# **CARE INSTRUCTIONS FOR INFANT SQUIRRELS**

## SQUIRREL TALES: A MANUAL OF INFANT CARE FOR BEGINNERS

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Compiled from experience - Permission given to copy if distribution is free.

## Photos & Updates By Tom Stevenson

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Before initiating the care of a baby squirrel, try to find a licensed rehabilitator to take the baby. Call a vet's office and ask, or contact your state Department of Natural Resources for a rehabber in your area. If you cannot find a professional to take the baby, then follow these instructions to the letter, and if the baby you have found has no hidden damage or death inducing trauma, you will successfully raise it to release.

## **EMERGENCY TREATMENT**

**Read Each Section Before Acting** 

Step 1: Get the Baby Warm	<u>Section A.</u>
Step 2: Hydrate	Section B.
Step 3: Treat Wounds	
Step 4: Get the Right Formula and Feeder	<u>Section D.</u>

## **GENERAL INSTRUCTIONS**

Bathroom Business How Old Is My Baby? Sex - Boy or Girl? Weaning and Diet Metabolic Bone Disease (MBD) Release Flying Squirrels Squirrels Are Not Pets

**NOTE:** A healthy baby squirrel, while in the hairless state, is bright pink all over, with pink gums and lips; it squirms, responds to touch, feels warm, and is fat and round. A dehydrated or cold baby is grayish pink with grayish gums and lips; it will ball up, be unresponsive, sluggish or lie still; it will look thin and feel cold to your touch. A healthy furred baby will have very pink gums, respond appropriately to its environment, feel warm, and look round and full.

#### A. Get THE BABY WARM! (read and do now before going any further)

A baby squirrel should feel much warmer than your skin. If it feels cool to your touch then it is cold. Hypothermia will kill. Do not attempt to feed a cold baby. Until the baby is fully furred, he or she does not produce enough body heat to

warm him or herself. A furred baby who is sick or injured will need a heating source. Wrapping it in a blanket will not suffice since the baby cannot warm the blanket. You must provide a constant heat source. The most dependable and accessible is an electric heating pad. Temporary heating, until a pad is found and the nest box warmed, can be supplied by filling a zip lock baggy with hot water and putting it under a blanket with the baby in the blanket. Do the following: turn the pad on low , place it on a table; get two bath towels: fold one in half and lay on the pad; rumple the second towel and put it in the nest box (bigger and taller than a shoe box with flaps that can be folded over. No matter how small, these babies will climb and you may find it frozen in a corner of the room if there was no top on the nest). Make a pocket in the middle of the towel with your fist, put in the baby and gather the covers together over the baby. Placing the nest box half on and half off the pad will provide a cool place if the baby becomes too hot in one area. Now go on to step 2, section B.

#### B. HYDRATE THAT BABY!

The most important treatment you will give the baby squirrel you have found is hydration. Do not start the baby immediately on any formula, even the right one - hydrate first. Any baby has encountered trauma by being separated from Mama: the separation may have been a few hours or a few days. The smaller the baby, the greater the risk of dehydration and if you do not rehydrate you will lose it. Even the healthiest looking babies should first be hydrated.

Why is hydration so important? Water is essential for the digestion of food: fluid is pulled from the body's cells during the digestive process. If the fluid in the body is low, then there is not adequate fluid for digestion and the baby's reserves are drained. Additionally, the baby's body is accustomed to Mother's milk and introducing a new food can cause diarrhea, leading to further dehydration. Soon, without hydration, you can have a thin , dry, grayish looking little mummy instead of a precious, fat, round, wet, pink baby. If you have already given a milk of some kind, then start over. Hydration Instructions: Most people immediately give the new baby milk of some kind. Don't do it. A baby will not starve to death over a 24 hour period, but it can sure die of dehydration. Hydrate first. Here's how: mix a little salt in water (salt is an electrolyte) and administer with a syringe or eyedropper. Mixing a drop or two of 2% milk in with the water will make it more acceptable to the baby.

Over several hours continue to give the water mix until you see an improvement. Remember - only a drop or two of the milk - it is for flavoring only and too much will further dehydrate the baby. If the baby is unmoving or cannot drink, take it to a vet and ask him or her to inject lactated ringers subque (under the skin), then continue the hydration schedule at home until you see an improvement. Transport the baby with a hot water bag under a blanket - it will be cold when extremely dehydrated.

If you think the baby is moderately dehydrated give water as above without the salt; give water even if you think the baby is not dehydrated. Do not start any baby on full strength formula. Always hydrate first and then gradually introduce the formula as described under formulas.

Now, between times of offering the baby the rehydration fluid, read the rest of the instructions, then get the recommended formula and feeder.

## C. TREATING WOUNDS - The 3 Most Commonly Encountered

1. <u>CAT BITES KILL</u>. Cat bites must be treated with a wide spectrum antibiotic such as Clavamox (safe and contains clavalanic acid as well as amoxicillin). Obtain this drug from your vet. Don't accept amoxicillin alone - it will not kill the gram negative bacteria that is in a cat bite. Clean all punctures by flushing with betadine. Hydrogen peroxide is a poor anti-bacterial flush.

2. <u>HEAD INJURIES</u> with major swelling are more difficult because a steroid such as dexamethazone should be administered to reduce pressure and damage caused by swelling of the tissues and fluid. This drug can be dangerous if not used properly. The proper dosages should be observed and given for 3 to 5 days.

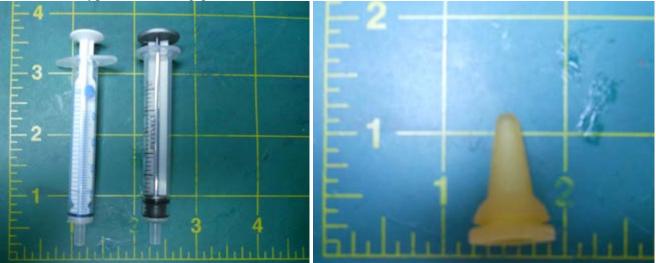
The animal must be withdrawn slowly, with decreasing dosages, or it will die from the withdrawal. A liquid form is available. It is obtained from a vet who will advise you on dosages. A baby with a head injury will fall or drift to one side, and carry the head to that side. The swelling from the injury will probably be noticeable.

**3.** <u>A FRACTURED LEG</u>, unless it is a complete break and the leg is misaligned, should not be taped. Taping can cause many problems and the baby will grow so fast that a fracture should heal before the baby is old enough to be up and about.

**IF YOUR BABY HAS DEFORMING INJURIES** that would prevent its later release, then do the kind and loving act of freeing it from suffering through euthanasia. Your vet will aid you in this. A squirrel who cannot run free is a squirrel deprived of its essential nature and you will always be a warden tending a prisoner.

## D. FEEDER, FORMULA, and INTRODUCING FORMULA TO THE BABY

**Feeders:** The right feeder is a syringe, in the sizes of 1 to 3 cc syringes for a pinkie, or 6 to 10 cc syringes for a 5 week plus baby. **DO NOT USE PET NURSER BOTTLES** - you can aspirate the baby with a bottle (get milk in the lungs, causing pneumonia or outright drowning). At 1 to 2 weeks, you can add a nipple to the end of the syringe and allow the baby to suck. This will speed up the feeding process. Apply a small amount of pressure to the plunger but, only enough to keep the formula flowing. Get syringes from a vet or some drug stores. Get several because some types of syringes have gaskets on the ends of the plungers that begin sticking after a few feedings, progressing to completely stuck. Other types have 0-ring gaskets that do not stick.





"O"Ring on left, Gasket on Right, Four Paws Nipple available at <u>WWW.Squirrelstore.com</u>, Nipple installed on

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"O"Ring Syringe

Formula: The right formula is Esbilac Powder Milk Replacer for puppies.

As of 2012, due Esbilac formula changes, we now recommend Fox Valley 32/40 Day One Formula for long term use. Fox Valley is available in a selection of sizes from <u>WWW.SQUIRRELSANDMORE.COM</u>

**Accept no substitutes!** Not even if a pet store clerk or a vet tells you the product they sell is the same - it isn't. Wildlife has special dietary needs - many products advertise that they can be fed to squirrels and other wildlife - that doesn't mean they should be fed to squirrels and other wildlife. Esbilac is expensive and sometimes hard to find, but if you are going to the trouble to love and care for this baby and raise it to freedom, why subvert your efforts with a formula that will kill it? Do not use human infant formula, goat's milk, evaporated milk, or other cow's milk. The protein, calcium and vitamin contents, as well as other nutrients are too low or missing to sustain the baby, and lactose causes diarrhea in squirrels. Mix and handle the formula as follows: 2 parts of water, 1 part of Esbilac powder, 1/2 part of real whipping cream (1/2 pint cartons in the dairy case) Mix in a small jar what you think you will use in 2 to 3 days. Refrigerate mixture and the powder, too. Warm only what you will need each feeding to a little better than room temperature. This is your full strength formula.

**Feeding Schedule:** do not fail to follow the schedule below. This schedule will continue hydrating the baby and also will introduce the formula gradually so that the baby doesn't react adversely to a new food. The proportions noted in this schedule are based on a 3 cc syringe. If you are using a different size, then adjust the amounts accordingly.

#### Feeding #1

Put the tip of the syringe in the jar of formula and pull into it 1/2 cc of the formula. Take the syringe to the sink and add 2 and 1/2 cc's of plain water. Give the baby all it wants.

#### Feeding #2

Into the syringe put 1 cc of the formula - add 2 cc's of plain water.

#### Feeding #3

1 and 1/2 cc's of the formula - add 1 and 1/2 cc's of plain water.

#### Feeding #4

2 cc's of the formula - add 1 cc of plain water.

#### Feeding #5

2 and 1/2 cc's of the formula - add 1/2 cc of plain water.

#### Feeding #6

You have reached full strength formula which you will continue to feed.

The baby should now be sucking enthusiastically, and when finished eating, sleeping satisfied and quiet with a little round belly. Note: give the tiny pink babies some extra water every day because they dehydrate easily. For the last feeding before you go to bed, add some extra water to the syringe. You can stop this when the baby's hair begins to emerge and he or she looks fat and healthy.

#### HOW OFTEN DO I FEED THE BABY? Do I have to get up at night?

Tiny pink babies without hair, or with scant hair appearing on the back of the head and shoulders, can only ingest small amounts per feeding, so more feedings are necessary. He or she should be fed about every 2 to 3 hours from when you get up until your bedtime. About getting up at night: ideally, a tiny baby would be fed twice a night, but most of us must work and sleep is necessary for us to function; if you are tired and your boss is angry because you are late to work, then you will feel pressured and the baby will suffer. Be diligent during your waking hours, and the baby should be alright. If the baby is dehydrated or sick then you should give nightly feedings until it is fully recovered.

As the baby grows and can ingest more formula at each feeding, the times between feedings can be increased until, at

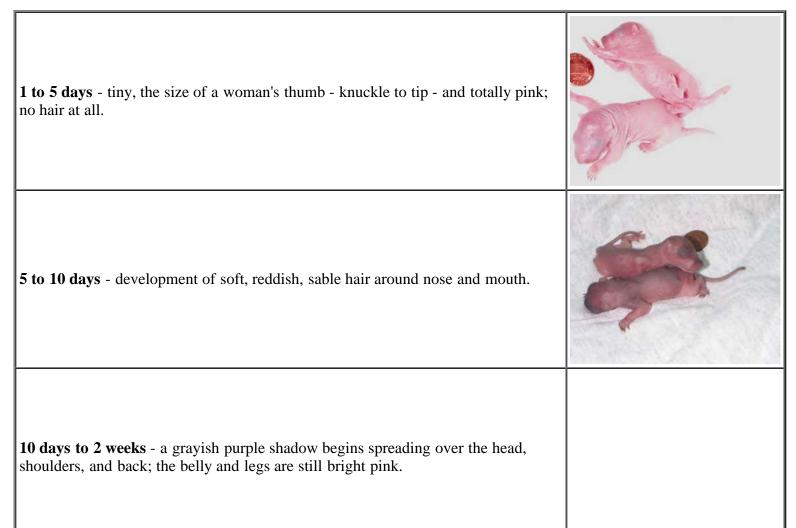
approximately 5 weeks of age, you are feeding it every 4 hours. As the baby goes through weaning and is ingesting increasing amounts of solid foods, you can decrease the number of feedings per day until the baby is eating only solid foods and has rejected the formula - this rejection will occur sometime between 8 and 10 weeks.

#### **BATHROOM BUSINESS**

An infant squirrel should be stimulated to urinate and defecate every time you feed it. Failure to do so can cause uremic poisoning. All mother mammals lick their babies to initiate this process, and to keep their babies clean. A baby will leak on him or herself but this is not the same as voiding a bladder. And also, an unclean baby will get diaper rash, urine burns, on its tender belly. Stimulate by tickling the babies genitals with a cotton ball or other soft, absorbent material.

When you first get the baby, its stools will be a hard dark brown. Within 24 hours of feeding formula, the stool will change to a mustard brownish color; it should remain firm. If it is runny, then you have diarrhea. Add water to the formula for a couple of feedings (about 1/2 water, 1/2 formula) then continue with full strength formula. The baby might have been slightly dehydrated. Another reason for runny stools is over feeding. A baby's belly should never look bloated after feeding - it should be nice and round. If the diarrhea does not stop in 24 hours, it may be serious, such as extreme dehydration or a parasite such as coxccidia. Take it to a vet and have a stool tested. Albon is the treatment for coxccidia. The vet will recommend a dosage.

#### **HOW OLD IS THE BABY?**



<b>2 to 3 weeks</b> - grayish-purple color deepens until the emerging hair is long enough to be identified as hair.	
<b>3 weeks</b> - the baby's lower front teeth begin emerging. Hair is now slick, smooth, and shiny. still no hair on legs and belly.	The second secon
<b>4 weeks</b> - has light grayish-brownish hair all over, except lower legs and belly and under tail. Some downy white hair beginning on belly and legs.	
<b>5 weeks</b> - thicker hair, including legs and belly. Tail hair is short, straight, and lies parallel with the bone. Eyes open.	Picture Coming Soon
<b>5 to 6 weeks</b> - upper front teeth begin emerging. Begins curling tail over back.	
6 to 7 weeks - fully furred, sleeping less with more active periods.	Picture Coming Soon

<b>7 to 8 weeks</b> - tail is fluffy. Should be placed in a cage with plenty of room to play.	Picture Coming Soon
<b>8 to 9 weeks</b> - looks like a miniature squirrel. very active and shredding your sweaters, curtains, furniture, and arms with its claws. has lost infant appearance.	Picture Coming Soon
9 to 10 weeks - develops more muscular physique.	Picture Coming Soon
<b>10 to 12 weeks</b> - about 3/4 full size - release at 12 weeks.	Picture Coming Soon

### **SEX - Is My Baby a Boy or a Girl ?** Added by Tom Stevenson.

Because we've heard this question so often, I decided to add a photo that best shows the difference. From the very youngest, to those old enough to release, one can always distinguish male from female. In the photo below, the baby on the left is obviously a male and the one on the right is a female.:



Hopefully this will help when the time comes to determine if your baby is a boy or a girl.

#### WEANING and DIET

The baby's eyes open at 5 weeks but they don't see well at first and nothing about their behavior will change for another 5 or 6 days; they will still eat and go back to sleep immediately. At some point during this period of time, begin gradually introducing some baby cereal to the formula; start out with just a few grains and if you see no adverse change in the stool then add a little more with the next feeding and so on. Do it gradually.

At 6 weeks put a couple of grapes and a few pecan pieces in with the baby. It will begin gnawing the pecans and sucking the grapes (don't cut the grapes into small pieces - put in whole - a baby can suck a grape piece into its throat and choke). Gradually thicken the cereal mixture until it is too thick to pass through the syringe. By this time the baby will love the taste and will also be old enough (approximately 7 weeks) to start licking it from a jar top. Add some baby applesauce or pears to the formula/cereal mixture when you offer it in a jar lid. This eating of cereal is a messy and humorous affair. The baby sucks it instead of licking. Keep a wet towel handy to wipe the baby's face, chest, and head as it will practically swim in the cereal. Give the cereal mix several times a day in addition to some fresh apples, grapes, or pears, and fresh corn on the cob. Fresh corn is a good food to offer because it has protein and calcium, is soft enough for little teeth, and the babies like it.

As the baby grows and becomes more active, offer other raw foods such as broccoli, sweet potatoes, and carrots. At approximately 8 to 9 weeks the baby will be able to open sunflower seeds. Get the large stripped sunflower seeds - do not give salted seeds. If a pet store near you has rodent chow or monkey biscuits, add that to the diet. Always have fresh foods in the baby's cage in addition to rodent chows and sunflower seeds.

Squirrels will chew on deer antler or old dry dog bones from the yard. Add either to the cage and it will be a good source of minerals and help strengthen teeth and jaws.

About peanuts and pecans: pecans are only used to entice first munching. Pecans and peanuts are not food, they are candy with the nutritional content of Snickers Bars; in other words they have no nutritional content. A squirrel fed a diet of pecans and peanuts will develop metabolic bone disease (a lack of calcium and minerals), begin having seizures around 2 months, (you may not notice the seizures because they are at first very short and mild and may take place when the baby is out of your sight), and will die before 3 months of age. Give pecans and peanuts sparingly as hand treats.

#### Metabolic Bone Disease (MBD)

Metabolic Bone Disease (MBD) is caused by an improper diet that is deficient in calcium/phosphorus. The condition leads to death or paralysis. A diet consisting primarily of peanuts and pecans will surely cause MBD. Calcium is necessary for the development of bones, muscles, eyesight, and other organic functions.

Symptoms of metabolic bone disease: the squirrel begins having seizures between 2 and 3 months old (you may not notice the seizures because they are at first very short and mild and may take place when the baby is out of your sight). Paralysis may or may not appear at this time, but will surely appear at some point. The animal will sometimes be obviously in pain, crying, or stiff with limited motion. There will sometimes be a drop in appetite. If the condition goes untreated, the squirrel will die. MBD is very common because people do not provide a proper diet. A proper diet consists of a variety of foods as has already been mentioned. Variety is key here: do not give too much of one food. For example, corn, although containing calcium and protein, is not sufficient unto itself and too much of corn will lead to deficiencies. Rodent chow (also known as monkey biscuits or parrot biscuits) is balanced with the proper nutrients and should be part of the diet.

Treatment for MBD: get calcium/phosphorous into the squirrel immediately. The most readily available source can be purchased from most vets and is called Pet Tabs. Pet Tabs have a blend of minerals and vitamins. Grate the tab into powder and administer 1/4tsp daily. Try rolling the powder in a small ball of peanut butter, or, if necessary, dilute in a small amount of water and force feed with a syringe. If the symptoms are severe, take the animal to a vet and ask for a calcium injection, then continue treatment with the Pet Tabs. Your vet may have another product containing calcium that he or she recommends. Be sure that the product has calcium/phosphorus and is not just a vitamin supplement. You should see positive results in a few days. Be sure to change the diet.

#### **RELEASE**

There is a special and simple way to successfully release the squirrel you have nurtured. Don't just take it to a tree and let go; The squirrel may reach your back door before you do, begging to come in. That he is begging to come in doesn't mean he is rejecting his birthright: it means he is unfamiliar with the outdoor territory. Squirrels have home ranges in which they know every tree, rock, and bush, dog and cat. Take them to another area and they are completely unnerved and afraid.

Provide a support system for your baby until he or she has adjusted to new surroundings and is comfortable outside. Your baby must learn to interact with its own kind as well as learn about its new environment. Put the cage outside a week or so prior to your release date. This will introduce the baby to outside temperatures, sounds, and daylight/nighttime schedules gradually. Place the cage in a protected area such as a screened porch, a covered patio, carport, etc. Make sure cats and dogs cannot reach the cage. You could even hang the cage high in a tree. Protect the cage from rain and too much direct sun. Continue putting food in every day and talking and touching the baby to reassure it. It will be very frightened at first and will probably hide in the nest box for a day, but will eventually come out. You can even, in the case of extreme fear where the baby crouches panting and squealing in the cage, move the cage out of the house every day for a few hours until the baby is comfortable outside. Then leave the cage outside all the time, including nights.

One day, when the squirrel is scampering all over the cage, and the weather will be mild for several days, open the door and let it find its way out. Do not remove the cage and keep food and water and the nest box in the cage. He or she will come and go from the cage for awhile until it has built a nest or taken over an old one.

## FLYING SQUIRRELS - Special Handling Required -

**General Information -** The general information concerning diet, warmth, stimulation, hydration, and release will be the same. However, these little guys are very fragile and die easily therefore, they need much more constant attention to than the grays. . Flyers are nocturnal and will be more responsive or active during the night hours. The developmental rate will be a little slower than grays, and they tend to be much tamer than grays, so less handling during adolescence is recommended to insure a more successful release..

Get The Baby Warm - warmth and heat is very important - do not allow to get cool. (also do not overheat).

**Hydration** - Monitor them for hydration - they tend to dehydrate in the dry environment of a heated nest box. Try a wet cloth in a bottom corner of the box, and give extra water in the formula once a day.

**Feeding :** Be very careful not to over feed them at each feeding. Feed smaller amounts more frequently than you would grays. Remember that their capacity is much smaller. Be very careful to avoid aspiration (milk getting in the lungs during feeding) Use a 1cc syringe and small drops rather than a flow of milk.

Formula - Be sure to use the Esbilac powder/whipping cream formula, no substitutions.

**Mix and handle the formula as follows:** 2 parts of water, 1 part of Esbilac powder, 1/2 part of real whipping cream (1/2 pint cartons in the dairy case) Mix in a small jar what you think you will use in 2 to 3 days.

**Feeders:** Because of their extremely small size, flying squirrels need special feeding tools. Standard nipples used to feed the larger gray squirrel is far to large for use with flyers. Here are a couple of suggestions that have proven successful.(all of the below can be obtained from a vet and a vet will recognize the terms.

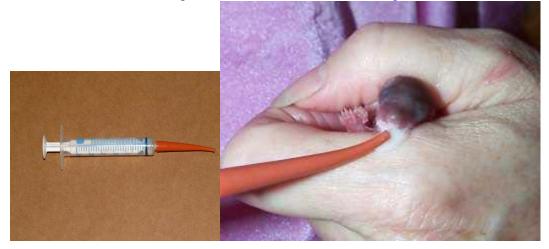
**Method #1** - Use the soft rubber tip from a vacutainer and a teat infusion cannula. The cannula will act as an adaptor to make the nipple fit onto the tip of a 1cc syringe. Slide the rubber tip over the infusion cannula. Cut slit in the end of the nipple. (The vacutainer is normally used for blood collection.)

**Method #2** - Use a Teat Infusion Cannula attached to a 1cc or 3cc slip tip syringe. Apply small amount of pressure to syringe and let baby lick the formula. This takes a little time so don't rush.(The teat infusion cannuala is available at Jeffers Pets. or Chris's Squirrels)



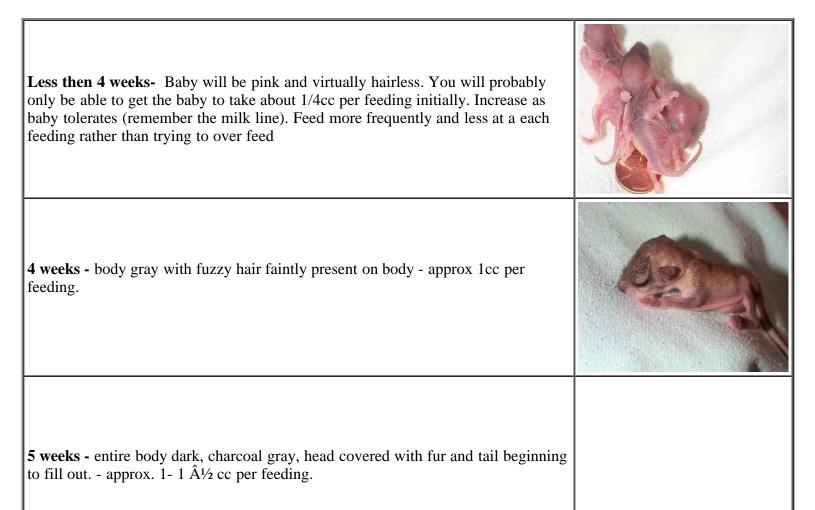
**Method #3** - A butterfly needle and rubber vacutainer. Cut plastic tubing 1/4" from hub and slide the rubber vacutainer onto the plastic tubing and then slide onto the tip of a 1cc syringe. cut slit in the end of the nipple.

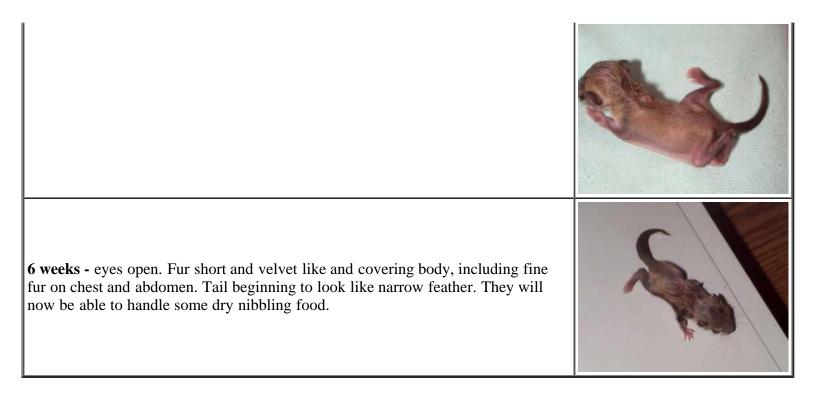
**Method #4 -** A 5 fr Red Rubber Feeding Tube/Catheter. Cut plastic tubing 1/4" from hub and slide the hub onto the tip of a 1cc or 3CC syringe. Apply small amount of pressure to syringe and let baby lick the formula. This takes a little time so don't rush. (feeding tubes are available at <u>Chris's Squirrels</u>)



**Feeding Schedules:** Remember, do not over feed however, on the other hand, don't under feed either. (Note: We found that the underside of the young squirrels is very transparent. By holding the baby vertical you can actually see a Milk Line across the stomach. We use this as a guide to help determine amount of milk the baby has taken.)

**How Much and How Old?** - The amount of milk to give at each feeding is determined by age and size. Here is a general guide for age and amounts per feeding. This is only an average and babies may vary slightly in size. Obviously, larger babies need more milk no matter the age.





#### SQUIRRELS ARE NOT PETS

Squirrels are wonderful babies and can be vicious adults. In most states it is illegal to keep them and if caught a person could pay a big fine. They have no domestic instincts, they do not love and they do not feel loyalty; they have no pack or herding instincts, and are by nature solitary creatures. Do not allow yourself to confuse their natures with those of dogs and cats. Squirrels have special dietary and special needs that are difficult to satisfy. Mature squirrels are unpredictable in mood, do not forget or forgive mishandling, and will bite even the hand that fed it and kept its bottom cleaned. Do not believe the stories you hear or read which imply squirrels are wonderful pets - they are not.

Squirrels are creatures of pure instinct with very strong defenses. Their bodies are designed for trees and dirt, not houses and cages. They will shred your curtains, urinate and defecate anywhere they happen to be, claw the skin off your arms, bite you, and if kept in a cage will develop mindless routines of movement. You will become a warden tending a prisoner. There is nothing more heart rending than to see a squirrel hanging on wire or screens longing for something it cannot name but wants so intensely. The squirrel is driven by instinctive emotional and physical needs that cannot be satisfied in captivity and that cannot be changed.

Releasing a squirrel will relieve you of the day to day responsibility and the pain and guilt you will feel when the squirrel you have loved and nurtured dies in captivity. And die it will - because of poor diet; because it bit somebody and was thrown against a wall; a child injured it or it injured a child; someone moved a sofa and crushed it; slammed a door when it was sitting on top of the door; or it drowned in a toilet. A squirrel you raised and who lives in your backyard is a happy squirrel that will come to you and take treats; it may even come in and out of your house. You can have a relationship with a free squirrel that you cannot possibly have in captivity, a relationship that is based on respect and admiration and not on selfish possessiveness.

Love and nurture the baby you have found, and after giving life, give the greatest gift of all - the freedom to enjoy that life. The first time you watch your baby scamper up a tree you will feel the rightness of it, you will see its unbounded joy. You will profit from one additional aspect of freeing your baby and that is a feeling of participation in the natural world by giving back to Mother Earth one of her own.