

CARE OF ORPHANED SQUIRRELS



GREY SQUIRREL



FRONT

REAR

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CARE OF ORPHANED Squirrels For Wildlife Guardians of Ontario

This information is from a conglomerate of sources including IWRA & experiences of several Canadian Wildlife Rehabbers.

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PLEASE NOTE:

There are grey squirrels [grey & black in colour] as well as red and flying squirrels. The care for an infant is pretty much the same no matter which species you are helping. In fact all the same principles apply to even those little loveable chipmunks.

As they grow older the difference becomes apparent. Red squirrels are the hyperactive children of the animal world and caring for one is like caring for 4 grey squirrels! Flying squirrels are protected and must be reported to the MNR.

INFANTS

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. [Note: if cold the baby may appear to be dead, try warming the baby for 5-10 minutes. When too cold they will go into an almost hibernation state and can often be revived. Too many hypothermic babies have been buried alive.]



Keep Warm: 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. Placing the cage or box half on and half off the pad which allows a cool place if the baby becomes too hot in one area.

Temporary heating, until a pad is found and the nest box warmed can be supplied by filling a zip lock baggie with hot water and putting it under a blanket with the baby in the blanket.

Put the baby/babies in a box [don't forget air holes] or cage with lots of rags and place a portion the box/cage on a heating pad on **low**, leaving a portion unheated to allow the baby to move from the heat if necessary. Hot water in a jar, wrapped in a towel or a 'hot water bottle' can be used but the temperature must be monitored. Babies with eyes closed can roam so make sure they can't climb out.

Find a wildlife rehabilitator in your area and get the animal to them as soon as possible. Can't locate one yet? Do the following and get the baby to a rehabber as soon as possible.

RE-HYDRATE THAT BABY!

The most important first treatment you will give the baby squirrel you have found is hydration. 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. 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 surely die of dehydration without water. 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, too weak to lift its head, instead of a precious, fat, round, wet, pink baby. If you have already given a milk of some kind, then start over.

Remember that hydration is a temporary measure meant to address deficiencies and should not be continued indefinitely.

Hydration Instructions: 1 tsp salt; 1 TBLS sugar + 1 quart warm water If you think the baby is only moderately dehydrated give water 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

HOW OLD IS THE BABY?

Age	Look For	Food	Caging
1-5 days	Pink, no hair. ears closed Approx 14-18 grams & 50-60mm long Size of woman's thumb, from knuckle to tip. Normal Temperature: 102.8° F (40.6° C).	½-2cc every 2 hours [one night feeding]	Up to eyes open can be housed in incubator, aquarium, and cardboard box, filled with soft rags, from which it cannot escape. It should sit partly upon a heating pad on low.
10-14 days	Grayish purple colour spreads over head, shoulders back [belly & legs still pink]	2-4cc every 2 hours [maybe 1 night feeding]	
2-3 weeks	Grayish purple colour deepens into emerging hair	4-6cc-every 3 hours	
3 weeks	Lwr teeth emerge Still no hair on legs & belly	8-10cc every 3-4hrs	
4 weeks	Downy hair begging on belly & legs about 85g		
5 weeks	Hair on legs and belly Tail hair short Eyes open About 100g	10-15cc every 4 hrs Start Solids begin weaning	Eyes open means movement, make sure it is in a secure cage and has room. Keep warm. Add branches and hiding place.
5-6 weeks	Upr teeth emerging Tail begins curling over back Ears Open		
6-7 weeks	Fully furred Less sleeping more active 15-175g	15-18cc every 6-8hrs	Larger cage needed with 'nest' to live in, dirt to bury in, branches to play in etc.
7-8 weeks	Fluffy Tail 175-200 gr		
8-9 weeks	Miniature squirrel Very active.		Should be outdoors in larger cage with more environment in the cage.
9-10 weeks	More muscular physique		
10-12 weeks	¾ full size		
12 weeks	Release		

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.

Some rehabbers say: DO NOT USE PET NURSER BOTTLES - you can aspirate the baby with a bottle (get milk in the lungs, causing pneumonia). Get syringes from a vet or 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 O-ring gaskets that do not stick.

Formula: Esbilac Powder Milk Replacer for puppies. Some rehabbers insist this is the only formula to use, it is certainly the best. 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 to 1 and 1/2 parts of Esbilac powder. 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.



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Feeding Schedule: After re-hydrating the baby as above, you can start introducing the formula. Give approx ½ the amount of hydrating water and afterwards, ½ with formula for a 3-4 feedings.

The baby should now be sucking enthusiastically, and when finished eating, sleeping satisfied and quiet with a little round belly. The chart is guideline only, some need less, some more.

Pinkies: 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.

At about 3 weeks of age you should still be feeding at least 4 times a day and definitely will not need midnight feedings. Much depends on the overall health of your baby. A sickly one will need more attention.

Weaning: The baby's eyes open at approx. 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 6 weeks, put monkey chow (called Zupreem Primate Chow and can be purchased at many pet stores) or rodent chow (no gerbil or hamster food) into the nest box with the baby, and

some apple or pear. It will at some point begin gnawing on the monkey chow. 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 6 and 10 weeks. It is sometimes very sudden. One day they are happy with formula the next day you are practically forcing them to eat. That's the cue for you to get them on solids if you have not already.

As the baby grows and becomes more active, and after it has begun eating the monkey chow, offer other raw foods such as broccoli, sweet potatoes, and a small piece of fresh corn. 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. Always have fresh foods in the baby's cage in addition to rodent chows and raw sunflower seeds. One of the most important aspects of a growing squirrel's diet is that you include a small amount of each food, not too much of one thing, but a variety of foods, including the chow, that will meet his or her nutritional needs.

Solid Foods can include: Corn on the cob, squash, broccoli, carrots, apples, grapes, bananas, apple, and pear fruit tree leaves. Cracked nuts: walnuts, acorns, pine, beech, hazel nuts etc.

Raw not roasted and not salted!

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 seizing 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.



Some rehabbers use a high quality puppy or cat kibble as a stable diet item.

Once the squirrel is stripping bark off branches and getting nut meats out it needs to be able to crack a walnut, prior to release.

PEE & POO:

Infant squirrels should be stimulated to urinate and defecate every time you feed it. They cannot do it on their own. Mom licks their baby in a downward motion from their stomach to their genitals. You can do the same with a cotton ball or gently your fingers. Keep them clean as animals get diaper rash too!

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 overfeeding. 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 coxoccidia. Take it to a vet and have a stool tested. The vet will recommend a dosage.

Sometimes a drop of children's Kaopectate will get rid of the diarrhea; however this is a one or two dose remedy, until you change the formula or find out the problem.

HOUSING

From birth to 5 weeks the babies can be housed in an incubator, aquarium, a cardboard box, or Pet carrier with the bottom holes taped. A heating pad, set on low, should be Placed under the container covering a portion of the nest area and wrapped in a towel if too much heat penetrates the housing unit. Too much heat can cause skin and hair problems as well as hyperthermia.

Example of nesting material include: cloth diapers, T-shirts, receiving blankets and soft facial tissues (the latter can be "built" into a nest form and replaced easily as soiled).

At five weeks, squirrels can be transferred to a cage At this time the cage should be small enough to be kept warm by using a heating pad in the manner previously discussed. The animal may 'be frightened at first and hide or cling to the sides. Place a lightweight towel over the cage to afford privacy and to keep drafts out. Sturdy branches can be added for play, eating, and hiding. Transfer part or the entire old nest from the previous cage. A hanging nest can be made by tying four corners of a small towel through the top of the cage. When the squirrel starts using this as its bed regularly, remove the other nest. . Squirrels like to hide food in the cage. Caching behavior usually develops when they are 7.5 weeks old. At this time, provide a container of dirt large enough to allow the animal to take dust baths and hide foods in it. The dirt should be pesticide free and be changed daily as it will contain spoiled food as well as excrement. Squirrels also eat dirt for minerals and insects.

Leave nuts or other foods that do not spoil. . Squirrels can learn to use lab animal water bottles which is nice for the rehabilitator since bowls of water tend to frequently get spilled and soil the cage. If bowls are used, heavy ceramic or weighted bowls work best. to Increase the size of the



cage as the

animal grows and becomes agile. It can be housed outside in a sheltered area at about 8 weeks of age. Additional branches and hollow logs will create a more natural environment, A wooden

nest box with hinged or removable front end will allow for cleaning. The entrance should be off-center to provide privacy. It should be placed on a platform up off the bottom of the cage. Height can be 170 considerable as long as they are climbing well.

RELEASE

You need to 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. If lucky you can open the door of your outside cage and let the squirrel come and go as they need to. If not move the cage to the area you are going to release a week or so prior to your release date. 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.

TREATING WOUNDS - The 3 Most Commonly Encountered

CAT BITES KILL. 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 are in a cat bite. Clean all punctures by flushing with betadine. Hydrogen peroxide is a poor anti-bacterial flush.

HEAD INJURIES 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.

A **FRACTURED LEG**, 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.

METABOLIC BONE DISEASE

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 seizing 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. Young growing animals need adequate sources of these minerals which nuts and fruits do not provide Broccoli, cauliflower, are good. Rodent chow also provides vitamins and minerals needed, but do not rely on it, they need a varied diet.

Dandelions, maple keys acorns, beechnuts, hickory nuts, walnuts, com, fruits, berries, buds, seeds, and some bark and even soybeans should all be brought to them.

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.



SPECIAL CARE PROBLEMS

As with any small mammal, aspiration can occur if the animal takes in too much formula. Select nipples with smaller holes in them should formula come out the nose. By applying a firm hold on the syringe plunger, one can control how much formula the animal takes to some limited degree. When very hungry, they are more likely to really pull hard on the nipple. If aspiration occurs, remove the feeding apparatus; wipe formula from the nose (so it will not be inhaled). Observe to see if the animal is breathing comfortably, if it seems that more formula is still in the nostrils, take a small bulb syring, squeezing to only half way, and place it on one nostril at a time. Repeat this two or three times until nose is clear. If any breathing problems develop (i.e., heavy or raspy), contact a veterinarian.

Genital sucking can be a real problem for growing squirrels. If bruises begin to appear on hairless squirrels, littermates are probably sucking on them. Be attentive when raising males squirrels genital sucking can cause swelling and sometimes lockage. If this occurs, temporarily separate the squirrels involved. If the problem continues, the male if sucking on himself determine that he is able to urinate. Sometimes this behavior occurs as a result of insufficient formula per feeding, an inadequate number of feedings or lack of enough sucking during the feedings. A rubber pacifier or standard baby nipple may be helpful.

Diarrhea may occur as a result of overfeeding or changes in the formula. Substitute dehydrating solution for the next two feedings, and then reintroduce the formula gradually by adding it to the rehydrating solution. Kaopectate has also been used with some success in this species.

Stringy towels or towels with holes in them can cause strangulation or inhibit circulation. Towels should be free of human hair which can cause the same problems as well as intestinal disorders if ingested.

Eyes that swell before they open should be seen by a veterinarian who will determine the course of treatment. Generally, the lids will be opened, the area cleaned, and instructions for further care given to the rehabilitator.

Screaming - An infant will sometimes make a high pitched scream when frightened or when first using its voice.

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 spatial 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.