



## CARING FOR YOUR SUGAR GLIDER

Sugar gliders are small nocturnal marsupials from Australia, Indonesia and New Guinea. They resemble small striped chipmunks with a flap of skin between their front and rear legs which allows them to glide through the air, similar to flying squirrels. Their body length is 5-6 inches with a 6-7 inch tail. Gliders are social in nature and may benefit from being kept in pairs. Some gliders may live beyond 10 years old.

**HOUSING:** Sugar gliders are very active and need space; a minimum cage size for a glider would be 24 inches wide and long, and 30 inches tall. Open air cages (wire) are best. The cage bottom should be covered with an inch of absorbent bedding changed twice weekly, such as hardwood (Birch or Aspen) chips, recycled paper bedding (such as Care Fresh), or fleece. Avoid cedar or pine which contain toxic oils. Branches free of splinters should be provided for climbing. Gliders prefer to hide and sleep inside a small chamber; a hanging cloth pouch suspended from the cage should be provided with easy access via a branch. A hanging basket may also be provided with soft cloth bedding contained within, as some gliders prefer this sleeping arrangement. Gliders like heat; the ideal air temperature is 60-80°F. Avoid cold drafty conditions; keep the cage clean & dry. Gliders do not need wood or other hard objects to chew on.

**DIET:** Gliders are primarily insectivores (carnivores). In nature they also can survive for periods of time by eating tree saps and nectars when insect prey are scarce. They never eat fruits or vegetables in the wild. In the past, complex diet formulas such as Leadbeater's Mix were developed. Although the original mix worked well when carefully formulated, most of the "Leadbeaters Mixes" or "BML" formulas now listed on the Internet have been modified from the original, and are no longer nutritionally balanced. Like most 'home made' diets in other species (such as cats), the vast majority of formulas don't hold up to close scrutiny, and are likely nutritionally inadequate. The need for such diets has largely vanished, due to good commercial glider diets which are now available.

The safest approach is to use a nutritionally complete dry pelleted food as the bulk of the diet. Pretty Pets glider diet is good; Pocket Pets kibble is adequate as well. Alternatively, a very low fat cat food or a low fat Hedgehog kibble may be used. These should contain no more than 35% protein and 10% fat. These foods provide balanced vitamins, minerals and protein. Gliders eating good kibbles need NO additional calcium or vitamin supplements.

Live prey can be fed, but need to be low in fat and calcium balanced if used as more than occasional 'treats'. Earthworms, Phoenix worms & slugs are good. Crickets or Dubia roaches may be used if they are calcium-enriched via feeding them T-Rex Calcium Plus or Mazuri gut loader food for 2-3 days (no other insect gut loaders have been proven effective.) Avoid mealworms, superworms & waxworms as these are nutritionally poor. You can offer small amounts of sweet foods, including non-fat yogurt, cottage cheese, & fruit baby food. Note: many fruits & veggies are low in calcium; limit items such as carrots, peas, corn, sweet potato, and most fruits. Higher calcium veggies and fruits may be fed more liberally, including papaya, blackberries, raspberries, grapes, apples, mango, and some chopped leafy greens. These are all low fat and won't likely cause obesity. Avoid high fat foods such as seeds & nuts, cheese, avocado, monkey chow, or regular dog & cat foods. Offer small meals twice daily; reduce the amount if your glider becomes heavy. Provide fresh water via a water feeder bottle, although gliders may only drink sparingly.

**BEHAVIOR:** Like many wildlife species, gliders are very energetic and easily stressed. Young gliders often require extensive handling to become socialized, and owners may need to carry the pet in a pouch for several hours a day for the animal to become tame. Gliders may bond with an owner, but some continue to exhibit fear with other people. If frightened a glider will make a hiss/growl noise, and may bite if it feels threatened. Gliders are fast moving, and may leap from the owner's hands to nearby objects or people. They like heights and may rapidly climb to a person's head. In general a glider should not be carried out in the open in unfamiliar areas, especially outdoors, but rather should be carried in a cloth pouch or inside one's clothing, to minimize stress and escape attempts. Their behaviors can make them challenging medical patients; they physically tolerate surgeries well, but are prone to self-mutilation via chewing any surgical incisions, unless strong preventive measures are taken.

**BREEDING:** Gliders begin to breed at 7-14 months old and can breed in any season. Pregnancy lasts 16 days, then the babies move to the mother's pouch. The babies attach to a nipple inside the pouch; if a baby loses its attachment to the nipple it may die. The young usually leave the pouch around the 70<sup>th</sup> day and can leave the nest around 110-120 days. One to three young are usually produced each litter.

**MEDICAL PROBLEMS:** Sugar gliders have several common disease problems in captivity, some of which are due to dietary deficiencies.

**Rear Leg Paralysis--** This condition is fairly common and typically occurs suddenly. Autopsy exam of paralyzed pets has revealed that spinal cord trauma is the usual cause. Gliders are very active and often leap around. If their diet is deficient in calcium or has a calcium/ phosphorous imbalance, then the bones become soft, which leads to an easily damaged spinal column. Treatment of paralysis includes restricting the pet's activity and giving cortisone within 24 hours of the injury, as well as correction of the diet and short term calcium supplementation. However, severely damaged spinal cords do not heal, and in many cases the paralysis is permanent, so the pet does not survive. Prevent this disease by feeding a balanced diet including a commercial food, and avoid obesity.

**Polioencephalomalacia--** This is a neurologic condition wherein certain areas of the brain degenerate. Signs may include weakness, dizziness, incoordination, gradual paralysis, tremors, disorientation and lethargy. The pet usually eats poorly and loses weight. The causes are not completely understood, but some animals appear to improve with administration of Vitamin B<sub>1</sub> (Thiamine) suggesting that nutritional deficiencies may contribute to this disease. Severe cases may fail to improve and eventually die. Prevention is best accomplished by feeding a balanced diet including a good commercial food.

**Cataracts--** These appear as a pale "spot" in the center of the eye (in the lens) and result in blindness. These typically occur in very young infant gliders. Infection of the mother's pouch may lead to eye damage in the infant glider. Another possible cause is nutritional, as infant cataracts seem more common when the mother is on a poor diet, or is fed too much sugary food, or is obese, or when the mother is bred too frequently.

Vitamin A deficiency has been proposed as a possible cause. Lastly, there may be a genetic (inherited) tendency to get cataracts. There is no effective treatment. Prevention is attempted via ensuring that the breeding female is on a healthy diet, is not overweight, is not bred too heavily, has no pouch infections (a veterinary exam and pouch culturing should be done), and that there is no family history of cataracts in the female's past.

**Trauma—**Gliders are easily injured if they are attacked by other house pets, are dropped, stepped on, or have a tail or leg become trapped in the cage wire. Torn skin and bone fractures are common. Prevent injuries by handling your glider carefully, and providing safe secure housing away from the reach of other pets.

An injured glider should be placed in a small enclosure such as a small cage or box to minimize movement, and kept warm; seek veterinary care immediately.

**Urinary tract diseases--** These may include bladder infections, urinary blockages, and kidney disease. These problems may be more common in gliders on very high protein/ high mineral diets such as large amounts of regular cat food. Signs may include bloody urine, straining to urinate or dribbling urine, lethargy, decreased appetite, increased thirst or urine output, protruding and/ or discolored penis, and weight loss. Treatment depends on the exact type of urinary tract disorder; seek veterinary care if signs are noticed. Prevention is via providing proper diet and housing.

**Reproductive problems--** Failure to reproduce, or weak/ dying joeys (babies) are common problems. Failure to breed can be due to improper cage setup such as inadequate space which leads to aggression between gliders. Weak or dying joeys are commonly seen when the mother's nutrition or health are not adequate. Be sure the mother is on a balanced diet and is not obese; do not breed her more than once yearly, and have her checked for infections of the pouch, mammary glands, or uterus. Preventive exams may include a check of blood calcium levels, fecal parasite exam, urinalysis to check for reproductive infections, and a pouch swab to check for bacteria and yeast infection.

**Digestive disorders--** Gliders may develop diarrhea or rectal prolapse (protruding bowel). Common causes include bacterial infection of the bowel, parasites, or improper diet. A fecal analysis should be done on a fresh fecal sample; antibiotics or anti-parasitic drugs may be needed, along with anti-diarrhea medication such as kaolin-pectin. Correct the diet if necessary.

**Skin problems--** Poor hair coats and/ or oily skin may be seen with poor diet or moist/ dirty cage conditions. Self trauma from repeated escape attempts or pacing within a small cage may result in areas of hair loss, due to repeated rubbing of an area of skin. Occasionally mites may cause small bumps on the edges of the ears. Mature male gliders (if not neutered) develop a normal bald patch on the top of the head between the ears, and another on the front of the chest, where scent glands are located.