

## Companion Animal Hospital Exotic Animal Care



The common degu (*Octodon degus*), sometimes called the brush-tailed or trumpet-tailed rat, is an intelligent and often friendly companion animal. Degus were originally bred in captivity for medical research, as they have been used as a model for diabetes research and more recently, Alzheimer's disease. This small mammal is a rodent (order Rodentia) in the suborder Hystricomorpha, family Octodontidae, and are closely related to chinchillas and (less closely to) Guinea Pigs. Pet degus typically live 6-8 years; however they may surpass that age with excellent care.

### 1. Feeding your pet degu

Degus should always be eating and producing stools because of the structure of their digestive systems. As hindgut fermenters, their bowels are full of healthy bacteria that aid in digestion of plant material. If a degu stops eating, these bacteria quickly die off and produce toxins. **This is a life-threatening situation for a degu, and is an emergency.** If your pet has stopped eating and/or has stopped producing stools, please contact us or the Metro Animal Emergency Clinic ((902) 468-0674) as soon as possible. **Always provide fresh food to your degu to help avoid this condition.**

Degu diets should consist of three parts: Pellets, hay, and fresh fruits and vegetables. As degus are **browsers** by nature, they will selectively eat the most nutrient-rich food since this is a less common but more "valuable" meal in the wild. This means that for our pets it is important to limit their access to rich foods like pellets and sweet fruits or vegetables, as they will easily overindulge which will contribute to obesity, dental disease, or even cause a gut stasis (which is a life-threatening emergency).

Among small mammal pets, degus seem to be uniquely prone to developing diabetes mellitus if fed a high-sugar diet. For this reason it is critical to avoid very sugary or starchy food items when preparing their diet. Please review each category below for species-specific dietary restrictions.

- **Pellets:** This is a balanced diet that ensures that your degu is receiving appropriate nutrition. Pellets formulated for small mammals have adequate levels of protein, vitamins, and minerals. A rule of thumb is ½-1 tbsp. daily, but it is a good idea to check with the manufacturer's recommendations. Please speak to our staff regarding pellet brand options, as not all products available for degus are healthy.

Some formulas made for gerbils and hamsters are appropriate for degus. It is critical that the diet does not contain sugars like molasses or corn syrup as eating these sugary ingredients frequently can lead to serious health issues long term.

- **Hay:** Timothy and/or orchard hay should be provided *ad libitum*. Hay provides fibre that keeps the digestive tract healthy, and degus can use the nutrients in hay because of their gut bacteria. Not only does hay provide nutrition, it also helps maintain their teeth and they may also use it as bedding. Store hay in a cool, dry place and regularly inspect it for moisture, discolouration, and/or mould. Hay should have a fresh, “grassy” scent.

Young degus (up to 75 days) or pregnant and nursing females may be fed alfalfa hay in addition to other hays. It is very rich in protein and calcium, which is good for a growing animal. After the age of 6 months we discourage feeding alfalfa hay as it promotes urolith (bladder stone) formation and can contribute to obesity.

- **Vegetables:** Providing a mix of healthy and appropriate green vegetables will help to round out your degu’s nutrition and can provide enrichment. Please take note that while this aspect of the diet is important, the volume of vegetables to be offered is very small (less than 1/8 cup daily). Feeding an excess of vegetables can cause a serious gut microbe imbalance and quickly result in a very sick degu.

When offering a new vegetable, do so one at a time so that you may monitor how your degu likes it. If any new food item causes soft stools or diarrhea, eliminate it from the diet.

Some fruits and vegetables naturally contain antinutrients. These are plant chemicals that reduce the body’s ability to use certain nutrients. Oxalates or oxalic acid, a calcium antinutrient, is the biggest concern in pet degus.

*Leafy greens I (low in oxalates):* 50-75% of what is offered daily. Items with an asterisk (\*) are high in calcium and should be offered in combination with other, low-calcium greens.

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|-----------------------|------------------------|----------------------|
| • Arugula             | • Dandelion greens*    | • Mint (any variety) |
| • Basil (any variety) | • Dill leaves          | • Radicchio          |
| • Bok choy            | • Endive or escarole*  | • Raspberry leaves   |
| • Borage leaves       | • Fennel               | • Watercress*        |
| • Boston lettuce      | • Frisée lettuce       | • Wheatgrass         |
| • Chicory             | • Mâche or nut lettuce | • Yu choy            |
| • Cilantro            | • Romaine lettuce      |                      |
| • Collard greens*     | • Spring greens/mix    |                      |
| • Cucumber leaves     | • Turnip greens*       |                      |

*Leafy greens II (high in oxalates):* 25-50% of what is offered daily. Do not offer more than one of this category daily.

- Beet greens
- Carrot tops
- Kale
- Mustard greens
- Parsley
- Radish tops
- Spinach
- Swiss chard
- Sprouts, various (1-6 days old for better nutrition)

It is a good habit to find a food that your degu enjoys to use as a treat. This can be offered in small amounts to gauge your pet's appetite, meaning that if he does not eat his favourite treat there may be an issue with his appetite. This treat food can also be used as positive reinforcement to reward good behaviours.

Some foods will upset the gut of degus, or are toxic. Avoid feeding these foods and plants (this list is not exhaustive):

- Apple seeds
- Apricot plant (all parts except fruit)
- Avocado
- Beans (any kind)
- Bread
- Broccoli
- Cabbage
- Cereals
- Chocolate
- Corn
- Nuts
- Oats
- Onion
- Peas
- Refined sugar
- Rice
- Seeds
- Tomato plant (leaves, stem, vines)
- Wheat

For a complete list of toxic garden and houseplants, please see this list on Medirabbit.com: <[http://www.medirabbit.com/EN/GI\\_diseases/Food/Toxic\\_plants\\_en.pdf](http://www.medirabbit.com/EN/GI_diseases/Food/Toxic_plants_en.pdf)>

- **Seeds:** A very small volume of seeds (with the shell intact), such as unsalted sunflower or pumpkin seeds, can provide your degu with fun enrichment. It is important to limit the number of seeds your degu eats to 1-2 seeds per day, as they are rich in fat. Free access to seeds encourages degus to overeat them, contributing to obesity, dental disease, and other problems caused by an imbalanced diet.

Degus should always have access to fresh and clean water, provided in a water bottle or dish. You may not observe your degu drinking very much, but they should always have free access to water. The water bottle and any other food dish should be washed regularly to maintain good hygiene.

## 2. Behaviour, socialization, and handling

Degus have evolved as prey animals so they are naturally shy and reserved. With time and patience, many guinea pigs learn to enjoy socializing with people, and even gentle handling. It is important to socialize your pet slowly, as being too forceful will cause undue stress.

Degus prefer to have their feet on the ground. They often become interested in a person who sits on the floor with them. Allowing the degu to come to you to investigate is a great way to start with socialization. Having a tasty food item ready as a reward can help your pet learn that you are a source of good things!

When picking up a degu, always support their rear end cupped in one hand and their front end cupped in the other. A two-armed hold, like carrying a football, is a safe way to carry your degu. Degus are capable of quick bursts of speed and are very agile, so take care in handling to avoid injury. These animals may shed the skin on their tail when grabbed- it is critical to never grab a degu by the tail.

## 3. Housing and exercise

Although degus are small animals, they need a relatively large amount of space for exercise, and bigger is always better! We recommend a multi-level cage to allow for lots of space to move around and provide many hiding opportunities.

Cage flooring must be solid, like firm plastic, and not grid or mesh caging. Cage floors made of grid, mesh, or other similar material results in damage to the delicate feet that can become infected (often termed “bumblefoot” but properly called pododermatitis). Cage walls should be made of a small gauge wire (15 x 15 mm size at the most) to help prevent limb injuries. Degus are athletic, often found “bouncing off the walls” in their homes, so large wire or barred cage walls can allow for limbs to get stuck resulting in orthopedic injuries.

Bedding or substrate in the cage needs to be carefully selected. Bedding such as hay, fleece blankets, and towels are all safe for degus. Corrugated cardboard boxes that have been flattened may also be used, and degus often enjoy chewing on this for enrichment. Wood shavings of a non-aromatic wood, like aspen, are safe. Aromatic wood shavings such as cedar and pine are not safe: The fumes (aromatic hydrocarbons) are irritating to the respiratory tract and are hepatotoxic (harm the liver) in large concentrations or after long term exposure.

Compressed newspaper pellets make a great litter, and many degus can learn to use a litter box. Degus also require a dust bath to help maintain their fur and skin health, but it should not be left in their cage at all times (as this can contribute to eye and respiratory problems). Degus should have access to the dust bath several times a week if not daily.

Degus are very active and can do well exercising out of the cage when supervised. Always supervise degus closely, as they are notorious for squeezing into tight spaces. Wires and other electrical equipment should be protected or not present in the play area: Degus love to chew on wires, and electrocution is a common injury that needs immediate veterinary attention. You may offer exercise time at dawn and dusk when degus are most active.

Exercise wheels are a great way to provide your degu with enrichment and exercise when caged. Traditional exercise wheels that are vertically-oriented are not very safe for degus and back and limb injuries are common. We recommend the more horizontal "flying saucer" style wheels, pictured below.

*Figure 1: "Flying saucer" style exercise wheel*



Degus are extremely sensitive to heat stress. Degus should not be exposed to room temperatures of greater than 30 °C (86 °F). Keeping the degu cage in cooler region of the home, and/or using air conditioning or fans to keep the room cool during warm summer weather is important. If you suspect that your degu is suffering from heat stress, contact us or the emergency hospital immediately.

#### **4. Health**

Degus are prey animals so they hide any signs of illness very well. This is a behavioural defense to avoid being eaten in the wild. If you notice any subtle changes in behavior, this can be the

first hint that something may be wrong. Do not hesitate to contact us if you feel that your pet's behaviour has changed.

Your degu's fur should be clean and dry, and his or her eyes, nose, and mouth should be free of discharge. If you notice anything like runny eyes or nose, wet fur around the mouth, anus, or genital region, these can be linked to various health problems and your degu needs to see the veterinarian.

Monitoring your degu's waste production is important. Generally, they produce two forms of waste:

- **Feces or stools** are produced as waste from the digestive tract, and like in other animals contains what is left over from digestion. Normal, healthy degu stools are small, slightly oblong, and dry to slightly moist. Sometimes stools will be more moist if the degu has eaten some unusual foods, but continued moist stool can be a sign of serious digestive upset. True diarrhea where the stool is mostly water and has no solid shape is rare in degus, but indicates a life-threatening health problem and requires immediate treatment.
- **Urine** can vary in colour and consistency in healthy degu, depending on what the animal is eating. Generally, urine is clear and pale yellow like in other mammals. If a degu's diet is high in calcium, the urine will appear cloudy, but it should never be "gritty" (this indicates a serious problem and your pet should be examined by the veterinarian). Blood in the urine (hematuria) may appear red or pink and requires veterinary attention. If your degu is trying to urinate but is only producing small drops or no urine at all, this is a true emergency and requires immediate medical attention. Conversely, if your degu is incontinent and its belly and perineal region are always moist with urine, this is abnormal and indicates a health problem.

Degus are uniquely prone to diabetes mellitus when fed diets high in sugar and/or starch. We recommend following our diet guidelines closely, and regularly weigh your degu to help monitor for obesity.