

# EXOTIC



A PRACTICE FOR CLINICIANS

**DVM**

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Sugar Glider  
Care

The Collapsing  
Ferret

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## WHAT EVERY VETERINARIAN NEEDS TO KNOW ABOUT Sugar Gliders



**David M. Brust, DVM**  
Sugarland Pet Hospital  
Sugar Land, Texas  
drdave@asgv.org

David Brust received his DVM degree from Texas A&M University in 1984 and has been a practicing exotic animal veterinarian since that time. He is a past president of the West Houston Veterinary Medical Association and host of the radio talk show, "Ask the Vet." He is the current president of the Association of Sugar Glider Veterinarians, [www.asgv.org](http://www.asgv.org). Dr. Brust is the author of "Sugar Gliders: A Complete Veterinary Care Guide," and has filmed over 30 educational documentaries for the public regarding proper sugar glider care and husbandry.

All photos courtesy of ASGV™ and [www.asgv.org](http://www.asgv.org).

Sugar gliders (*Petaurus breviceps*), also known as sugar bears, are small marsupials similar in appearance to small flying squirrels that are native to Australia, Indonesia and New Guinea. They were first brought to the United States in 1993 and have rapidly grown in popularity as companion pets. Most domestic sugar gliders in U.S. are the smaller New Guinean subspecies. Although they are legal companion pets in 46 of the contiguous states (with the exception of California and Pennsylvania), breeding and sales are strictly regulated by the USDA.

### Suitability as Pets

Young sugar gliders are best human-socialized between 8 and 12 weeks out of the pouch. The bonding process may take several weeks to complete. Human socializing for taming and handling may be difficult in sexually mature adults who were not socialized as youngsters.

Sugar gliders are colony animals, therefore it is strongly recommended

**Table 1. Vital Statistics**

Physiological	
Life span	12-15 years
Head/body length	13-19 cm (5.0-7.5 in)
Weight	Male 113-170 g (4-6 oz) Female 85-142 g (3-5 oz)
Heart rate	200-300 beats/minute
Respiratory rate	16-40 breaths/minute
Food consumption	15-20% BWt
Base metabolic rate	2.54 W/kg
Avg. basal metabolism	46.2 kJ/d (130 g animal)
Avg. active metabolism	84-126 kJ/d
Cloacal temperature	89.6°F (32°C)
Rectal temperature	97.3°F +/- 0.7°F (36.3°C)
Thermonutral zone	75-88°F (24-31°C)
Reproductive	
Breeding cycle	Year round in captivity
Estrous cycle	Polyestrous - 29 days
Gestation	5-17 days, after migration, fetus will remain in pouch 50-75 days.
Litters per year	1-2
Incidence of multiple births	Twins 80% of the time; triplets are documented
Weaning	35-60 days out of pouch

\*Adapted from Brust DM: *Sugar Gliders: A Complete Veterinary Care Guide*. Association of Sugar Glider Veterinarians,™ 2009, [www.asgv.org](http://www.asgv.org)



One of the most distinguishing features about sugar gliders is that they have 4 hands. Each hand has 4 fingers and an opposable thumb.



A sugar glider's nails may become sharp. Nails may be filed but not clipped; clipping nails may reduce the animal's ability to firmly grasp its surroundings, allowing it to fall.



While the patagium is similar in appearance to that of a flying squirrel, sugar gliders exhibit muscular control over it and can steer themselves to their target.



Males have 2 scent glands—a diamond-shaped “bald spot” on the forehead and a smaller sternal spot in the center of the chest. Females do not have either of these characteristics.



Males have a bifurcated penis with a preputial covering; the scrotum is anterior to the cloaca.

they should be housed in groups of two or more whenever possible. If housed alone, owners must be advised to spend a minimum of 2 hours per day interacting with the animal to provide necessary companionship and prevent malaise. Sugar gliders may self-mutilate if not given enough social stimulation.

## Behavior

Although nocturnal by nature, sugar gliders are able to adjust to any schedule that allows maximum interaction with their owners. They enjoy playing outside their enclosure; however, careful supervision is strongly recommended to prevent encounters with common household hazards, such as floor or halogen lamps, metal venetian blinds and houseplants.

When properly trained, they may exhibit behavior similar to many dogs, e.g., expressing affection, recognizing

their name, coming on command. With training, they will ride around in the owner's pocket for hours without restraint.

Common vocalizations include “crabbing” (when frightened), barking (lonely or playing), purring/chirping (contentment) and sneezing/hissing (grooming or playing).

Aggression is rare in well-acclimated animals and is typically limited to young joeys or unsocialized adults. When threatened, a sugar glider will stand on its back legs and charge at the threat, feigning strikes and making loud sounds similar to a locust.

## Physiological Characteristics

- Each of the 4 hands possesses sharp, scimitar-like claws and opposable thumbs.
- Teeth do not continually grow like rodents and should not be routinely trimmed unless presenting serious issues.

- Sugar gliders exhibit exceptional muscular control over the gliding membrane (patagium), allowing the animal to glide up to 50 m.
- The semi-prehensile tail is primarily used for steering when gliding.

## Sexing

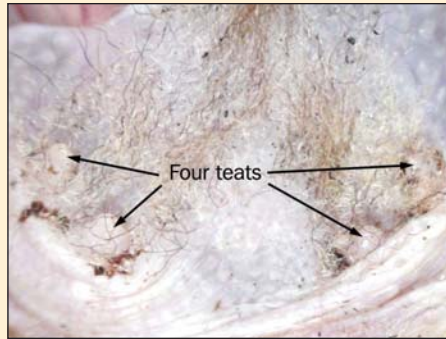
Males have a large pendulous scrotum and a bifurcated penis. Prominent scent glands are visible on the forehead and chest. Females exhibit a ventral pouch (marsupium) with 4 internal teats.

## Growth of Joey

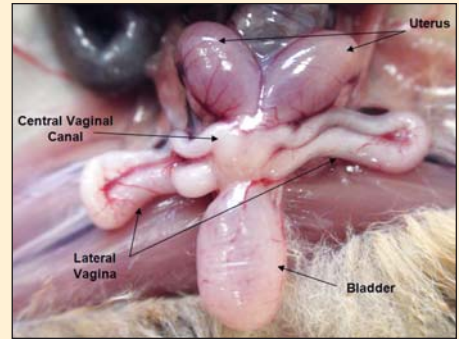
A study of the offspring from 30 breeding pairs was conducted to observe and record the developmental weight and characteristics of young sugar gliders over the first 8 weeks out of the pouch. The study concluded that certain developmental markers were more reliable than size and weight in estimating the age of joeys (Table 1).



Female sugar gliders have a prominent, mid-abdominal pouch (marsupium) where they carry their young.



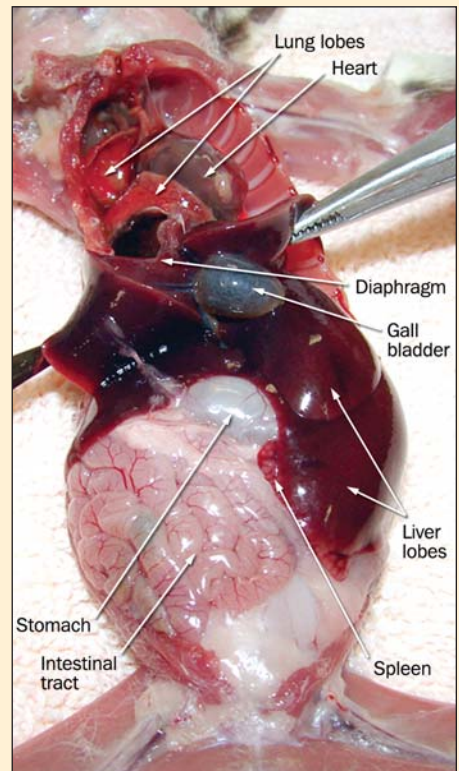
Females have four teats.



Female sugar gliders have 2 uteri and 2 elongated lateral vaginae that open into a single cul-de-sac divided by a septum.

**Table 1. Growth Stages and Distinguishing Characteristics**

<b>GROWTH OF JOEY</b>			
<p><b>WEEK 1</b> 8-18 g body weight; no fur, eyes closed</p>			
<p><b>WEEK 2</b> 12-22 g body weight; very fine fur, eyes closed</p>			
<p><b>WEEK 4</b> 18-35 g body weight; fur-becoming more prominent; tail starting to fluff out; animal becoming weaned</p>			
<p><b>WEEK 8</b> 23-75 g body weight; self-sufficient; very active at night</p>			



Normal internal organ placement.

## Dietary Recommendations

Free-ranging sugar gliders' diet consists primarily of pollens, arthropods and plant and insect exudates; however, their diets can vary greatly by season, location and climate conditions. Attempts to replicate this type of diet for domesticated animals may be impractical in non-clinical settings. Sugar gliders should not be

presented with a wide selection of high-sugar, high-fat items as they will almost always eat these foods to the exclusion of other more nutritious foods. Inappropriate feeding practices and inadequate homemade diets are believed to be a substantial contributing factor to many illnesses seen by practitioners and reduces the animal's life span.

Although some homemade diets

may be adequately designed, they are rarely practical for the average owner because it is often more difficult for them to secure necessary ingredients and maintain precise feeding ratios.

Fresh portions should be fed in the evening. Preservatives, pesticides and excessive fat should be avoided in the diet. Acceptable treats include small portions of fruit (e.g., melons, peaches, mangos, blueberries, papaya), yogurt

## Selected Sugar Glider Diets

### SUGAR GLIDER DIET 1

(Recommended by author, see [www.asgv.org](http://www.asgv.org) for additional information)

The ideal daily diet for a domesticated sugar glider should equal approximately 15-20% of its body weight and consist of the following 4 components:

- **Nutritionally-balanced kibble\*** (approx. 75% of daily intake). This equates to 1-2 oz per animal and should be available free choice in the enclosure at all times.
- **Sliced fresh fruits and vegetables** (approx 25% of daily intake). This equates to approximately one-eighth of an apple per animal and should be placed in the enclosure at night and removed each morning. Items should not be diced or chopped to maintain moisture content.
- **A calcium-based multivitamin\*** should be sprinkled over fresh fruits or vegetables 3-4 times per week.

**\*Special consideration:** Kibble and multi-vitamin products should be designed specifically for sugar gliders and formulated to work in tandem with each other. Mixing products made for other animals is generally not recommended.

*The following feeding programs are published in Johnson-Delaney C: Exotic Companion Medicine Handbook for Veterinarians. Zoological Education Network, 2000.*

Owners electing to use any of the following diets should be advised to mix the ingredients precisely as outlined in order to maintain nutritional consistency and efficacy.

### SUGAR GLIDER DIET 2\*\*

- **50% Leadbeater's Mixture**
- **50% insectivore/carnivore diet**

#### Leadbeater's Mixture:

- 150 ml warm water
- 150 ml honey
- 1 shelled hard-boiled egg
- 25 g high protein baby cereal
- 1 tsp vitamin/mineral supplement

Mix warm water and honey. In separate container, blend egg until homogenized; gradually add honey/water, then vitamin powder, then baby cereal, blending after each addition until smooth. Refrigerate.

\*\*Based on research and consultation with Australian zookeepers, veterinarians, and naturalists

### SUGAR GLIDER DIET 3

(one daily portion)

- Include equal amounts of: chopped apple, grapes or mango, carrot, sweet potato, hard-cooked egg yolk, zoo formula insectivore or exotic feline diet, plus 1 Tbsp volume of pet industry-raised insects
- Pet industry-raised insects that have been fed a commercial cricket diet or enriched feed
- Or, owner can dust all insects, fruits and moist foods with a complete vitamin/mineral powder
- Insects include mealworms, crickets, waxworms, moths
- 1 Tbsp insects (2 small mealworms or 4 small and 2 large or 2 waxworms)

- Nectars formulated for lories/lorikeets can be given as a fruit-portion substitute or as a treat
- Foods should be "chopped together" to decrease the ability of the glider to pick out only the favorite parts

### SUGAR GLIDER DIET 4†

(feeds 1 sugar glider)

- 1 tsp-sized piece each, chopped: apple, carrot, sweet potato, banana
- 1 tsp leaf lettuce
- 1/2 hard-cooked egg yolk
- 1 Tbsp good quality zoo feline diet
- 1 dozen mealworms

† Chicago Zoological Park adapted from AAZK Animal Diet Notebook

### SUGAR GLIDER DIET 5#

(feeds 2 sugar gliders)

- 3 g apple
- 3 g banana/corn
- 1.5 g dog kibble
- 1 tsp fly pupae
- 3 g grapes/kiwi fruit
- 2 tsp Leadbeater's mixture (see previous Diet 2)
- 4 g orange with skin
- 2 g pear
- 2 g cantaloupe/melon/papaya
- 3 g sweet potato
- On Wednesdays: feed day-old chick; when available, large insects (mealworms)

# Taronga Zoo, Sydney Australia

and applesauce. Owners should be cautioned against feeding fatty, nutrient-deficient insects as treats because sugar gliders will often hold out and refuse to eat anything else once they become accustomed to insects. Treats should be no more than 5% of daily intake. Filtered spring or drinking water (not unfiltered tap water) should be available at all times.

## Housing Recommendations

The recommended enclosure size for 1 or 2 adult animals over 5 months of age is: 36 inches (91 cm) wide by 24 inches (61 cm) deep by 40 inches (102 cm) high. Large aviary cages are the most practical option for adult sugar gliders. Additional height is the primary consideration.

The ideal enclosure size for 1-2

babies or juveniles younger than 5 months out of the pouch is: 18-20 inches (46-51 cm) wide and deep and 24-30 inches (61-76 cm) high.

PVC-coated wire is preferred over epoxy, paint, powder-coated or galvanized wire due to potential health and safety hazards. Rectangular openings should be no larger than 1/2" x 1" (1.25-2.5 cm). Enclosures consist-



Due to an instinctual fear of falling, sugar gliders will become significantly less active when they cannot firmly grasp their surroundings.



A smaller, “starter” cage is more conducive to the well-being of joeys under 5 months out of pouch. The ideal cage size for 1-2 joeys is 18-20 inches (46-51 cm) deep x 24-30 inches (61-76 cm) high.



A nesting cloth, loosely draped over a heat rock is recommended rather than traditional nesting boxes or hanging pouches, as a sleeping area, especially for young joeys. This combination reduces stress on the glider and promotes the bonding process with owners.

ing primarily of vertical bars (e.g., bird cages) are not recommended for babies or juveniles, as soft tissue tears may develop between the digits from sliding down the bars.

A removable plastic waste tray should be at least 1" (2.5 cm) from the floor of the enclosure. Paper lining is preferred over wood shavings. Daily removal of feces and soiled papers and general cleaning of an enclosure and all supplies are recommended as well as a quarterly sterilization of the housing and accessories.

Important considerations for placement of the enclosure in the home include environmental temperature, noise levels, odor, lighting and the social nature of the animal.

The ideal temperature range in the home for a healthy animal is 75-80°F (24-27°C). Nighttime temperature should not drop below 70°F (21°C). The use of a supplemental heat source is strongly recommended. A conventional heat rock is preferable to a heat lamp or UV lighting, especially during the bonding period, as it allows the animal to efficiently self-thermoregulate throughout the day regardless of temperature variations. Alternatively, ceramic heat emitters positioned with a linen towel or surgical huck towel can be used for regulating the heat.

Food and water bowls and food items may be placed inside an enclosed dining area to avoid contamination and unnecessary waste. The use of both a conventional water bottle and a weighted secondary water dish is recommended.

### Environmental Enrichment

Sugar gliders enjoy most traditional pet toys. Any item with loose strings or wires that could entangle the animal should be avoided. Solid exercise wheels provide an important opportunity for necessary exercise. Traditional hamster or rodent wheels should be avoided due to hazards associated with the prehensile tail. Rope and/or wooden toys should be replaced every 3-4 months.

Plants and branches are recommended to promote leaping and climbing. Quality artificial plants are preferred to natural fauna due to health and sanitary considerations. Varied sizes of branches of nontoxic trees can be used (for a list of safe plants go to [www.asgv.org](http://www.asgv.org)). These should be removed and cleaned every 2-3 weeks and must be thoroughly rinsed. A preferable alternative to foliage is 1-inch plastic chain, available at home improvement centers.

### Grooming

Bathing is not required. Sugar gliders will routinely groom themselves and each other. Effective topical sprays and waste tray additives are commercially available.

### Restraint

Manual restraint is best accomplished using either a surgical huck towel or fleece bonding pouch as a glove. These animals should not be scruffed or held by the tail. Sugar gliders can be transported to the clinic in a zippered, fleece pouch.

### Sedation

Sedation is usually required for a clinical examination or diagnostic sampling. Isoflurane may be used at 5% for induction, using a large face mask as an induction chamber, and 1-3% for maintenance with a small face mask. A non-rebreathing circuit should be used for both induction and maintenance. If isoflurane is used for induction, application of a topical methylcellulose eye lubricant should be used. Alternatively, sugar gliders may be sedated first with administration of an anxiolytic, such as midazolam (0.3-0.5 mg/kg IM). The use of an electrocardiogram (ECG) may be useful to help monitor the animal if it is



Solid-construction (not wire mesh) exercise wheels provide a good source of environmental enrichment and exercise for sugar gliders.



The least stressful method of sedation is achieved by using a large face mask as an induction chamber while 5% isoflurane is inhaled.



Once induced, 1-3% isoflurane is delivered for maintenance using either a small face mask or 1 mm Cook endotracheal tube.



A sugar glider can be safely restrained by placing the thumb under the jaw and the index finger on top of the head.



Normal radiographs, dorsoventral and lateral views

anesthetized longer than 5-10 minutes. Fluid therapy is required to maintain homeostasis.

## Veterinary Visits

The initial consultation and annual examination should include:

- Careful analysis of all aspects of the diet and husbandry (directly related to most clinical presentations)
- Physical examination
- Stool flotation/smear for abnormal protozoa/parasite levels (a fecal sample is usually obtained by simply picking up or restraining the animal)
- Dental examination

- Other diagnostics
  - CBC/chemistry tests
  - Radiographs to assess bone density
- Males should be neutered whenever possible to avoid anti-social behaviors and self-mutilation.

## Blood Collection

Only small volumes of blood may safely be drawn, up to a maximum of 1% of the animal's body weight in grams. A 1-mL tuberculin (or 0.5-mL insulin) syringe, with a 25- to 29-gauge needle, is recommended for most diagnostic sampling, depending on the site selected.

The cranial vena cava may be accessed at the thoracic inlet by directing the needle caudally at 30° off midline toward the contralateral hind limb. To avoid inadvertent cardiac puncture, insert the needle halfway of its length as the vessel is superficial in location. (View instructional collection videos at [www.asgv.org](http://www.asgv.org).) With practice, blood collection at this site is usually the most successful regardless of the animal's size or condition.

The medial tibial artery is highly mobile and easiest to access just distal to the stifle using a 29-gauge needle. As much as 0.5 ml blood may be

**Table 2. Hematologic Reference Ranges for Domestic Sugar Gliders**

Parameter	Reference range	Sample size
Basophills	29.50-62.75 x 10 <sup>3</sup> /μL	8
Eosinophills	92.02-281.18 x 10 <sup>3</sup> /μL	10
HCT	51.29-54.49%	62
HGB	15.83-16.86 g/dL	53
Lymphocytes	3693.98-7157.15 x 10 <sup>3</sup> /μL	62
MCH	18.79-19.39 pg	53
MCHC	30.63-30.99 g/dL	53
MCV	60.17-68.05 fL	54
Monocytes	112.55-170.69 x 10 <sup>3</sup> /μL	45
Neutrophills	1461.03-2204.57 x 10 <sup>3</sup> /μL	61
Platelets	292.18-400.32 x 10 <sup>3</sup> /μL	53
RBC	8.31-8.83 x 10 <sup>6</sup> /μL	53
WBC	5.49-9.31 x 10 <sup>3</sup> /μL	62

Values shown are the 95% confidence intervals after outliers were removed. Blood was collected from the cranial vena cava. Statistically, 90% of the population should have values within these limits.

\*\*Glucose levels measured immediately after collection.

**Table 3. Biochemistry Reference Ranges for Domestic Sugar Gliders**

Parameter	Reference range	Sample size
Albumin	3.12-4.64 g/dL	99
Alk phos	89.37-115.04 IU/L	75
ALT	96.76-136.60 IU/L	81
Amylase	2117.18-3350.82 IU/L	8
AST	54.42-99.79 IU/L	38
BUN	15.07-18.07 mg/dL	100
Calcium	8.53-8.85 mg/dL	97
Chloride	105.97-108.64 mEq/L	94
Cholesterol	111.70-123.99 mg/dL	78
CPK	1080.78-1636.71 IU/L	47
Creatinine	0.47-0.59 mg/dL	100
Globulin	2.9-3.1 g/dL	92
Glucose**	152.70-171.89 mg/dL	85
Magnesium	1.63-2.14 mEq/L	13
Phosphorus	4.35-6.12 mg/dL	62
Potassium	4.60-5.53 mEq/L	93
Sodium	138.76-143.06 mEq/L	92
Total bilirubin	0.12-0.70 mg/dL	72
Total protein	6.74-7.01 g/dL	92



Larger samples (up to 1 mL) may be obtained from the cranial vena cava. Notice the needle is not completely inserted.



The techniques used for administering fluids in sugar gliders are the same as in other small mammals; however, care should be taken not to administer fluids laterally, as they can pool in the patagium, resulting in slow absorption and discomfort to the patient.



Sugar gliders are particularly prone to obesity, especially when not exercised frequently or when fed inadequate diets that are too high in fat or sweets.

obtained from each side.

Cardiac puncture and orbital bleeding are not recommended.

### Injection Sites

- **Intravenous:** Cephalic or lateral saphenous veins, using a 25-gauge needle
- **Intramuscular:** Quadriceps, epaxial muscles of the neck and biceps/triceps, using a 25-gauge needle. Avoid the use of medications that sting.

- **Subcutaneous:** Dorsal midline of the thorax, using a 25-gauge needle. Check for pooling in the patagium.

### Most Common Disorders

- **Malnutrition**, which may be expressed as hind-limb paralysis, blindness, dehydration, cataracts, metabolic bone disease and seizures
- **Obesity**
- **Intestinal parasites**
- **Hair loss**, typically resulting from

poor nutrition and vitamin intake

- **Pneumonia**, including discharge from the eyes/nose
- **Diarrhea**, resulting from a change in diet, inappropriate diet containing too high sugar content, bacterial overgrowths, *Giardia*, *Cryptosporidia* or *Clostridium* sp.
- **Stress-related diseases**, including self-mutilation (particularly solitary animals), cannibalism of young and eating disorders



Hair loss in an obese sugar glider.



Cataract causes may include: genetics, vitamin A deficiency, pouch infections and an improper diet too rich in sugars or fat.



Radiograph shows warped bone development in the rear leg (circle) consistent with metabolic bone disease.

- **Endocrine disorders**
- **Trauma** (fractures, burns)
- **Dental Disease**
- **Neoplasia**

### Zoonotic Potential

There are no records of sugar gliders being susceptible to any specific pathogen or infectious disease. In over 15 years of widespread domestication and practical observation, *Clostridium piliforme* infections have been the most common diagnosis, and no documented cases of zoonotic transfer have been recorded.

Like most other mammals, it is

believed that sugar gliders naturally host trace levels of various bacteria and flagellates in their digestive tracts. Under normal presentation, no treatment is typically required. During periods of abnormally high stress (e.g., adoption, transportation, introduction of new foods, change of diet), the immune system often becomes compromised, and bacteria/flagellate levels increase. The most common presentation is diarrhea, with *Giardia* often suspected as the causative agent in chronic cases.

To date, no documented case has confirmed a *Giardia* transfer from

### What Every Owner Should Know About Sugar Gliders

- The most common mistake owners make is to feed the animal things it “likes.” This is problematic due to the animal’s overwhelming predilection for sweets and fats. Treats should consist of small pieces of fruit, yogurt or applesauce, not to exceed 5% of the total daily intake.
- Kibble or supplements designed for cats, primates or reptiles should not be fed to sugar gliders.
- Uneaten fruits/vegetables should be removed from the cage each morning.
- Owners should thoroughly wash their hands, including under their fingernails, before handling animals in order to avoid accidental transfer of toxins or bacteria.
- Sugar gliders are susceptible to toxicosis and a wide range of household hazards due to their keen senses and highly inquisitive nature. They should be protected from access to:
  - open containers of fluids, such as toilets, sinks, bathtubs, or buckets
  - stovetops, light bulbs, toasters, coffee pots
  - fruit-scented air fresheners/cleaners, insect or rodent baits, pesticides sprayed in rooms or on foods, residues left on hands or under fingernails and chemicals in tap water used as drinking water
  - chocolate or caffeinated drinks
  - toxic houseplants or holiday decorations
  - overheated non-stick cookware and other kitchen hazards

### What to Look for in a Healthy Sugar Glider



sugar gliders to humans. It is believed that some genotypes of *Giardia* may be host-adapted and endemic to marsupials and under normal circumstances do not appear to cause clinical signs.

Web Resources

Updated veterinary-oriented

resources, including an online veterinary care guide, procedural videos and extensive client education materials are available at the Association of Sugar Glider Veterinarians™ website, [www.asgv.org](http://www.asgv.org). Due to an educational grant, first-year memberships are free for a limited time.

RESOURCES

A client education brochure on sugar gliders is available from Zoological Education Network - 800-946-4782 [www.exoticdvm.com](http://www.exoticdvm.com)



Table 4. Formulary for Sugar Gliders\*

Although every effort has been made to ensure the accuracy of the information presented herein (particularly doses), in all cases the clinician is responsible for the use of any pharmaceuticals. Most drugs used in exotic companion species are considered extra-label, and few pharmacokinetic studies have been conducted; therefore, the clinician must critically evaluate the information provided and stay informed of recommendations in the literature.

Dosages listed in this formulary are anecdotal as reported in the literature except where noted. Sugar gliders have carnivore/omnivore gastrointestinal tracts; therefore, carnivore guidelines should be followed for antibiotic choice. Pain resulting from an injection can cause the rapid induction of shock in small species of marsupials.<sup>9,15</sup>

**Compounding note:** Due to sugar gliders' overwhelming predilection for sweets, most sugar gliders respond favorably to medications that are compounded with a fruity flavor. Tutti-fruity typically works best, although other fruit flavors, such as apple, peach have also been used with favorable results.

DRUG	ROUTE	DOSAGE	COMMENTS	REFS
Acepromazine (A) + ketamine (K)	SC	(A) 1 mg/kg + (K) 10 mg/kg	Postoperative analgesia and sedation to prevent self-trauma to incision site	6, 20
Acepromazine (A) + butorphanol (B)	PO	(A) 1.7 mg/kg + (B) 1.7 mg/kg	Tranquilization, analgesia post op	6, 20
Alfaxalone-alfadolone acetate (Saffan, Glaxo, London)	IV	0.1-0.2 ml/kg	Immobilization sedation	9,22
	IM	0.25-0.5 ml/kg		
	SC	15 mg/kg		
Amikacin (A) + Penicillin G (P)	SC	(A) 3 mg/kg q12h + (P) 25,000 IU/kg q12h (with fluid support)	Respiratory infection	11
Amoxicillin	PO, IM	30 mg/kg q24h x 14d	Dermatitis, general	6,10
Amoxicillin/clavulanic acid	SC	12.5 mg/kg q24h	Inject form not avail US	6
Atropine	IM, IV, SC	0.02-0.04 mg/kg	Control salivation during sedation	9,22
Bismuth subsalicylate	PO	1 ml/kg q8-12h x 5-7d	Diarrhea related to <i>Giardia</i> , coccidia	11
Buprenorphine	IM	0.01-0.03 mg/kg	Analgesic	11
Butorphanol	IM, SC, PO	0.1-0.5 mg/kg q6-8h prn	Analgesic	6,12,15,20
Butorphanol (B) + acepromazine (A)	PO	(B) 1.7 mg/kg + (A) 1.7 mg/kg; dilute with saline to administer	Post-op sedative, analgesic	6
Calcium glubionate	PO	150 mg/kg q24h long term	Calcium deficiency/nutritional osteodystrophy	6
Calcium gluconate	SC	100 mg/kg q12h x 3-5d (diluted in saline to 10 mg/ml)	Calcium deficiency/nutritional osteodystrophy	11
Calcium glycerophosphate/lactate	IM	7 mg/kg IM	Calcium deficiency/nutritional osteodystrophy	6
Carbaryl powder (5%)	Topical	Sparingly, also in nest boxes	Ectoparasites	6,11,20
Cephalexin	SC	30 mg/kg q24h		6
Ciprofloxacin	PO	10 mg/kg q12h x 7-10d	Similar use as enrofloxacin	6
Cisapride	PO, IM	0.25 mg/kg q8-24h	GI motility enhancer	6,15
Dexamethasone	IV, IM, SC	0.2 mg/kg q12-24h	Antiinflammatory; higher dosages for shock	6,15
Diazepam	IM, PO, IV	0.5-2.0 mg/kg	Calming, higher dosages IV for seizures	6,15,22
Doxapram	IV	2 mg/kg	General CNS stimulant, especially respiration	17
Enalapril	PO	0.5 mg/kg	Vasodialator in the treatment of heart failure and hypertension	17
Enrofloxacin	PO, IM, SC	2.5-5.0 mg/kg q12-24h	Antibiotic; note: may cause tissue necrosis SC	6,15
Epinephrine	IV	0.003 mg/kg	Stimulates heart, antagonizes effects of histamine, raises blood sugar	17
Fenbendazole	PO	20-50 mg/kg q24h x 3d repeat in 14d	Anthelmintic	2,6,11
Fluoxetine	PO	1-5 mg/kg q8h	Self-mutilation	11,16
Furosemide	SC, IM	1-4 mg/kg q6-8h	Diuretic	15,17

DRUG	ROUTE	DOSAGE	COMMENTS	REFS
Furosemide	PO	1-5 mg/kg q12h	Diuretic	15
Glycopyrrolate	IM, IV, SC	0.01-0.02 mg/kg	Control salivation during sedation	6,22
Griseofulvin	PO	20 mg/kg q24h x 30-60d	Antifungal, <i>Trichophyton</i> spp.	26
Hyaluronidase	Fluids	(150 IU/ml) 0.5-1.0 ml/L	Speeds fluid absorption	11
Isoflurane		5% induction/1-3% maintenance	Preferred anesthesia	6
Itraconazole	PO	5-10 mg/kg q12h	Fungal treatment	1,6
Ivermectin	PO, SC	0.2 mg/kg once, repeat in 10-14d	Anthelmintic	2,6,11
Ketamine	IM	20 mg/kg	Follow with isoflurane	6
Ketamine (K) + medetomidine (M)	IM	(K) 2-3 mg/kg + (M) 0.05-0.1 mg/kg	Immobilization. Reverse medetomidine with atipamezole 0.05-0.4 mg/kg IV	22
Lactulose	PO	0.2 ml q24h	Constipation	6
Lincomycin	IM	30 mg/kg q24h x 7d	Dermatitis	10
Meloxicam	PO	0.1-0.2 mg/kg q12h; Use 0.5 mg/ml concentration	Analgesia and nonsteroidal antiinflammatory; animals like sweet taste	11
Metoclopramide	IV, IM, SC, PO	0.05-0.1 mg/kg q6-12h prn	GI motility enhancer	6,15
Metronidazole	PO	80 mg/kg q24h	Infection	10
Midazolam	IM	0.25-0.5 mg/kg	Anxiolytic, preanesthetic sedation	14
Oxfendazole	PO	5 mg/kg once	Anthelmintic	2,6
Piperazine	PO	100 mg/kg	Anthelmintic	26
Prednisolone	IM, SC, PO	0.1-0.2 mg/kg q24h	Corticosteroid	15
Pyrantel pamoate (P) / Febantel (F)	PO	(P) 14.4 mg/kg + (F) 15 mg/kg	Roundworms, strongyles	6
Pyrethrin powder	Topical	Product safe for kittens, same dosage, frequency	Ectoparasites	6
Selamectin	Topical	6-18 mg/kg repeat in 30d	Ectoparasites	11
Sevoflurane		1-5% to effect	Anesthesia	6
Sulfadimethoxine	PO	5-10 mg/kg q12-24h x7-10d	Antibiotic; make sure well hydrated	6,11,15
Trimethoprim / sulfa	IM, PO, SC	10-20 mg/kg q12-24h x7-10d	Antibiotic; make sure well hydrated; SC may cause necrosis	6,15
	PO	50-57 mg/kg q24h		6
Vitamin A		500-5000 IU/kg	Skin disorders	6
Vitamin B complex	IM	0.01-0.02 ml/kg	Vitamin; be very careful of "sting"; administer under anesthetic or dilute	15
Vitamin E	PO	25 mg/animal/day	Vitamin	26
Yohimbine	IV	0.2 mg/kg	Reverse xylazine	22

\*Adapted from Association of Sugar Glider Veterinarians™ web site, www.asgv.org ©2009 by David Brust, DVM and Marsupial Formulary ©2002 by Cathy Johnson-Delaney, DVM, Dipl ABVP (Avian)

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# Transitioning your Sugar Bears to a Healthy & Nutritious Diet!

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It has been estimated that over 90% of all problems Vets see in our little buddies are directly related to improper diet – and *"in most cases these problems can be traced back to complicated, homemade diets found on the Internet..."*

The simple fact is that there's a lot of misinformation and hype out on the internet about which diets are best for Sugar Bears/Gliders – and this can get very confusing for owners. For example, on many unregulated "Sugar Glider" websites, there is an almost fanatical, deeply-held conviction among a core of amateur enthusiasts that nothing can be too "good for the glider", and therefore it must be catered to, and provided with, a wide variety of food items to choose from. Anything less, and the animal is somehow being abused or malnourished. In recent years, these self-proclaimed experts have inundated the internet with their emphatic and frequently unsupported recommendations of certain feeding programs (as well as almost every other area of Sugar Glider husbandry). In many cases, these so-called "experts" have only raised a small number of gliders themselves – and with no veterinary training whatsoever spend their entire day on a handful of Sugar Glider chatrooms dispensing "wisdom" to well-meaning new owners - and aggressively attacking anyone who disagrees with them.

This *"blind leading the blind"* mentality has dominated the Internet for the past decade – and significantly contributed to the majority of health issues commonly seen by Veterinarians to this day.



To be clear, the diet we recommend (Glide-R-Chow™, Glide-A-Mins™, fresh fruits & veggies) has been developed and refined by top Vets and licensed animal-care experts over more than a decade – and has proven to consistently produce tens of thousands of wonderful, healthy Sugar Bears . Even so, if you adopt animals from other people that aren't used to our diet – or get "off-track" a little bit when feeding your own little guys (which is easy), it's important to get them all on the right diet as soon as possible. As such, the following page of information (published by Association of Sugar Glider Veterinarians™) has some great general diet tips and instructions for staying on track! ☺

## ***"Transitioning your Gliders to a Nutritious and Healthy Diet"***

Due to the animal's extreme predilection for sweets, transitioning a sugar glider to the proper diet can be challenging. Once a patient that has become accustomed to a "junk food" diet, they will often hold out for the sweet foods they like – and refuse to eat more nutritious items.

Transitioning must therefore occur gradually, by mixing more nutritious items into their current diet. This is usually best accomplished by grinding up the pelleted kibble into a fine powder - and adding increased amounts over the course of approximately 30 days. If the patient eats around the powder, mixing in a blender may be necessary until they become accustomed to the taste. As the levels of nutritious food are increased – and the sugary, fat items are decreased – eventually the patient can successfully be transitioned onto the correct diet.

When transitioning an obese patient to the proper diet, practitioners should caution clients to go slowly – and to actually "follow through" with the transition. Often, the underlying problem originally began with the owner wanting to feed the animal what it "likes" – so the critical importance of transferring to a proper diet, (and the consequences of not doing so), must be stressed.

Owners of young joeys (8-16 weeks out of pouch) should be extremely careful when transitioning to a new diet. As with most animals, a sudden change in diet can put their entire physiology under severe stress – and this is especially true for babies. Young sugar gliders often develop chronic diarrhea and die rapidly from dehydration (and other stress-induced complications) due to owners abruptly changing their diet.

### **DIETARY WARNING:**

**Contrary to commonly available information in lay publications and on the internet, the majority of a sugar glider's daily diet should not consist of fruits, vegetables, or "live" foods (such as mealworms or crickets).** Such items contain excessively high levels of sugar and fat which can result in obesity, osteoporosis, periodontal disease and wide range of related disorders.

**Additionally, Sugar Gliders should not be presented with a wide selection of foods at mealtime. Experience has shown that, when offered such items in this manner, sugar gliders will tend to gorge themselves on sweet and fatty items – to the exclusion of healthier, nutritionally-balanced foods.**

**The detrimental effects of this behavior cannot be overemphasized enough – and requires continual proactive management by owners – as it is believed to be a substantial contributing factor to many illnesses seen by practitioners.**

The above issues are often made worse by owners who mistakenly believe that a particular food is good for the glider – just because they happen to "like" it. One effective way to communicate the seriousness of this problem to owners is by comparing sugar gliders to human children – because in many ways, their dietary behaviors are quite similar. For example:

- They love sweets – and prefer them over almost anything else.
- If presented with a meal that includes sweets – and healthy food – they will almost always gorge themselves on sweets first – to the exclusion of nutritious items.
- Once their system has become accustomed (ie. addicted) to getting sweets, they will often stubbornly hold out for them – refusing to eat other foods.
- The physiological affects are similar, and include obesity, decreased energy/activity levels, periodontal disease, etc.. However, of particular importance to gliders is the relatively rapid onset of calcium-related deficiencies – often resulting in seizures, hind-limb paralysis, and death.

## How do I know if my baby is sick?...

Hey there :-)

Virgil here again with another "Tip-o-the-Day"!...

Since the topic of today's email is related to health, by law it's important to stop for a second and remind you of the following. :-)

\*\*\*\*\* DISCLAIMER \*\*\*\*\*

All the information provided to our customers and published on the Pocket Pets website has been reviewed and approved by multiple licensed animal care professionals and at least one Licensed Doctor of Veterinary Medicine - all of whom specialize in Sugar Bears (also known as sugar gliders). Pocket Pets, and its directors, employees or agents are not licensed veterinarians and nothing associated with this communication is to be construed as - or relied upon - as veterinary advice. As such, you are strongly encouraged to consult with a licensed Veterinarian who specializes in Sugar Bears/Gliders regarding any specific health issues, questions or concerns.

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Ok, now that we've got all that "legal stuff" out of the way, let's dive into today's topic. :-)

As we've already covered in the Quick Start Audio CD and a couple previous emails, Sugar Bears (also known as sugar gliders) - in general - are not really prone to any particular illness or disease. However, as tiny babies, the two most common things they are susceptible to are dehydration - and hypothermia.

Since we've already covered both these topics already, in this email we're going to focus on giving you some very specific tips on:

- 1) Warning signs to look for, and
- 2) Tips for HOW to deal with anything that might come up...

Before we get started here, it's important to briefly remind you of the importance of always keeping your babies nice and snuggly-warm; especially during the first few weeks you have them. The simple fact is that most of us can't keep the room where our baby's play and sleep at above 75 degrees, so if at all possible, you'll want to make sure and get a good, quality heat lamp - to go along WITH their heat rock - for at least the first few weeks they are in their new home. With baby sugar bears especially, in the rare case that they would start to exhibit any signs of sickness - giving them plenty of heat right away is a big MUST - so that they don't have to waste any of their valuable energy just trying to stay warm. For more specific information on: 1) why this is important, 2) where to get the right lamp & bulb, and 3) why NOT to use a space heater near your babies cage, check out the free report entitled: "Keeping Healthy" on the front page of our website at [www.SugarBears.com](http://www.SugarBears.com) .

Ok, keeping all this in mind, let's dive in and start with the topic of dehydration. When it comes to this topic, the thing we always tell customers is to always ASSUME your baby is dehydrated for the first few weeks you have them (even though they're not). This way, it automatically kind of "pre-empts" anything that might happen while they are still tiny like this - and you will have the "peace of mind" of knowing that your baby's welfare is well in-hand.

Now, right off the bat, you should already be mixing your baby's water bottle with a 50/50 mixture of Gatorade (or apple juice) and purified bottled water. Any citrus flavor will usually work fine. If you don't want to use apple juice or Gatorade, you can also substitute Pedialite (made for human babies) because it doesn't have the high-fructose corn syrup contained in Gatorade - but either works equally well in most circumstances. About the only thing you have to do is switch out this mixture every other day or so, in order to keep it fresh. :-)

Secondly, for the first 6 weeks you have them, the ONLY fruit you should feed them is apples. NOTHING else. No matter how tempting it is to watch them eat other stuff - save that for later in their lives. The basic reason for this is simply that baby sugar bears get MOST of their liquids from their apples - and apples contain PECTIN - which is a VERY important digestive agent for their little tummies. Remember, as little babies, their tummies don't have all the necessary digestive enzymes yet that they need to eat other foods - so it's best to play it SAFE for the FIRST SIX WEEKS – and stick religiously to the diet we lay out for you.

The basic rule of thumb here is that baby sugar bears are a lot like little kids – especially when it comes to their eating habits. In other words, if you give them sweet, FUN stuff all day to eat - they'll definitely eat it. However, that doesn't mean it's GOOD for them.

For example, every year we get FAR TOO MANY frantic emails and calls from new parents, saying things like: "Help, my baby is throwing up"...or "has severe diarrhea" ..etc..etc.. In almost EVERY case when we dig into what's happening, these well-meaning moms/dads got some CRAZY information off some credible-LOOKING website or chat room that told them sugar gliders LOVE this kind of food - or that our diet is terrible and that they should immediately switch their baby to a different diet – etc..etc... The problem is that by the time they figure out they got BAD advice, their little baby's digestive system is all out of whack - and it could easily die in less than a day or two.

**WARNING REGARDING CHANGING DIETS:** Suddenly changing a diet that any animal has become accustomed to over time can be very dangerous. This is true for almost any animal, but it is especially important for young baby Sugar Bears, whose tiny digestive systems are very delicate at this young age. Changing a baby's diet automatically forces their entire digestive system into a state of extreme stress - as its digestive system is suddenly forced to cope with and process a whole range of strange foods it has never experienced before. This stress extends all the way down to the cellular level – causing every system in the baby's body to effectively go into “crisis mode”. Once this happens, the baby will often develop diarrhea very quickly – and it can die as a direct result of JUST changing their diet. It's essentially the same principle as how a full-grown dog or cat will usually get diarrhea if you switch their brand of food – except that these little darlings only weigh a couple OUNCES at this age – and subjecting their entire body to such an extremely high level of unnecessary stress can be deadly.

Bottom line... The diet that is laid out for you in the audio CD and these Special Reports has been designed – and approved – by multiple Doctors of Veterinary Medicine who specialize in these animals; and all our babies are already used to eating it. PLEASE stick to this exact diet FOR AT LEAST THE FIRST SIX WEEKS - and you're little darling(s) will get off to a GREAT start :-)

Now, having said all that, it's important to understand that Sugar Bears, like almost all mammals, typically host trace levels of various bacteria and/or parasites (such as Giardia) in their digestive systems. Many of these organisms are believed to naturally exist in sugar bears, in much the same way as we humans have thousands of organisms that normally live in our digestive tracts. Under everyday

circumstances, they normally don't cause any significant harm to the animal, and don't require treatment. HOWEVER, under periods of stress (like the kind associated with traveling across the country and moving to a new family) it can SOMETIMES "bloom" inside their digestive tracts and cause a wide range of problems; including severe dehydration.

Luckily, in most cases, both dehydration and Giardia are very easy to handle just by doing the two things outlined above. In addition, starting today (and for the next 4-6 weeks) if you would like, you could ALSO do the following.

1) Get a cup of blueberry or peach flavored yogurt. This is like "crack" to most baby sugar bears and they can't resist it :-). Just like kids, some sugar bears will only like certain flavors, so before you move on to the next step, be sure to FIRST find a flavor that your baby(ies) like.... Once you've found a flavor they like, THEN

2) \*\*\*VERY IMPORTANT\*\*\* Mix a small amount of BOTH: 1) Kaopectate (or Peptobismol) and 2) Glide-a-Mins into the yogurt. Use about 1/2 TEASPOON of Kaopectate (or Peptobismol) - and 1 TEASPOON of Glide-a-Mins per standard-sized cup of yogurt. It's VERY important to mix this together thoroughly, and not put too much of either into the yogurt. The tiny amount of Kaopectate (or Peptobismol) will help combat any digestive stress they might be feeling, and it usually helps keep Giardia and diarrhea from becoming a problem. The Glide-a-Mins have a specially-formulated mixture of good digestive bacteria and enzymes that - along with the yogurt - will help 'jump-start' their little digestive systems. After you make it, keep this mixture refrigerated, and just give it out as follows:

3) Dip your finger in the mixture and let them lick it off. Give them about a HALF-teaspoon - per baby - every day for the first 3-4 weeks. Not only does this little "exercise" ensure that you KNOW they are getting their vitamins (in addition to the other two methods laid out in the other Special Reports) - but it is also a FANTASTIC way to speed up the whole bonding process (because to them, you kinda become the "ice-cream man")!

For example, as we will be covering in other upcoming emails, whenever you get TWO baby sugar bears at one time, they NEVER - EVER - bond at the same rate. In fact, it always seems like one bonds to you almost instantly - and the other "hates" you. Even though this is never the case - it sure FEELS like it, when one is crawling right into your hand practically from day one - and the other is crying constantly and nipping at you whenever you come near the cage. The truth is they BOTH will eventually get to the same "place" of trust and love - but they just never get there at the same rate.

The "problem" in this type of situation is usually that a new mom or dad naturally gravitates towards spending more time with the loving baby - and less with the scared, aggressive one. In reality, it's the scared one that needs even MORE love and attention to "break through" their defenses - but even if you KNOW the whole "tough guy" thing is just an "act" - that chattering noise and nipping can be pretty intimidating sometimes. You just have to "push" through the fear and be persistent :-)

In any event, whether your baby is completely docile...super-aggressive....or somewhere in between - the "yogurt on the fingertips trick" is one of the FASTEST ways to get them to bond with you. The reason is simply that if/when they DO nip at you - they will pull back a mouthful of what tastes like REALLY good "ice cream" to them - and if you keep this up for a couple weeks, it WILL transition even the most aggressive little baby (like my own personal pet Bandit was) from nipping...to licking...to eventually loving :-)

4) Take a small bottle-cap (from a drinking water bottle) and fill it about HALF full every day with the yogurt/Glide-a-Min mixture. This is roughly about HALF a teaspoon. Just put it in their cage (or dining room assuming that you've already made one) every night just before you go to bed - and take whatever is left out of the cage first thing in the morning.

Keeping all the above in mind, the primary signs of a baby sugar bear being sick or dehydrated are simply that:

- 1) they are very lethargic or "wobbling" when they walk,
- 2) they have diarrhea for more than a day or so,
- 3) their stool is "sticky" (possibly a sign of a Giardia "bloom"), and/or
- 4) they are not eating their apple.

If you notice anything like this, be sure to email us right away...title the email something like "HEALTH EMERGENCY"...and give us the specifics of what is happening. These emails - while rare - are our TOP PRIORITY - and we will ALWAYS try to get back to you immediately. However, if you feel the situation is serious - or for some unknown reason you do not hear back from us within a couple hours - don't hesitate for a second to take the sick baby to a vet right away.

Having said that, if you should notice that your baby suddenly starts "wobbling"(which again is usually a sign of severe dehydration), TIME is of the essence. Therefore, in addition to getting them to a Vet ASAP, the most important thing is to get them eating and drinking IMMEDIATELY. Giving them a half a slice of canned peach (or applesauce or fruit cocktail if they don't like the peach) - with lots of syrup - will usually help give them a much-needed boost of energy, but that's just a start...

In addition, the following is a special "EMERGENCY RESCUE MIX" that we've found works wonders in a very short period of time. It was developed by a Vet specifically to counteract the above symptoms (pretty much regardless of the cause) and we've seen near-miraculous turnarounds even in severe cases of Giardia or dehydration when it is caught early enough - and given often. It only takes about 5 minutes to throw together - and to make it you will need:

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#### EMERGENCY RESCUE MIX (ERM):

- 1) 10 TABLEspoons of warm water (bottled of course - Remember to NEVER give your baby city or tap water because of potential "spikes" in chlorine levels.)
- 2) 10 TABLEspoons of honey
- 3) 1 hard-boiled egg (still in the shell)
- 4) 20 pellets of Glide-R-Chow, and
- 5) 1 TEAspoon of Glide-A-Mins

#### INSTRUCTIONS:

- a) Using a blender, thoroughly mix the warm water, honey, and Glid-A-Mins.
- b) In a separate bowl, crush the Glide-R-Chow into fine powder.
- c) Place the hard-boiled egg (still in the shell)in the bowl with the powder, and crush it by hand into the

smallest chunks you can.

d) Scrape the the egg/powder mix into the bowl containing the water mixture, making sure to scrape out as much of it as possible.

e) Stir everything together by hand, and then blend for approximately 3-5 minutes using an electric blender. Start on low - and increase the speed until the entire mixture is completely chopped up and liquefied.

f) Serve approximately 2-4 TABLEspoons of this mixture to the potentially-sick sugar bear evenly THROUGHOUT the course of each day. They probably won't be able to eat all this, but you should begin to notice an improvement within the first few hours, and two full batches of this mix will normally help get almost any sick sugar bear "out of the woods". Keep refrigerated or frozen until served.

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Now, we'll warn you right off the bat that even the most "finicky" sugar bear (even the rare ones that won't eat the yogurt/pepto mix) will usually go absolutely NUTS the first time their little tongue tastes this "heavenly concoction" - so be prepared for a surprisingly enthusiastic response when you give it to them :-). In fact, this makes it a PERFECT food for them to lick off your finger while they are sick. Over the days you administer this mix, ALSO continue to give them their normal standard diet of apples, Chow, and bread as outlined in previous emails. They will almost always eat this mix before anything else, (which should be about 50% of their overall diet while they are sick), but this way they will have PLENTY of other nourishment to heal their little body.

Now, if you happen to be one of those "extra cautious" parents who wants to be prepared for anything, you can go ahead and whip up a batch of this and just keep it in the freezer. Hopefully you'll never need it, but this way it's ready just in case. Also, even if they aren't sick, you can still feed a LITTLE bit of this mix to them once every 2-3 WEEKS or so as a "super-treat". They'll LOVE it, but only feed it to them as an OCCASIONAL treat.

While this "Emergency Rescue Mix" is GREAT for nursing a potentially-sick baby back to health, if it becomes a main part of their diet for more than 30 days, they WILL probably start to develop a very musky odor that is extremely hard to get rid of. Therefore, if you find it necessary to give them this mix, it's usually best to discontinue it as soon as they have been acting normally for 5-7 days with firm stools :-)

Now, in the rare case where your sugar bear will NOT eat the ERM, immediately try giving them the individual parts of it separately (ie. egg, honey, etc..). If they STILL don't like it, the best thing is to probably get them to a Vet RIGHT away - because this usually means that whatever is wrong has already gotten to the point where only medication will help.

As we've said in previous emails, dehydration in a small baby sugar bear (or a severe Giardia "bloom") can kill it within a day or two - so it's always better to be safe than sorry. Therefore, if you are EVER in any doubt, ALWAYS err on the side of caution and take a sick baby to the Vet. They will easily be able to tell if the baby is dehydrated, and a quick fecal-exam (called a "float") will tell them if bacteria or parasites are the problem. Although identifying the specific type of bacteria or parasite can sometimes be almost impossible without extensive testing, in most cases a couple simple, inexpensive tests will

quickly tell your Vet exactly what needs to be done.

That being said, when looking for a good Vet, here are a few important considerations that can save you a LOT of money.

First, in almost every situation, your normal neighborhood Vet (that already sees hamsters & gerbils) can easily work on Sugar Bears (aka Sugar Gliders) – even if they’ve never seen one before. This is simply because the process for treating diarrhea, dehydration or intestinal bacteria/parasites is identical to virtually any other small mammal.

Now, in many cases if you call ahead to their office, they may tell you they do not work on these animals. However, it’s been our experience that if you simply “show up” at their office with your baby – armed with the following three printouts:

- 1) This Special Report,
- 2) The Special Report “Transitioning your Sugar Bears to a Healthy & Nutritious Diet”, and
- 3) The Veterinary article "What Every Veterinarian Needs to Know about Sugar Gliders"

they will at least take a look at them for you. You can print all this information out at one time simply by going to the link provided below, and once your vet sees everything they will know exactly what to do. :-)

Also, always ask if your Veterinarian is a member of the Association of Sugar Glider Veterinarians™ (www.ASGV.org). As we have mentioned in previous emails, the ASGV™ is a “vets-only” association that is free to all licensed Doctors of Veterinary Medicine. If for some reason your Vet is not already a member, just ask them to join. The ASGV™ is always on the cutting edge of veterinary medicine for these little guys – so by going to a member Vet you can rest assured that they will be up to date on all the latest dietary and care information you might ever need. :-)

Now having said that, if your baby is exhibiting any of the symptoms outlined above, in most cases your Vet can quickly determine the source of the problem by simply doing a quick fecal check (or “float”). Once this is done, the typical treatment consists of:

- 1) Giving the baby a quick "Hydro" shot (to push much-needed liquids into their system),
- 2) Giving them an ongoing oral medication for a few days; like either Albon (a banana-flavored paste that also goes by the scientific name: Sulfadimethoxine), Panacur (scientific name: Fenbendazole) or Flagyl (scientific name: Metronidazole). For example, the typical dosage for administering Flagyl is 25 mg/kg orally, twice a day for 7-10 days.
- 3) Giving them an anti-diarrheal medication like Endosorb.
- 4) Possibly an additional hydro shot every other day for the next week or so (depending on how severe the dehydration was)

In any event, any Vet will always be familiar with one – or all - of the above procedures and medications; and once they read the above reports you bring in with you, they will quickly know both the appropriate medicine and dosages for your particular situation. Again, for much more detailed information on how to treat this – or any kind of medication condition in these animals – simply ask

them to go to [www.ASGV.org](http://www.ASGV.org) and join the Association of Sugar Glider Veterinarians™. Tell them they can find something called a “Formulary” - and all treatment information - on that site (they will know what that means). Also, once they are members they can speak directly with some of the top Vets in the world who specialize in these little guys, and get any other answers they might need right over the phone. :-)

From there, all you have to do is just follow their instructions. :-)

All of the above very standard stuff for treating small mammals, and the good news is that even if they need to do all of the above things – the total cost is normally only between \$50-\$100 for everything. :-)

**IMPORTANT NOTE ON MEDICATIONS:** One of the most common mistakes people make when giving their animals prescribed medications is that they stop giving it to the animal before the medicine runs out. For example, even if the baby's stools become firm, always finish any prescribed medications exactly as outlined by your Vet, because that will prevent any reoccurrence down the road. :-)

All that being said, while we are still on the subject of potential illnesses, one more quick thing I want to cover is about the importance of washing your hands both before - and after - playing with your new little darling(s).

First off, it's very important to always wash your hands BEFORE taking your babies out of their cage. This is because there's a pretty good chance that - during the course of your ordinary day - there might still be toxins and other residues left on your hands or underneath your fingernails that could potentially hurt your sugar bears if they lick it. Remember, sugar bears have a GREAT sense of smell, and if they sense something strange on your hands or underneath your fingernails, they will probably try to check it out :-)

Now, as far as washing your hands afterwards goes, this is always a good thing to do immediately after handling ANY pet. In all our research, even though we've never been able to find even ONE SINGLE verifiable, documented case of a sugar bear ever passing along an illness to a human, it's still always strongly recommended to wash your hands after handling ANY pet - including sugar bears. Most household pets, including: dogs, cats, birds, and reptiles routinely pass along all kinds of sicknesses to humans - and studies have shown that in almost every case where this has happened, the whole thing probably could have been avoided by owners simply washing their hands. Therefore, getting in this habit both before - and after - handling your pets is always a good idea :-)

\*\*\*\*\* ONE LAST THING \*\*\*\*\*

About the only other kind of non-life-threatening "illness" (if you can call it that) which baby sugar bears can occasionally come down with is an eye infection. Usually when this happens, it's simply the result of accidentally scratching their eye while cleaning themselves. Like everything else covered so far, this is an easy problem to detect - and very simple to treat...

Basically, you can tell if an eye infection is starting when all of a sudden one of your baby's eyes swells shut – gets crusty - or noticeably turns either blueish or a milky white. If this happens, it's pretty easy to treat using a warm, wet cloth and a substance called "triple antibiotic"..

Triple antibiotic can be found on the shelves of Walgreens, CVS, Wal-Mart, and Target. It's in the First Aid Section. If your baby's eye is matted shut, just take a warm, moist cloth and gently rub the

"matting" off the eye until it opens. Then, if it's not blueish or milky white in color - just wait a few hours and see if it closes again.

If it does, (or the eye is already blueish or milky white in color), just put a TINY bit of triple-antibiotic directly on the problem eye twice a day. Always wipe the eye clean with a warm, wet cloth each time before re-applying. It will probably take a few days to see a change, and it may turn a milky white before it starts to get better - but it should take care of the problem if you just keep it up... Again, if in doubt, don't hesitate to take them to a Vet. They should be able to identify the problem very easily :-)

Now, having said that, it's important to point out that there is a BIG difference between having a simple eye "infection" or a much more serious problem called an "abscess". An abscess is simply an infection (usually caused by getting a small cut inside their mouth) that is under the skin – and while it is rare - with sugar bears it usually first appears as some sort of "bump" on their face. If you do happen to notice a "bump" or "lump" ANYWHERE on your sugar bear's face (not on the eye itself) – take it to your Vet immediately.

Again, while rare, an abscess can get very serious – very quickly – because it can spread into their sinus cavities and respiratory tract and quickly cause death if not treated as soon as it is noticed. Fortunately, it's extremely rare that something like this might happen, and it is usually a very simple, inexpensive problem to treat – as long as it is caught early. :-)

\*\*\*\*\*

One last reminder in case you end up needing to take your baby to a Vet... Again, be sure to PRINT OUT: 1) this report, 2) the special report entitled: "Transitioning your Sugar Bears to a Healthy & Nutritious Diet", and 3) the Veterinary Article entitled: "What Every Veterinarian Needs to Know about Sugar Gliders" - and BRING THEM WITH YOU to the Vet.

All this information can be found in the "Health & Safety Reports" section of the Family Circle, and you can also pull them all up in one place by simply pasting the following link into your browser:

[www.sugargliderinfo.org/Vet\\_info.pdf](http://www.sugargliderinfo.org/Vet_info.pdf)

Bringing all this with you to ANY vet - no matter how often they see these little guys - will often save you a lot of valuable time & trouble when you right in the middle of an urgent health emergency. For example, as we state in several other reports, unfortunately many Vets who don't see Sugar Bears/Gliders on a regular basis are still relying on very outdated dietary information that has not been updated for many years. If this is the case, you can bet that they probably will not be familiar with our diet – and they may immediately conclude that you are not feeding your baby(ies) correctly. Therefore, by printing out all the above information and taking it with you to the Vet - (as well as asking them to join the ASGV™) - it will save you a lot of time; and your Vet will be reassured that all aspects of our care and diet are in fact OPTIMAL for these little guys. :-)

Well, that's about it for now! Like I said at the beginning of this email, if you follow the precautionary instructions exactly as we've laid out above for the first few weeks of their lives - you will be WAY ahead of the game and probably NEVER have a health problem with your new little addition(s). We just love these little guys SO much that we always want to go waaaaaay OUT of our way to be extra safe :-)

You'll find that the "yogurt" trick is especially rewarding when they start licking it off your fingers and you begin to notice how much more quickly they are bonding - so HAVE FUN with all this!

As always, if you have any other questions on this topic - or anything else - make SURE to log-in to the "Family Circle" Section of our website, [WWW.SUGARBEARS.COM](http://WWW.SUGARBEARS.COM). In addition to all the other Special Reports and Instructional Video Clips – you will also find a VERY helpful publication entitled: “Quick Medical Reference Guide: A-Z”! This covers a wide range of other, less-common health issues that can happen to these little darlings.

You'll be pleasantly surprised at just how much helpful information, (including SEVEN additional "Health & Safety" Reports), is right there in the Family Circle - at your fingertips - 24 hours a day :-)

Sincerely,

Virgil Klunder  
Executive Director - PocketPets



# SPECIAL REPORT:



## Quick Medical Reference Guide: a-z

The following is intended to be a quick reference guide to a wide range of issues that can happen – but are not common – among Sugar Gliders. ***For detailed, step-by-step answers to the most common ailments, refer to the [Day 4 Special Report: “How do I know if my baby is sick?..”](#)***


**\*\*NOW FOR THE LEGAL DISCLAIMER STUFF \*\*** Even though the pro’s here at Pocket Pets have years of experience raising tens of thousands of Gliders – we aren’t “Vets” – and therefore cannot give out “Veterinary advice”. Therefore, you are always encouraged to consult a local Vet who has experience with Sugar Gliders for any urgent health needs.

## Ok, Let’s Dive In! . . .



# aflatoxicosis:

A hepatic (liver) disease caused by ingestion of aflatoxins, which are toxic metabolites produced by certain fungi in/on foods and feeds. At highest risk for contamination are corn, peanuts, and cottonseed. Aflatoxins are also carcinogenic (cancer causing). Sugar gliders can contract aflatoxicosis by eating crickets who have been fed contaminated corn, or eating peanuts.

## Causes:

-  Ingesting contaminated corn, peanuts, or insects who have ingested contaminated feed






## Prevention:

-  Do not feed your gliders insects
-  Do not feed your gliders peanuts



## Research:

-  Cornell University Animal Science Department

## Signs and Symptoms:

-  Loss of appetite
-  Anemia
-  Jaundice
-  Lethargy
-  Gastrointestinal dysfunction (bowel problems, diarrhea)



## Treatment:

-  If caught in time, aflatoxicosis is reversible
-  Seek veterinary care immediately. Once a sugar glider shows symptoms, death can occur within HOURS

# Calcium Deficiency

Because many fruits, vegetables and proteins in a glider diet have low calcium to phosphorous ratios, many gliders experience calcium deficiency, which can lead to HIND LEG PARALYSIS, a potentially fatal disease.

## Prevention:

-  Make sure they are eating their [Glide-A-Mins™](#) every other day as outlined in the [Special Reports \(link to my baby won't eat his food or vitamins\)](#). If they won't lick them off the apple, mix them into a flavor of yogurt you already know they like – or applesauce – or peach syrup from canned peaches... Whatever it takes to “trick” them into getting their vitamins.
-  Feed a well-balanced, nutritious diet of [Glide-R-Chow™](#) and [Glide-A-Mins™](#)

## Research:

-  USDA Nutrient Database: Find out calcium/phosphorous ratios

# Cat Food Complications:

The two major and potentially fatal complications gliders experience from eating cat food are "Lumpy Jaw" and Intestinal Blockage. Diets that are high in cat food also lead to Calcium Deficiency, liver problems, and, in some cases, death.

## Prevention:



**NEVER** feed cat food

# Constipation:

Constipation is passage of small amounts of hard, dry bowel movements. It may be difficult and painful to have a bowel movement.

## Causes:



Not enough fiber in diet

Not enough liquids

Use of pain medications

Lack of exercise

Stress

Gastrointestinal dysfunction

Poor diet overall

## Prevention:



Provide a well-balanced, nutritious diet of [Glide-R-Chow™](#) & [Glide-A-Mins™](#)

Provide fresh water at all times for your gliders

Provide enough exercise for your gliders

Monitor glider fecal matter to insure that stools are healthy

## Signs and Symptoms:



Straining or crying when having a bowel movement

Decrease or lack of bowel movements

## Treatment:



Baby food prunes, and orange juice may work as a temporary solution until veterinary assistance can be obtained



Small amounts of mineral oil have also been effective in treating glider constipation







Seek veterinary care as soon as possible



# Contact Dermatitis (Humans):

A HUMAN condition, which is an inflammation of the skin caused by direct contact with a foreign substance. In this case, it would be the paws of your gliders.



## Causes:

-  A history of allergies
-  The severity can vary with an individual over time
-  The skin reacts to the gliders paws as allergens and triggers an immune response that inflames the skin
-  Although there may be no initial reaction, repeated exposure can develop sensitivity






## Prevention:

-  Wear long sleeves when handling your gliders if you suspect you have an allergy
-  Wash skin surfaces thoroughly after handling your gliders




## Research:

-  Medline Plus Medical Encyclopedia: Contact Dermatitis
-  Hendrick Health System Access Med Health Information Library: Dermatitis

## Signs and Symptoms:

-  A red rash limited to the area of skin that has come in contact with glider paws
-  Itching of the skin in exposed areas
-  Swelling in the area that had contact with the paws
-  Blisters or pimple-like rash
-  Tenderness or warmth in exposed area





## Treatment:

-  Thoroughly wash exposed area with water to remove irritants
-  File down Glider's nails with [EZ-TRIM™ Nail Trimming Insert](#)
-  Apply Hydrocortisone Cream to the affected area, being careful not to overmedicate

# Dehydration:


Occurs when the body does not have enough fluids to function at an optimal level. Any dehydration is a life-threatening situation and the condition is fatal, but reversible if caught in time.


## Causes:


-  Fluid loss (usually through vomiting or diarrhea)
-  Fluid loss due to excessive urination (as in diabetes or kidney disease)
-  Strenuous activity
-  Appetite loss associated with acute illness

 Inadequate water supply

**Prevention:**

 Always provide fresh water / Pedialyte / Gatorade mix for your gliders at all times. Do not ever use tap water. Bottled water only.


 Add an open container of water if in doubt (weighted ash tray works well)


 Always thoroughly wash food and check for safety before giving it to your gliders

 At the first sign of any problems with your glider, seek veterinary care

**Research:**


 Medline Plus Medical Encyclopedia: Dehydration


 Hendrick Health System Access Med Health Information Library: Dehydration


 "Sugar Gliders: Gotta' Love 'Em", Kevin Schargen, Former President, ISGA, Critters Magazine


**Signs and Symptoms:**


 Loss of fluid through vomiting or diarrhea

 SEIZURES and/or WOBBLING


 If the skin on the back stands up when you pinch it, your glider is dehydrated


 Delayed capillary refill time (when you press on the gums of your glider with your finger, the spot remains white for an extended period of time)

 Membranes lining mouth and nose lose moisture

 Decreased or absent urine output


 Constipation

 Deep or rapid breathing


 Sunken eyes

 Lethargy

**Treatment:**

 Immediately print out [Day 4 Special Report: "How do I know if my baby is sick?.."](#) Follow instructions.

Administer water or Pedialyte using eye-dropper or a needle-less syringe

 Seek medical attention immediately! This is an emergency situation. A glider can dehydrate completely and die in a matter of twelve hours


## Depression:


Depression is a term that people commonly use to refer to states involving sadness, dejection, lack of self-esteem, and lack of energy. In sugar gliders, depression can lead to mental illness, self-mutilation, and death. Severe, persistent depressed mood and loss of interest or pleasure in normal activities, accompanied by decreased energy, changes in sleep and appetite, and feelings of guilt or hopelessness are all signs of depression and/or mental illness.

**Causes:**





 Keeping a lone sugar glider without playing with it on a regular basis

 Owner neglect



 Prolonged illness

 Loss of a companion





**Prevention:**

-  Keep more than one sugar glider – or play with them regularly
-  Provide your gliders with toys, a large enough cage, and play with them
-  Provide your glider with a healthy, well-balanced diet
-  Provide your glider with annual or bi-annual check ups at the vet to alleviate, treat, and/or prevent illness





**Research:**

-  Medline Plus: Depression
-  "*Sugar Gliders: Gotta' Love 'Em*", Kevin Schargen, Former President, ISGA, Critters Magazine

**Signs and Symptoms:**

-  Loss of interest in playing
-  Decreased activity
-  Change in sleeping patterns
-  Decreased communications: no barking






**Treatment:**

-  Lots of love, bonding time, and attention
-  Provide a glider companion for your glider
-  Ensure that the glider has an enriching environment
- 






## Diarrhea:

The passage of an increased amount of stool. Mild diarrhea is considered to be the passage of a few loose or mushy stools. Severe diarrhea is the passage of many watery or unformed stools.

**Causes:**

-  Viral or bacterial infection
-  Stress of moving to a new home
-  Parasites: Typically a Giardia "bloom"
-  Malabsorption (lactose intolerance, intolerance to specific foods, milk protein intolerance)
-  Bowel disease

**Prevention:**

-  Provide your glider with a healthy, well-balanced diet of [Glide-R-Chow™](#) & [Glide-A-Mins™](#)
-  Avoid trying new, "fun" foods. Test new treats ONE at a time after you have had them for a minimum of 6 weeks.
-  Keep cages well-cleaned
-  Remove any uneaten food as soon as possible from the cage
-  Carefully monitor stools when offering gliders a new food item. Discontinue if watery stools appear


#### Research:

 Medline Plus: Diarrhea


#### Signs and Symptoms:

 Loose bowel movements

#### Treatment:

 Immediately print out [Day 4 Special Report: "How do I know if my baby is sick?.."](#) Follow instructions. Check to see if the diarrhea is diet-related (citrus fruits, pumpkin, and milk products are common culprits)

 If diarrhea is bad, administer Pedialyte to prevent dehydration

 Seek veterinary attention to rule out such causes as internal parasites or bacterial infection.

## Ears "Wilting" or drying up:

Although rare, there are a handful of reasons why a Sugar Glider's ears might "wilt" or dry up. One reason are injuries caused from scratching at tiny mites inside the ear.


The most common cause for ears drying up is a fungal infection. [Aspergillus fungus](#) is the most common culprit. If caught early, a vet can treat it with an antifungal medication. This fungus can also produce urinary tract symptoms, such as blood in the urine, and respiratory symptoms similar to colds. In those cases, systemic antifungals are needed.


Should you notice this condition, the best treatment is to take the animal to a vet and check for either mites or a fungal infection.


## Giardiasis (Giardia "bloom"):

A diarrheal illness caused by *Giardia intestinalis* (also known as *Giardia lamblia*), a one-celled, microscopic parasite that lives in the intestine of people and animals. The parasite is protected by an outer shell that allows it to survive in the environment for long periods of time. All Sugar Gliders carry *Giardia* as a natural part of their digestive system. It can remain dormant for up to six months, and only manifest systems when the glider becomes stressed. If this happens, diarrhea can set in – and death can occur within hours. There has never been a single documented case of a Glider ever passing *Giardia* along to humans.




#### Causes:

 The parasite is passed in the stool of an infected person or animal



 Accidentally swallowing something that has come in contact with the stool of a person or animal infected with *Giardia*

 All Gliders naturally carry dormant *Giardia* as a part of their digestive system. It only becomes a problem when it "blooms" in their stomachs under prolonged periods of stress. This makes them feel "full", and they stop eating/drinking.








### Prevention:

-  Always thoroughly wash your hands
-  Always thoroughly wash and/or peel fruits and vegetables before feeding them to gliders
-  Do not use or ingest water that may be fecally contaminated










### Research:

-  Medline Plus: Giardiasis
-  CDC Giardiasis Fact Sheet

### Signs and Symptoms:

-  Change in behavior
-  Lameness
-  Diarrhea
-  Vomiting
-  Yellow tint to belly (Jaundice), indicating liver problems
-  Green color to stools
-  Dehydration


### Treatment:

-  Immediately print out [Day 4 Special Report: "How do I know if my baby is sick?.."](#) Follow instructions.
-  Seek veterinary care if case is severe – or no improvement is noticed.
-  Quarantine the animal with symptoms. Giardiasis is HIGHLY contagious to other Gliders.
-  Take special care with other animals and yourself. Wash your hands thoroughly after handling the infected glider and keep hands away from your mouth
-  Clean other glider cages
-  Thoroughly sterilize the cage and everything in it using [Squeak-E-Clean™](#)
-  Sterilize the cage and items again a week after improvement is noticed.
- 
- 


## Hind Leg Paralysis


A common symptom of *nutritional secondary hyperparathyroidism*, hind leg paralysis (HLP) is not a disease in and of itself. Low calcium levels result in calcium being leached from bone to compensate for low calcium in the bloodstream. This condition is fatal if not treated, but, in many cases, reversible.


### Causes:

-  Inadequate calcium absorption due to poor diet (low calcium, high phosphate, low Vitamin D) leads the glider's body to produce increased parathyroid hormone, which removes calcium from the bones

### Prevention:

-  Feed a well-balanced, nutritious diet of [Glide-R-Chow™](#) and [Glide-A-Mins™](#)

 Make sure they are eating their [Glide-A-Mins™](#) every other day as outlined in the [Special Reports \(link to my baby won't eat his food or vitamins\)](#). If they won't lick them off the apple, mix them into a flavor of yogurt you already know they like – or applesauce – or peach syrup from canned peaches... Whatever it takes to “trick” them into getting their vitamins.

 Maintain a positive calcium to phosphorous ratio in the overall diet

**Research:**


  The Pet Place: Nutritional Secondary Hyperparathyroidism

 Bristol BioMed Image Archive: Nutritional Secondary Hyperparathyroidism

 Hind Leg Paralysis in Sugar Gliders: A Personal Experience

**Signs and Symptoms:**

 Paralysis


 Lethargy

 Limping

 Fractured bones


 Tremors

 Weakness

 Loss of use of hind legs or favoring one leg

 Poor gripping ability

**Treatment:**

 If caught in time, this disease is reversible

 Immediately print out [Day 4 Special Report: “How do I know if my baby is sick?..”](#) Follow instructions. Seek veterinary care immediately if no improvement is noticed.


## Intestinal Blockage


The partial or complete mechanical blockage of the small or large intestine. The bowel is physically blocked. This most often occurs in sugar gliders when a foreign body is present in the intestines (such as wood, seeds, or millet), blocking the bowel.


**Causes:**


 A foreign body, such as seed husks, seeds, millet, or wood, physically blocks the intestines, allowing fecal matter to build up in the intestines

**Prevention:**


 Always feed your glider a healthy, well-balanced diet of [Glide-R-Chow™](#) & [Glide-A-Mins™](#)

 Never give gliders inexpensive dry cat food






 Moisten dry foods for easier digestion

 Steer clear of seeds, nuts and other dry foods


**Research:**

-  "Sugar Gliders: Gotta' Love 'Em", Kevin Schargen, former President, ISGA, Critters Magazine

**Signs and Symptoms:**

-  Abdominal fullness, bloating, or swelling
-  Vomiting
-  Diarrhea (if blockage is not complete)
-  Breath odor
-  Absence of passage of stool (when blockage is complete)


**Treatment:**

-  Seek veterinary care immediately! If blockage is complete, surgery will be needed



## Lumpy Jaw (Impacted Salivary Gland)

Lumpy jaw, or *actinomycosis* is an infection primarily caused by the bacterium *Actinomyces israelii*. Infection most often occurs in the face and neck region and is characterized by the presence of a slowly enlarging, hard lump. It produces abscesses and can also infect the lungs and intestinal tract and other parts of the body and can lead to gangrene and other complications. It is fatal if left untreated.



**Causes:**

-  Bacteria are introduced into the facial tissues by trauma, surgery, or infection. The most common cause in gliders is dental abscess




**Prevention:**

-  Moisten dry, hard foods before feeding them to your gliders
-  Do not feed low quality cat food to your gliders


**Research:**

-  Pawprint Online: Sugar Gliders 101
-  Medline Plus: Actinomycosis

**Signs and Symptoms:**

-  A swelling or hard lump appears on face, neck or chest
-  Weight Loss
-  Discharge draining out of the eye

**Treatment:**

-  Seek veterinary care immediately! To eradicate the bacteria, your glider will probably need a prescription medication



# Stress

Stress is defined as an organism's total response to environmental demands or pressures. When stress was first studied in the 1950s, the term was used to denote both the causes and the experienced effects of these pressures. More recently, however, the word stressor has been used for the stimulus that provokes a stress response. In gliders, stress can be fatal.

## Causes:

- Actual danger
- Grief or loss of a loved one (human or glider)
- Loneliness
- Illness
- Poor diet
- Thyroid problems
- Low blood sugar
- Sudden change in environment, diet, or companionship

## Prevention:

- Provide your gliders with a healthy, well-balanced diet
- Keep gliders in a pair if you cannot play with it on a regular basis
- Keep gliders in a large enough cage
- When a glider has experienced a change, give him extra attention and love, and watch closely for any sign of illness
- Give your gliders an hour or two of playtime each night
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## Research:

- Common Diseases in Sugar Gliders
- Pawprint Online: Lonely Glider's Club

## Signs and Symptoms:

- Diarrhea
- Vomiting
- Loss of appetite
- Change in sleeping habits
- Self-mutilation
- 

## Treatment:

- If your glider is experiencing any illness brought on by stress, seek veterinary care immediately
- Spend lots of extra quality time with your glider



If the stress is coming because the glider is new to your home, make sure the glider has familiar surroundings (old pouch, same cage). Even if the pouch/cage is old or dirty, keep at least one item that is familiar and change slowly

## Toxicity Issues: Plants

See the following:



Special Report: [Day 27 - "What kind of PLANTS are safe for my baby\(ies\)?.."](#)

Prevention:



Do not expose your glider to any toxic plants



Do not give your gliders live tree branches unless you know they are 1) glider safe, and 2) uncontaminated from pesticides or chemicals

## Trichomoniasis

A bacterial disease caused by a flagellate organism known as trichomonas. Trichomonads are usually pear-shaped and possess anterior flagella with a recurrent anterior flagellum which is attached to the body as an undulating membrane. Trichomonas can infect birds, cattle, dogs, cats, rodents, primates, and humans, among other species.

Causes:



Ingesting food or water contaminated with the trichomonas organism

Prevention:



Provide fresh, BOTTLED water at all times for your gliders



Always wash raw foods thoroughly before offering it to your gliders



Always wash your hands before you prepare food for your gliders and before handling your gliders



Research:



Trichomonads Tutorial



Ask the Vet: Trichomonas



University of Missouri College of Veterinary Medicine: Trichomonas



Diagnostics of Veterinary Endoparasitic Disease

Signs and Symptoms:



Weight loss



Vomiting



Diarrhea



Change in fecal matter: feces may be golden in color, undigested food may be passed with feces, mucus may be present in feces






Dehydration



Loss of appetite

Treatment:

-  Quarantine the infected animal, and clean and wash the cage, toys, and anything with which the glider may have come in contact
-  Seek veterinary care immediately. The vet will need to do a direct fecal smear to test for the presence of the trichomonas organism, and prescription medication will probably be given to kill the bacteria.
-  Closely monitor other gliders who may have also been exposed to the organism. To be safe, get them all tested for the presence of trichomonas.

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed veterinarian should be consulted for diagnosis and treatment of any and all medical conditions