place the opening of the syringe on the side of the mouth – never directly in front of the mouth. Place a drop of milk on the kitten's tongue and make sure whatever is swallowed is completely under the control of the kitten to avoid aspiration. If you place a nipple on the syringe, you can enter through the front of the mouth encouraging the kitten to pull the milk through the nipple. Make sure they swallow the formula before you push more into their mouth.

### Kitten Developmental Milestones

#### Age Weight Milestones

Birth  
3–3.7 ounces  
85–105 grams  
Eyes and ears are closed.  
Sleep 90% of the time.  
Minimal handling.

2 – 5 days  
3.5–6 ounces  
90–140 grams  
Umbilical cord falls off.  
Can begin to purr.

10 – 14 days  
8 ounces  
227 grams  
Eyes and ears should be open.  
Healthy kittens will be round and warm with pink skin and will rarely cry.

2 – 3 weeks

12 ounces

340 grams

Deciduous incisors erupt, can begin to eliminate without help.

Will start crawling, standing, and playing with littermates.

Begin regular handling.

Ready for deworming.

4 weeks

1 pound

454 grams

Deciduous canines erupt, beginning to walk but do not have great balance, will start to groom themselves, able to thermoregulate.

Continue daily handling.

Ready for their 1st vaccine.

Ready for gruel and may be ready for introduction of dry kitten food.

6 weeks

1.5 pounds

680 grams

Deciduous premolars erupt.

Running, playing, using the litterbox, grooming themselves.

Should be eating dry kitten food, supplemented with canned.

Ready for surgery and adoption (if the veterinary team is comfortable).

8 weeks

2 pounds

907 grams

Ready for surgery and adoption (if not done at 6 weeks).

## 0 – 1 Week of Age

**Feeding:** If the kittens do not have a mother to feed them, they need to be bottle fed more regularly, about 6-8 feedings a day. If the kitten is not gaining weight, add an additional feeding. Do not wake sleeping kittens; feed them once they are awake to get in all of their daily feedings. Remember, you cannot over feed a kitten, but you can feed a kitten too often. Forcing a kitten to eat when they aren't hungry or asking for food, can stress them and give them diarrhea. A full kitten should have a pear-shaped abdomen when they are held up under their front legs.

If the queen is with the kittens, they should nurse vigorously and compete for nipples. Newborns can nurse up to 45 minutes at a time. Be sure to weigh kittens nursing at least once a day if the queen will permit it. Check to make sure that each kitten is settled and nursing. A great deal of activity and crying could indicate a problem with milk flow, quality or availability. When the queen re-enters the box, there should be some fussing for only a few minutes before everyone has settled down to serious nursing.

**Environment:** The temperature of the nest box should be nice and warm: 85-90 F. Hypothermia is the number one danger to newborn kittens.

**Development:** At one week of age, the kittens should weigh around 4 ounces and should be handled minimally to ensure adequate sleep. Kittens will sleep 90% of the time and eat the other 10%.

## 1 – 2 Weeks of Age

**Feeding:** Continue bottle feeding orphans 4-6 times a day until kittens are full but not bloated. If the kitten is not gaining weight, add an additional feeding.

**Environment:** Floor temperature of the nest box should be nice and warm: 80-85 F.

**Development:** Kittens at 2 weeks of age will weigh around 8 ounces. Ear canals open between 5 and 8 days. Eyes will open between 8 and 14 days. They open gradually, usually starting to open from the nose outward. All kittens are born with blue eyes, and initially no pupils can be distinguished from the irises – the eyes will appear solid dark blue.

Healthy kittens will be round and warm, with pink skin. If you pinch them gently, their skin should spring back. When you pick a kitten up, they should wiggle energetically and when you put them down near the mom they should crawl back to her. Healthy, well-fed kittens seldom cry.

To determine the sex of the kittens, hold a kitten on their back in your hand. In females, the vulva is a vertical slit above the anus; they are very close together. In males, the penile opening is above the anus, but they are separated by a raised scrotal sac and thus seem far apart. It is easiest to see the differences between the sexes if you examine all the kittens and compare the differences.

## 2 – 3 Weeks of Age

**Feeding:** Continue bottle feeding 4-5 times a day until kittens are full but not bloated. If the kitten is not gaining weight, add an additional feeding.

**Environment:** Floor temperature of the nest box should be nice and warm: 75-80 F.

**Development:** If there is a queen, she will begin to spend larger periods of time out of the nest, though she will not go far from it. Kittens will weigh around 10 – 12 ounces. Their ears will become erect. Kittens begin to crawl around day 18 and can stand by day 21. Kittens will begin to play with each other, biting ears, tails, and paws, even before their teeth have come in. Kittens learn to sit and touch objects with their paws.

Kittens begin their socialization phase – they will be strongly influenced by the behavior of their mother for the next six weeks. To further socialize kittens, increase the amount of handling and get them accustomed to human contact. It is important not to expose them to anything frightening; children may seem intimidating and should be supervised closely while visiting to ensure gentle handling.

## 3 – 4 Weeks of Age

**Feeding:** Continue bottle feeding 3-4 times a day and begin the weaning process. At this stage kittens may start lapping from a bowl. If kittens do take an interest in solid food, still offer food allowing them to eat but continue to bottle feed as well.

**Environment:** Floor temperature of the nest box should be 70 – 75 F from this point onward.

**Development:** Kittens will weigh around 13 -16 ounces. Adult eye color will begin to appear but may not reach final shade for another 9 to 12 weeks. Kittens begin to see well, and their eyes begin to look and function like adult cats' eyes. Kittens will start cleaning themselves, though their mother will continue to do most of the serious cleaning.

## 4 – 5 Weeks of Age

**Feeding:** They can usually drink and eat gruel from a shallow dish by 4 weeks. Weaning should be done gradually; bottle feeding should be continued twice a day while they are learning to eat solid foods. Introduce dry food and water. Keep in mind that some kittens do not like wet food and will only transition when kibble is available. A strongly scented small kibble like Royal Canin Babycat can be the only way to transition a kitten who does not have a taste for wet food. If that is the case, make sure to keep offering a

bottle to meet nutritional needs until their teeth are fully developed.

**Development:** Begin litter training at four weeks. When you notice your kittens moving away from where they sleep to relieve themselves, you know they are ready to tackle the litterbox. Use a low box with one inch of litter or shredded newspaper. After each feeding, place the kitten in the box, take his paw, and gently scratch the litter. Be patient! The kitten may not remember to do this every time, or may forget where to find the litter box, but will learn quickly. Be sure to give the kittens lots of praise when they first start using their boxes. Most will use it from the start, but like other babies, might make an occasional mistake. It is a good idea to confine the kittens to a relatively small space, because the larger the area the kittens have to play in, the more likely they will forget where the litter box is. Keep the litter box clean and away from their food.

## 5 – 6 Weeks of Age

**Feeding:** Feed gruel 3-4 times a day and thicken the gruel gradually. Dry food and water should be available at all times. Some kittens do not like wet food and some kittens do not like dry food. Make sure your options are meeting the needs of your kittens' tastes. If you are fostering a litter with their mother, continue weaning. Some kittens will not like canned food. For reluctant eaters, try mixing any meat-flavored human baby food with a little water. The meat flavor is often more appealing to the picky eaters. Be sure the brand you get does not contain onion powder as this ingredient can be hazardous to kittens.

**Development:** At about five weeks, kittens can start to roam around the room, under supervision. They will weigh 1 pound and the testicles of male kittens will become visible. The strongest, most curious kitten will figure out how to get out of the nest. The others will quickly follow.

Play with your kittens daily! It is a good idea to wear long sleeves and pants, as they can play roughly and their claws are sharp. If you sit on the floor they will play "King of the Mountain," using your knees and shoulders as vantage points. This game is lots of fun and good exercise for them. Some kittens may be fearful at first; do not force yourself upon them. You can get them used to your presence by sitting in the middle of the room making phone calls; this way they hear your voice but do not feel threatened. Make them an important part of your household activities; accustom them to the sounds of the TV, vacuum cleaner, and other household sounds. Be sure to introduce the kittens to a variety of people to help with socialization and help them to have a smooth transition into their adoptive home.

## 6 – 7 Weeks of Age

**Feeding:** Kittens should be eating canned and dry food well. Feed the kittens at least three meals daily. If one kitten appears food-possessive, use a second dish and leave plenty of food out so that everyone is eating. Bear in mind that a kitten at this age has a stomach roughly the size of an acorn, so, although they may not eat much at a single sitting, they like to eat at frequent intervals throughout the day.

**Development:** By this time, you have "mini-cats." They will wash themselves, use scratching posts, play games with each other, their toys, and you, and many will come when you call them. Be sure to reintroduce them to their litter box after meals, during play sessions, and after naps. These are the usual times that kittens need to use the litter box.

**Adoption:** It is time for their spay/neuter surgery and adoption! It is safe for healthy, robust 6-week-old kittens to be spayed/neutered at a veterinarian's discretion and be made available for adoption. This is the recommendation of the Association of Shelter Veterinarians HOHVSN guidelines. Check your state and local animal ordinances to find out if it is possible for your facility to adopt out kittens at 6 weeks of age. Testing and vaccination for retroviruses is not recommended for healthy kittens in the shelter environment and instead adopters should be advised to discuss all future medical care with their veterinarian.

## 7 – 8 Weeks of Age

**Feeding:** Offer wet food 2-3 times a day (each kitten will be eating a little over one 3 oz can of food per day). Leave down a bowl of dry kibble and water for them to eat and drink at will. If you have a litter with a

mom cat, she should only be allowing brief nursing sessions, if any.

Development: By the end of the 8th week, kittens should weigh 1.5 -2 pounds each and are now miniature cats.

Adoption: They can be spayed or neutered and adopted at any time!

## Socialization and Bathing

Beginning around 3 weeks of age, kittens need exercise to promote muscular and circulatory development and to learn social skills. They will begin to play with their littermates and learn from their mom if she is present. It is good to begin regular daily handling of kittens to get them used to contact with people. Play is the best method to help them physically and socially develop.

If kittens do not have a mom to regularly groom them, it is important to teach them to groom and keep them clean. After each feeding session, give kittens a full-body once over with a barely damp, warm washcloth. Use short strokes like a queen would use. Kittens often get dirty between cleanings and it is okay to wash a kitten with warm water under a sink faucet but focus only on the areas needing to be cleaned. A simple “butt bath” will usually do the trick. After bathing, wrap the kitten in towels/blankets and a heating pad set on low. Your body heat is not sufficient to warm up a cold kitten. Make sure you do not leave a kitten until they are completely dry.

## Socialization

Socialization is the process in which the kittens develop relationships w/ other living beings in their environment. This has been shown to be important to prevent behavioral problems who are acclimated to living with humans and other animals.

- It's a hard job, but someone has to play with kittens to ensure they are well socialized by adoption time.
- Kittens will naturally socialize with their mom and littermates if they have them. Socialization is another reason to pair single, same-age kittens if appropriate to do so.
- The key socialization period in kittens is from 2-3 weeks up to 10 weeks of age.
- Kittens start to play and explore at about 4 weeks of age. Make sure they have toys and stimulation in their cage. Pipe cleaners, cardboard rolls from toilet paper and paper towels are great play items in addition to traditional kitten toys.
- In a foster home, the foster parent should spend some time each day sitting in the foster room with the kittens and having play time. In a shelter, make sure the kittens get some hands on in-cage socialization time with caregivers. The AAFP feline life stages suggest “Ideally, kittens should have pleasant interactions with people for 30–60 minutes per day”.
- Keep in mind, it is important to expose kittens to a variety of people (different genders, sizes, ages, etc.), therefore set this as a goal for kittens both in foster homes and in the shelter.
- Introducing new fosters to the foster parents' resident pets during the first two weeks is not recommended. Let the kittens get acquainted with their new home before exposing them to other animals. After this time, introducing foster kittens to adult cats and dogs in the home can be great for the socialization of the kittens but should be done with care and only under supervision.

## Steps to Bathe an Underage Kitten

- Get a small sink or a basin ready with some warm water. If the kitten is really dirty, a small amount of Dawn or baby shampoo can be used in the water. Make the water a nice warm temperature as if you were taking a bath.
- To keep the kitten from getting chilled, have towels ready to immediately dry them off. If possible, warm the towels in the dryer beforehand.
- You may want to wear long sleeves and gloves. Kittens may panic and start to scratch. Gently hold the kitten under their front legs and support their body with your other hand. This may help calm and control the kitten.
- Give the kitten a quick but thorough bath to get any food and feces off them. If only their bottom is dirty,

then only immerse the bottom, not the whole kitten.

- Rinse the kitten off with warm water and immediately wrap them in a towel.
- Rub vigorously to get the kitten dry. If the first towel becomes wet, switch to a clean, dry towel.
- Keep the kitten with you and do not put them back until completely dry. If needed, wrap a heating pad around the outside of the towel while the kitten is drying.

[Click here](#) for a video from Maddie's Institute on bathing kittens.

## Care of the Queen

If you are fostering a pregnant queen during her final week of pregnancy, it is important to remember she may not have a big appetite because the kittens are crowding her internal organs. Feed her several small meals daily, rather than one or two larger meals. Leave dry kitten food and water out at all times. It is virtually impossible to overfeed a nursing or pregnant queen. Food requirements increase up to three times the normal amount.

Prepare a kitting box. Place it in a dry, warm, relatively dark and out-of-the-way place, and put the queen in it. If she doesn't want to stay in it, don't insist, but you can encourage her by petting her and giving her little food treats. If your nursery room is not that warm, you can keep the box warmer by wrapping a heating pad in a towel, setting it on "low," and placing it under HALF of the box so that the queen and kittens can remove themselves from the heat source if they choose. One word of warning: you might consider wrapping duct tape or a cord protector around the cord, as the kittens tend to chew on it! Alternatively, consider using a Snuggle Safe Disk which does not require a cord. Until the queen delivers, fill her litter box with shredded newspaper instead of cat litter. Many cats will deliver their kittens in the litter box. Newspaper provides a much cleaner environment for the cat and kittens than litter. After the kittens are born, switch back to normal litter.

## The Birth of Kittens, or Queening

The majority of cats give birth with no problem or need for outside help. Before delivery, the queen may become irritable and restless. She will search for a place to have her kittens. Put her in the designated queening box. She may choose not to have them there, so it helps to keep the box in a room with as few nooks and hiding places as possible. If she has her kittens outside of the box, let her. When she is completely done with the delivery, move them all into the box. If the cat has had her kittens outside the box, don't worry about the "mess" – when she is finished, she will normally clean up and leave very little evidence of the birth.

Some cats may want you to stay with them and will try to follow you if you leave. You will probably have to spend some time with this kind of cat soothing her. Often after the birth of the first couple of kittens, she will be very busy and not so dependent on your presence. Other queens will try to get away from you and hide. Give her the space she needs but keep checking in on her regularly. It is quite possible that you will miss the birth process entirely. You might wake up one morning or come home from work to find the new family born, dry, and nursing.

## Stages of Feline Labor

The first stage may take 12 hours, during which the queen may purr and breathe rhythmically. She may become very active, try to dig at the floor, appear to be straining to use her litter box, and cry loudly.

In the second stage, the water breaks, and straw-colored fluid is passed. A kitten will be delivered a few minutes later. The queen will lick the kitten clean and bite through the umbilical cord. She is bonding with her kittens through this process and learning to recognize them as her own. Do not disturb her. It may look as if her treatment is too rough, but she is actually stimulating breathing and blood circulation. Kittens should begin nursing between subsequent births.

In the final stage, the placenta follows a few minutes after delivery of a kitten. The mother may eat some or all of the placentas. Kittens are born anywhere from 15 to 30 minutes apart, so most deliveries take 2 to 6 hours. The average litter is 4 to 5 kittens. Larger litters of 6, 7, or more are unusual.

If a kitten is not born within 2 hours and the mother appears to be continually straining or in distress, call a veterinarian immediately. She may need a Cesarean section (surgery to remove the kittens), or a drug called oxytocin to stimulate contractions. If the mother is content and happy, she is probably finished, though there have been cases in which a cat resumed delivery sometime later.

## Nursing Queens

If you are lucky enough to have a mom taking care of her kittens, your job is much easier. You must ensure that mom is getting plenty of food because nursing a litter of kittens requires a significant number of calories. Provide the queen with free-choice dry kitten food, supplemented with canned food. You also need to monitor her mammary glands as mastitis (or inflammation of the mammary glands) is a common problem. Her mammary glands should not be overly swollen or hard, should not look red or inflamed, should not be painful to the touch, and you should be able to express milk out of them. One way to monitor the queen's lactation is by monitoring the kittens. They should not be overly vocal, should sleep most of the time, and should have a nice, round belly. Ensure foster parents know who to contact if they have any concerns with the queen or kittens they are fostering. Remember, nursing queens can be spayed as this will not inhibit her ability to produce milk. The most important aspect is to return her back to her nursing kittens as soon as possible after surgery.

## Considerations for Mixing Kittens

Shelter staff and foster parents are tasked with caring for and adopting out animals who are healthy and well-socialized pets for their future adoptive homes. We want growing animals to be able to experience the world, be able to express their normal behaviors, and have interactions that enrich their lives.

The key to kitten health is limiting infectious disease exposure opportunities while maintaining/encouraging socialization and behavioral well-being. Limiting length of stay is critical in shelters or other environments that pose significant infectious disease risks and struggle to meet behavioral needs. Moving kittens on to environments where infectious disease exposure will be limited, and behavioral support maximized is almost always the best option. So, in general, only very young kittens who are too young for adoption should even be considered for combining, mixing, or co-housing with unrelated cats.

Most kittens should be fast tracked at a shelter; meaning they will only need care for a few days and may not need to be considered for co-housing. Healthy kittens, six weeks of age and older, should be spayed/neutered and placed up for adoption. For neonatal kittens less than six weeks old, fast tracking likely means placement in foster or to rescue.

While most people think first of infectious disease when thinking about kittens, behavioral well-being is also critical, especially for very young kittens. Kittens raised without same-species interactions may not develop appropriate "social skills," such as learning how to send and receive signals (physical and verbal) to other cats, what an "inhibited bite" means, how far to go in play-wrestling, and more. Play is very important for kittens because it increases their physical coordination, social skills and learning limits. These reasons, as well as meeting the need for basic companionship, are why there may be times when combining unrelated kittens is beneficial. But we need to be careful!

Each time an encounter with a new animal is considered, the risk of infectious disease vs. the benefits to socialization should be balanced. In most cases, the risk is only worth the benefit if the kitten would need to stay on their own in a particular environment for more than a day or two.

Kittens who present on their own may have a higher risk of having been exposed to infectious disease. It

is unknown what happened to cause them to be found by themselves.

Here are a few general rules to follow:

- When adding a single kitten to a healthy litter the risk to the litter outweighs the benefit to the single kitten so this should not be done.
- Two single healthy kittens being combined present equal risk to each other so this is a great choice if two single kittens present at the same time.
- If two single healthy kittens are not present, then... The best choice of companion for a young kitten presenting to a shelter alone may be a kitten friendly dog (in a foster home) that is less at risk of becoming infected or being an infectious carrier than another kitten.

You might be wondering what to do with sick kittens who are on their own. Signs to look for that might indicate a higher risk of infectious disease are:

- Sneezing, nasal discharge, squinting/swollen eyes, ocular discharge
- Vomiting, diarrhea, poor appetite
- Itchy skin, visible external parasites, suspicious areas of hair loss, Wood's positive skin lesions
- Unexplained weight loss, history of littermate with sudden death

In these cases, it is still a balancing act. We know combining two sick kittens who are on their own increases the risk of infectious disease for both. We are left with a case-by-case decision if the important benefits of companionship are worth the risk.

## Questions and factors to address before deciding if mixing kittens is appropriate:

Does the shelter have adequate screening and monitoring practices in place to identify kittens with signs of infectious disease?

Kittens showing signs of infectious disease should not be co-mingled. Signs to watch for include:

Sneezing, nasal discharge, squinting/swollen eyes, ocular discharge  
Vomiting, diarrhea, poor appetite  
Itchy skin (pruritis), visible external parasites, suspicious areas of hair loss, Wood's positive skin lesions  
Unexplained weight loss, history of littermate with sudden death

Screening for these signs must begin at intake and monitoring should continue daily for the duration of the animal's time in the shelter.

Infectious disease may be brewing in apparently healthy kittens. The time between being infected with a pathogen and showing signs of illness is called the incubation period. During the incubation period an animal may be contagious to other animals but appear healthy. The incubation period for panleukopenia is well established, typically 5-7 days but can go up to 14 days. A cat is unlikely to be incubating panleukopenia if they appear healthy for 7 days, and the chances are slim if no signs have been seen for the past 14 days. For this reason, cats who have at least 7 days (and ideally 14 days) of a well-documented, healthy medical history in the shelter make better choices than cats with an unclear history.

Additionally, the incubation period for ringworm is 2-4 weeks. If cats are being screened for suspicious lesions (as well as other signs of infectious disease) at intake, receiving a wood's lamp examination at intake, and are checked again prior to being mixed, this will help to limit the spread of ringworm between cats in your shelter.

Does the shelter routinely vaccinate all cats and kittens at time of intake (or as soon as they reach 4 weeks of age) and every 2 weeks thereafter?

Vaccination is a key component of preventing disease outbreaks. The panleukopenia component of the FVRCP vaccine in particular offers robust protection from disease, but it does take at least 3 days for the vaccine to provide full immunity. Furthermore, the presence of maternal antibodies may prevent a vaccine from successfully immunizing a kitten, so it is important that they get re-vaccinated every 2 weeks while they are in the care of the shelter or until they reach the age of 20 weeks.

There are several factors that should be weighed before mixing animals from different sources together in any situation:

Do not mix sick kittens with other (healthy or sick) kittens. Much like children in daycare, if one kitten is sick, chances are all of them are going to get sick. But in kittens the stakes are higher, because the illness could be life threatening. Kitten's immune systems are developing from the day they are born but it takes time to develop a robust immune system. Furthermore, because kittens may have received antibodies from their mother soon after birth (that are important but can interfere with immunization), they may not be immunized by the vaccines they receive until the levels of maternal antibodies fall below a certain threshold. Because we can never be certain when that threshold is, kittens must be vaccinated every 2 – 3 weeks until 20 weeks of age when all maternal antibodies are known to have subsided. Also, even though 2 unrelated kittens may have signs of upper respiratory disease, you cannot be certain the disease is being caused by the same pathogen so mixing them together may result in complicating their upper respiratory infections.

Considerations when using surrogate queens:

Putting orphan kittens with an unknown history with a queen with older kittens may be a very risky choice for all of the kittens. Even if apparently healthy, the new kittens may be incubating disease that could affect the queen or other kittens she is nursing. Older kittens often also outcompete orphans for the milk they need to grow and thrive.

Queens provide more than just food and a warm snuggly pillow to their kittens. Kittens receive colostrum from their mothers in their first nursing sessions after birth. Colostrum serves to offer some immune protection from infectious disease until kittens develop an immune system of their own. Unfortunately, kittens are only able to absorb colostrum for the first 24 hours of their life, and queens only produce it soon after queening. Kittens who miss out on receiving colostrum are at high risk for disease and fading kitten syndrome. The colostrum-deprived orphans have a poor prognosis, and if/when they become ill they may put the queen's original kittens at risk.

NOTE: Kittens do not receive any immune benefits through nursing after the first 24 hours of life. Vaccinating a queen provides no immunity to her nursing kittens. Kittens who are 4 weeks or older should each receive their own vaccinations (or start once they reach 4 weeks of age), repeating as described above.

In addition, overloading a queen with more than her litter or with sequential litters may cause health and welfare risks for the queen. The nutritional needs of nursing queens are high, and caring for orphan kittens will take a toll on her physical health unless nutritional needs are maintained. Furthermore, it is important to maintain consideration for the behavioral needs of the queen over time.

Imagine the worst case scenario when making a choice to mix kittens and weigh that against your goals for socialization and/or foster home placement. If you decide to mix 2 unrelated litters of kittens, imagine the consequences if a serious disease were to spread to all individuals:

What if you placed 1 single kitten with a nursing queen and her 4 kittens? If either group is harboring disease, all 5 of these kittens (and possibly the queen) are now at risk. The benefits of putting the orphaned kitten in this group to save his life may ultimately jeopardize 5 other lives.

What if you placed 2 single kittens together? In this scenario, even if the worst happens, only these 2 kittens are put at risk for disease. As singletons, these kittens have a relatively high risk of developing behavioral problems that can reduce their adoptability. The choice to combine them carries some disease risks, but also offers real socialization benefits. The risks of 2 kittens remaining alone versus living

together does not multiply the risk additional animals.

# Intake

## General Intake Considerations

As spring approaches each year, shelter staff across the county know they will soon be inundated with calls from the public concerned about kittens. It is critical that these calls be triaged by a trained staff member or volunteer to avoid intake of kittens who didn't need help (e.g. those with a mother). Well-meaning members of the public may find kittens without their mother and believe they are orphaned, however healthy kittens are rarely true orphans. Learn more about how to handle such calls [here](#).

If it is determined that intake is truly in the best interest of the kitten(s), a foster home should be ready to accept the kitten(s) as soon as intake examination and treatments have been completed. Due to increased risk of infectious disease and better socialization opportunities, kittens not ready for adoption should be housed in foster homes, not in the shelter.

Some shelters have had success with an in-shelter kitten nursery; however, these are generally not recommended. Shelters considering a neonatal nursery must consider the resources required to operate a 24 hour, seven-days-a-week operation. Unweaned kittens are a fragile population requiring round-the-clock care, frequent rechecks, more supervision, and are more susceptible to illness. Caring for them requires a staff of employees and volunteers assigned to strictly work with this age group and who are trained in the care of neonates. Shelter resources are better spent creating a robust foster program where well-trained volunteers care for unweaned kittens until adoption.

## Intake Protocols

Intake protocols should be defined for your facility with the help of an experienced shelter veterinarian. Intake staff should be trained to perform a basic physical examination to identify any medical concerns. This is important for identifying common illnesses like URI and conjunctivitis and for identifying any animals needing immediate veterinary attention. All cats and kittens should also receive a routine Wood's Lamp examination as part of their intake exam so that any ringworm suspects can be immediately identified. Intake staff can be trained to estimate the age of incoming kittens based on the general guideline that they gain an average of 4 ounces (113 grams) each week.

[Click here](#) for a video from Maddie's Institute demonstrating a physical exam on an underage kitten.

All cats/kittens entering the shelter should have a picture taken on intake and individually identified. This is essential for accuracy of medical records. For litters of underage kittens too small for ID bands or microchips, consider an alternate way of identifying them (e.g. write numbers or different colored dots inside their pinna with a permanent marker). Each kitten should be assigned an individual animal ID number upon intake just like all other animal entering the shelter. Cage cards help track the individual identification numbers and are important for maintaining accurate records. A daily log of weight, appetite, attitude, and stool/urine production should be kept, whether in the shelter or in foster.

### Vaccination

Vaccination with a modified live FVRCP (Feline panleukopenia virus (FPV), Feline Herpesvirus-1 (FHV-1), and Feline Calicivirus (FCV)) vaccine should begin at 4 weeks of age and continue every 2-until 20 weeks of age.

For most shelters, the benefit of vaccinating the pregnant queen with an FVRCP vaccine outweighs the risks of not vaccinating her. While there is a minute possibility the kittens may develop cerebellar hypoplasia due to vaccination of the queen, natural infection with panleukopenia will often prove fatal to

both the queen and her kittens. Vaccinating a nursing queen does not provide any protection to the kittens. They only receive maternal antibodies from the colostrum they receive in the first one to three days of life.

All cats and kittens over 12 weeks of age may receive a rabies vaccination according to state laws. For more details on vaccination, refer to the [Vaccination for Animal Shelters](#) infosheet.

#### Anti-parasitic Treatment

Deworming with pyrantel pamoate and ponazuril can begin at two weeks of age. Pyrantel pamoate should be repeated every 2 weeks until 16 weeks of age, then monthly until six months of age. Four-week-old kittens can also receive a routine flea preventative like selamectin (Revolution®) dosed for weight. This should be repeated monthly. If fleas are visible, consider giving nitenpyram and praziquantel (treats tapeworms) if the kitten meets minimum weight requirements. If fleas are present but the kitten is too small for nitenpyram, bathe the kittens with warm soapy water, taking care to prevent hypothermia. For more information, refer to Steps to Bathe an Underage Kitten. Fleas should then be manually removed. For more details on deworming, refer to the [Intestinal Parasite Control Guidelines](#) infosheet.

## Creating a Foster Care Program

A robust foster program is an essential shelter resource. Foster homes provide resource-intensive kitten care that would often not be possible (or recommended) in a shelter. Foster parents also act as extensions of the adoption program by supporting community adoption events and finding homes for the kittens they foster; many end up adopting their foster pets into their own families!

Enlisting new foster parents is an on-going endeavor for all shelters. Social media, the shelter's website, and word of mouth are all traditional ways to recruit foster parents; a "[kitten shower](#)" is a more creative recruitment tool. Fosters also need to know what the shelter will provide, such as medical care, food and litter, and whether the shelter will take the kittens when ready for adoption or if the foster parents are to find adopters on their own.

#### General Cleaning

Heavily soiled items or items that contacted panleukopenia or dermatophytes must be thrown away immediately. Towels, sheets, blankets, pillow cases, washable pet beds and pillows are to be washed with HOT water. Overloading a washing machine results in a "less than clean" condition. Persons handling dirty laundry need to wear protective gowns to keep from contaminating personal clothing. When handling clean laundry, nursery workers must make sure they are not wearing a contaminated gown to keep from contaminating the laundry.

For manual washing, hot soapy water should be used for washing bowls, dishes and plastic toys. After they are cleaned, the items should be soaked in a disinfectant solution for the recommended concentration and contact time, then rinsed with fresh water. The easiest way to ensure compliance with this three-step cleaning process of all dishes is to set up a cleaning area with three utility sinks in a row. Let items air dry before returning them to the cages.

Bottle feeding equipment must be cleaned after each feeding. Each bottle and nipple must be washed with soapy water until all residues are gone. Disinfect the feeding equipment in the strength recommended by the product manufacturer (For example, if using an accelerated hydrogen peroxide product such as Rescue, the solution would be 1:64 or two ounces per gallon of water) for the recommended contact time, then rinsed with fresh water. If available, a dishwasher is the best way to disinfectant the feeding equipment. Allow all bottles and nipples to dry before the next use. For more information, refer to [Sanitation in Animal Shelters](#).

## Medical Flag System

It is important to have a plan in place so foster staff and volunteers know who to contact and when for a medical concern with kittens in foster. Ensure that kittens receive immediate attention when needed but

that the staff and volunteers do not contact medical staff constantly. One way to manage this is through a list of medical warning signs to look out for and what to do when these are observed. In the example below, a system with a list of red flag and yellow flag signs was established.

Red Flags – if any of the following occur, alert the medical staff member on call immediately if the kitten:

- did not eat during last meal
- lost weight
- has liquid diarrhea
- is dehydrated
- is listless
- vomited repeatedly
- is bleeding
- has neurologic signs
- was found deceased

Yellow Flags – if any of the following occur, monitor the kitten, alert the foster staff member, and fill out a veterinary exam request form. These forms are checked at least once daily.

- has sneezing, wheezing, nasal discharge and/or coughing
- has ocular discharge
- has mild lethargy or depression
- did not gain weight
- has loose stool (note – overfeeding is a the most common cause for kitten diarrhea in an otherwise healthy kitten)
- has occasional vomiting
- has decreased appetite
- has difficulty urinating or defecating
- is limping
- has behavior not normal for the kitten
- has an area of hair loss

## Common Illnesses seen in Kittens

Many kittens will be admitted into the facility in poor body condition, heavily parasitized, and suffering from mild illnesses. While we cannot cover everything in depth here, it is important to mention that there should be protocols in place for identification, treatment, and prevention of the common illnesses seen in the local kitten population. Conditions to cover include flea infestation, flea anemia, ear mites, intestinal parasites, coccidiosis, upper respiratory infections (including feline herpesvirus and calicivirus), conjunctivitis, diarrhea, dermatophytosis, and panleukopenia.

### Dermatophytosis

The number of dermatophytosis cases vary, often by season. An increase in the prevalence of the disease usually coincides with “kitten season” and for some regions, it is a constant challenge. Regardless of the geographical location, underage kittens often come in with ringworm. Intake staff must be trained on next steps for any cats or kittens with a positive Wood’s Lamp exam at intake or with suspicious alopecia (hair loss).

Any staff handling ringworm suspects should wear a gown and gloves, plus take precautions to avoid contamination of surfaces like an examination table. To avoid contamination of work surfaces, disposable drapes are a great option, followed by disinfection with a product effective against dermatophyte spores. Confirmation of a diagnosis of ringworm requires a visual examination, Wood’s Lamp examination, direct microscopic examination of glowing hairs, and a fungal culture.

All shelters in general, should develop formal, written protocols dealing with any ringworm positive cats in their care. These protocols must address diagnosis, isolation, treatment, cleaning protocols, and clearing the cats or kittens for adoption. For more information, refer to the [Ringworm Guidebook](#).

## Panleukopenia

Any animal shelter taking in cats and kittens dreads the appearance of a panleukopenia positive cat. This is another good reason for not housing young kittens at the shelter, especially in a nursery. Strict isolation of sick kittens and sound biosecurity protocols minimize the spread of panleukopenia, but even these steps will not completely stop isolated cases from occurring in newly admitted kittens exposed prior to admission and who appear healthy at intake.

Panleukopenia diagnosis can be made on a SNAP ELISA test for canine parvovirus (though a negative SNAP test does not rule it out) and suspected with an extremely low white blood cell count diagnosed on CBC. Since sudden death can occur in kittens that appeared healthy the day before, any kitten found dead in their cage should be tested for panleukopenia. Sound medical, vaccination, isolation, and cleaning protocols help minimize the potential for spread of the disease by any kitten shedding the virus. A written protocol for panleukopenia must be developed and staff and volunteers must understand the importance of adhering to the protocols and understand how devastating the spread of this virus would be. At a minimum, the panleukopenia protocol addresses diagnosis, isolation, treatment, cleaning protocols, and the decision to euthanize. Any panleukopenia positive kittens, as well as their cage mates, must be removed from the general population and placed into a strict isolation area for treatment. For more information, refer to the [Panleukopenia Guidebook](#).

## Daily Monitoring

Shelter staff and volunteers need to observe kitten health on a daily basis. This task should include monitoring of appetite, urination, defecation, any concerning signs, and updating weight. Tracking the kittens' health and progress is most easily accomplished with individual monitoring sheets, which are kept in a room binder. Keeping the sheet on the cage may seem more practical, but with the messiness and playfulness of kittens, the binder is usually the safer option for the paperwork.

Each room should post a schedule for daily veterinary rechecks and the handling of any emergencies that arise. The staff and volunteers can be trained to prioritize any health concerns with a method like the red and yellow flags outlined.

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