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“If you are traveling with an infant”...

Early Age Care for Foster Animals
**Developmental Stages**

- Neonatal
  - *Most fragile and susceptible*
  - *Highest mortality risk – but…*
- Transitional
- Socialization

**Developmental Milestone Checks**

**Birth / Neonatal**

- Any Physical Abnormalities
- Mobility
- Healthy, healing umbilicus
- Skin color pink and healthy
- Body condition
  - 90-100g (80-140g) for kittens
- Suckling
  - Good belly tone
- Did orphan or weak babies ever nurse?
- What does mom think?
- Urination
- Defecate
  - Cannot pee or poop voluntarily until 3 weeks of age!
Day 1

Where is the umbilicus?
Umbilicus at Day 5

What’s wrong in this picture?
What’s right in this picture?

- Nursing with reckless abandon!
- Excellent belly tone!

Nursing vigor
Gender checking puppies

• Males
• Two round orifices
• Looks like a colon
• Females
• One round, one slit like
• Looks like a semi-colon?

www.vetmed.wsu.edu
Developmental Milestones

- 10-14 days / moving into transitional
- Eyes opening
  - No discharge?
  - No conjunctival inflammation?
- Ears opening
- More intentional moving (squirming) about?
- Wobble is normal
- Start de-worming at 2 weeks (pyrantel pamoate)

Growth expectations

- Puppies
  - 5 -10% of body weight
- Kittens
  - Double their body weight in 14 days
    (50 - 100 g / week)
- Always increasing
- Some individual variation
Milestones vary

Day 12

Day 18

Locomotion

Day 5
Development Milestone Checks

Week 3-4 / Transitional
- Continued weight gain
- Nervous system developing
- Vision and hearing developing
- Blue eyes
- Incisors erupt, then canines
- IgG production
  - Growing immune system
  - Voluntary elimination about 3 weeks
    - introduce litterbox to kittens
  - Thermoregulation by 4 weeks

Day 39

“Mikie”

Developing nervous systems
Development Milestone Checks

Week 4 / Socialization Stage
- Key socialization period begins
- 4-12 weeks
- Eye color transition
- Vaccination may start

Week 5
- Hunting, pouncing, wrestling, peer socialization

Week 6-8 / Menace to Society
- Adult kidney function by about 8 weeks

Neurologic development

Day 39
Key Socialization Period

- 4-12 weeks of age
- Humans and animals
- Some handling prior to 4 weeks
  - Brief, but frequent (if mom’s there)
- Gentle
- Calm and quiet
- Facing you?

“Bella, Mae, and Nut”

Tough love

- Food is not food, food is love
- Hand feeding saves lives!

Resource: [http://www.youtube.com/watch?v=vypEcXlgMhyQ](http://www.youtube.com/watch?v=vypEcXlgMhyQ)
- Urban Cat League
- Kitten socialization videos (3 parts)
Feral Cats Anonymous

Let them interact, explore, and socialize

- Regular handling
- Exercise
- Meet new people
- Meet kids
  - with supervision
- Play with littermates
- Interact with other animals
  - with supervision
- Explore new places
- **Spend quiet time with humans!**
- And other animals too.
6 weeks or 8 weeks

Week 6
- Weaning?
- Spay/Neuter weight?
- Legal adoption age?

Week 8
- Weaning?
- Spay/Neuter weight?
- Legal adoption age?

To wait or not to wait?
- Depends on so many factors
  - Extra time may hurt chances for adoption
  - Extra time may cause a system log jam
  - Leaving the shelter sooner may be protective
  - Chances for socialization may be better in a home

Providing Care

- Foster homes
- Shelter Nurseries
Priority Care Issues

- Thermoregulation
- Hydration
- Feeding and Nutrition
- Sanitation
- Elimination
- Infectious Disease
  - Including parasites
- Socialization!!

Essential Supplies

"Shy Guy"
What you really need...

...is one of these.

Don’t forget the mama

- Vaccinate with MLV
- De-worming for roundworms
  - Every two weeks
  - Arrested larvae
  - Transmammary larval migration
  - Pyrantel pamoate
- Other parasites
  - Internal
    - Coccidia?
    - Giardia (fenbendazole)
    - Tapeworm (Droncit™)
  - External (selamectin)
- Screen for ringworm

- Have a plan
  - Written treatment schedule
  - Pregnancy and lactation
  - Keep good records

See the blog post on deworming: www.drsandranewbury.com
Prenatal

- General condition
- Nutrition
- Calcium (prenatal supplementation may cause problems unless need is identified)
- Decrease parasite load
- Prevent infectious disease

Don’t forget the mama

- Monitor mammary glands
  - Mastitis
  - Check lactation if problem signs from kittens
- Check incision if c-section
- Monitor weight
- LOTS more food for mom
Nesting box

- Comfortable for mom
- Contain the pups and kittens
- Room for all
- Warm (with gradient)
- Room outside the box for mom to get away

More Supplies

- Everything Disinfected
- Reliable / tested heating pad
- Milk Replacer
- Canned food (intermediate food)
- Cotton balls / pads
- Mineral oil / KY
- Clean towels
- Kitchen Scale
- Bottles
- Small syringes
- Eye droppers

Monitoring weight is one of the most important things you can do.
Housing

- Warm room (avoid drafts)
- Everything disinfected
- Other pets
  - controlled interactions only
- Kids / Adults
- Protect from falls
- Linear objects
- Non-linear objects
- Electrical cords
- Small spaces
- Sofa beds
- Toxic plants and other substances

Prevention

- **MONITORING** - Early recognition of problems
- Adequate nutrition
- **Weight checking** (every day)
- Viral Disease
  - Vaccination
    - every two weeks until 20 weeks
- **Mechanical protection**
- Ringworm
- Parasites
  - Internal
    - every two weeks
  - External
    - every month

![Graph showing puppy weight checks (grams)]
Fading

• Failure to thrive
• Syndromes cover similar undefined clinical presentations
• Many causes
  – Environmental
  – Genetic
  – Infectious
• Often cause is unknown
• Rule out or assume the worst
• Most common in the neonatal period

Failure of passive transfer (FPT)

• Sepsis
• Colostrum deprived kittens at highest risk
• Colostrum* replacement?
• Must be within 18 - 24 hours if oral

* Use of adult cat serum to correct failure of passive transfer in kittens, J Levy, C Crawford, W Collante, M Papich, JAVMA Vol 219, No. 10, November 15, 2001
Flea / parasite anemia

- Blood volume is very small
- Warm water and very mild soap under 4 weeks
- Pick the fleas
- Treat for worms

But...

- When kittens die in a shelter or shelter related setting
- Always rule out panleukopenia
Treatment

- Diarrhea / URI / Parasites
- Rare labeled products for age group
- Experience and trial reporting
- Balance risk vs. benefit
  - Drug safety
  - Need for treatment

- **Supportive care!**
  - Dehydration
  - Malnutrition

Litter mate sucking

- Prevention
  - Frequency of feeding
  - Adequate feeding
- Monitor for inflammation
- Seek veterinary care
  - Topical anti-inflammatory
  - Separate relentless littermates

Remember nursing vigor?
Keep them warm (but don’t cook them)

- Thermoregulation
  - Not until at least 2-3 weeks of age
- Provide a temperature gradient
- Warm room (85-90F)
- Warm surfaces
- Make it snuggly
- Groups do best
- Heating pads
- Watch / pre-test for hot spots
- Make sure they can breathe!

Assist with and monitor elimination

- Voluntary elimination about 3 weeks of age

- Frequency / Timing
  - Before meals / after meals?
- Use gentle soft materials
  - + / - Lubricant (mineral oil, KY)
- Towards the exit 😊
- Monitor for sore spots
- Monitor for loose stool or constipation
- Monitor for urination
- Keep records
- Keep the litter box and housing clean!
Keep them clean

- Prevent skin scald
  - Don’t let feces accumulate
  - Urine scald

- BATHE them!
  - Daily or more often
  - Blow dry?
  - Warm towels from the dryer

Milking: Getting started

- Babies must be warm
  - Cannot digest food if they are not warm
  - Take the time to warm newly arrived babes before feeding

- Milk replacer must be warm
  - Warmer than your body temperature
  - Test on your wrist skin

- Mix milk replacer according to directions

- Store unused powder in the freezer

- Mix a bit more than you expect to use and discard unused portion
- Clean bottles and nipples regularly
Feed appropriate milk replacer

- Commercial products specific for kittens and puppies
  - Powdered forms
  - Liquid forms
- Many brands *(not just those shown)*
- Home made?

Feed them enough

- **BUT not too much**
  - Most important when very young or force feeding
  - Pay attention to communication signals
  - Use a scale to weigh
  - Use feeding charts for particular products
  - Be sure to understand the “amount”
    - Per day / or per feeding
    - Dependent on mixing

<table>
<thead>
<tr>
<th>AGE (months)</th>
<th>WEIGHT</th>
<th>AMOUNT Per day</th>
<th>TIMES/DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4 ounces</td>
<td>32 cc</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>7 ounces</td>
<td>56 cc</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>10 ounces</td>
<td>80 cc</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>13 ounces</td>
<td>104 cc</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>1 pound</td>
<td>128 cc</td>
<td>3</td>
</tr>
</tbody>
</table>
Feed them *often* enough

- Small frequent meals for neonates
- Every TWO hours is most ideal for neonates
- Extend time between feedings as they age
- Pay attention to signals

### Age Timeline Table

<table>
<thead>
<tr>
<th>Age</th>
<th>Feeding Schedule</th>
<th>Feedings per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 weeks</td>
<td>Every 2-3 hours, 24 hours a day</td>
<td>8 to 12</td>
</tr>
<tr>
<td>2-3 weeks</td>
<td>Every 2-4 hours, 24 hours a day</td>
<td>8 to 12</td>
</tr>
<tr>
<td>3-4 weeks</td>
<td>Every 4-5 hours</td>
<td>5 to 6</td>
</tr>
<tr>
<td>4-5 weeks</td>
<td>Every 5-6 hours</td>
<td>3 to 4</td>
</tr>
<tr>
<td>5-6 weeks</td>
<td>Every 6 hours, from morning until 10 or 11 p.m.</td>
<td>3 to 4</td>
</tr>
<tr>
<td>6-8 weeks</td>
<td>Every 8 hours</td>
<td>2 to 3</td>
</tr>
</tbody>
</table>

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### Milking for Neonates

- Nipple sizing and shape
- Options
  - CATAC
  - 4 Paws
- Use syringe or eye dropper
- Go VERY slowly
- Small drops
- CAUTION!
  - Danger of suffocation
  - Danger of aspiration
- Tube Feeding?
Kitten Milking: Nipple competent

- Piercing the rubber nipple
  - X
  - Testing delivery
- Air lock problems
- Holding the bottle
- Positioning the kitten
- Patience
- Latching on vs. chewing

Milking

“Julie”

“Cynda”
Working towards weaning

- Gradually thicken the milk replacer
- Add in small amounts of smooth kitten food
- Offer milk replacer and smooth canned food on plates

Weaning to solid food

- Smooth foods
- Most common time for diarrhea

- Start solids at 3-4 weeks
- Age to wean?
- Need for love

No chunks!%$#@
Keep records!

- Record weights (daily)
- Food intake and elimination
- Record all treatments given
- Record all vaccinations site, route, serial numbers

Thanks for all you do!

Any questions?

Special thanks to the ASPCA for the partnership with UC-Davis that makes my position possible!
One year reunion

A FEW COMING ATTRACTIONS FROM ASPCApro

www.aspcapro.org/webinars

- Ringworm 101 for Shelters (9/25)
- Does Spay/Neuter Have a “People Problem”? (9/26)
- Ringworm Outbreak Management (10/02)
- Starting a TNR Program in Your Community (10/17)
- Beating Ringworm: Yes, You Can! (10/23)