Chinchilla

Rodent from the from Andes Mountains of South America. They are clean and odorless - dust bath helps them to stay clean, happy and maintain its coat naturally. Chinchillas are very smart and they have good memory. Chinchilla needs big cages so he can run and move around. They need toys and supplementary cage furniture. *Chinchilla Guide*



Social	Chins are naturally social and should be kept in pairs or more. A chinchilla that does not get enough exercise can not only have adverse physical effects, but also mental. Chins that are not allowed outside of the cage can become anti-social, chronically frightened and display neurotic habits, such as fur biting and circling in the cage.
Exercise / Play	Chins are very athletic. They should be allowed 1-2 hours or more of supervised playtime outside of their 'very large cage'. A wheel or saucer made especially for chins should be in their cage – make sure it is large enough and made of metal, as chins love to chew – one brand that seems well made is called the 15 inch 'chin spin'. Make sure the wheel is solid without spaces or rungs that their feet can get caught in. <i>No exercise balls</i> . Outside the cage = a 'chew proof room'. Examine the room carefully for crevices that they can crawl through and disappear into the walls, and for things that can be chewed. Chinchillas are very agile and can jump up to 5-6 feet, so don't be surprised at their small stature. In the wild, chins can run long distances and keep moving, so don't worry that your chin will get 'too much' exercise. <i>Small Angels rescue.org</i>
Cage	The cage should be at least 4 feet tall x 3 feet wide x 2-3 feet deep with no ladders or tubes. "Several solid wooden platform perches should be provided, about six to eight inches apart. Any levels in the cage should be solid, not wire. Animals should never be made to stand on wire. Standing on wire is extremely painful and will cause wounds, sores, foot deformities and arthritis. Wire levels can be made safe by covering them completely with ceramic tiles". <i>Small Angels rescue.org.</i>
Temperature	Chins are susceptible to heat stroke, so always keep your chin in a climate controlled environment of approximately 60-70 deg F, never above 80 deg F, and low humidity of approximately 40-60%.
Nutrition	Chinchilla Pellets and Hay - Avoid foods made for rabbits and other rodents. Chinchilla pellets should contain fiber as the highest nutritional percentage, at least 14% and preferably more than 16% and protein look for 16-20%. Protein should be no more than 20% because it may cause soft and mushy faeces and also gastrointestinal problems. Chinchilla pellets also must be alfalfa-based with extra vitamins and minerals added. Remember chinchilla is strictly vegetarian and nothing like animal ingredients should ever be present. <i>Chinchilla Guide</i> . Chinchilla needs about food is quite basic but it depends on quality of the food brands you will find and choose. They need food – pellets and hay – and fresh water every day as they also need supplementary kind of food, vitamins and minerals, for their health which we explain to Feed category. Give them treats but not too many, 1 each day is more than enough, and try to give most healthy treats. Chinchillas love routine and relax to it, so try to feed them around the same time each day. <i>Chinchilla Guide</i>

References

Chinchilla Guide http://www.chinchillaguide.com

Small Angels Rescue - http://chinchillacare.org/care-sheet/

Degu



The degu is a rodent that looks similar to a large gerbil, although there is some question if they are closer to the rabbit family in origin. They from South America and live in networks burrows in the wild, foraging on grasses and shrubs. They make great pets because they are small, easy to keep, intelligent, friendly, and are more likely to be up during the day as compared to some other small animals. Degus have fairly good vision and it islikely that their ultraviolet sensitivity has a social function, since both their ventral (stomach) fur and their urine are highly UV reflective.

Social

This is a very social animal that is better housed either in family units, or same sex pairs (if you do not plan to breed). There has been no evidence of aggression in same sex pairs, and solitary degus do not do well by themselves. If you are going to house more than one male, it is better to get them at the same time or from the same litter, as males have more of a chance of not getting along than housing more than one female.

Exercise/Play

Like the other animals on this page, a few hours out of the cage is necessary each day to prevent boredom and for physical health. These pets are only 5-7 inches, so if you are going to let them have a room to play in, it is very important that they are supervised so they don't crawl into a hole you can't get them out of. They are great jumpers, so keep this in mind when you think "they will never get up there". They also love to chew, so make sure there are no wires, furniture or plastic they can gnaw at. There is a product called the Grrreat Wall that is 'great' for small animals. Exercise balls are NOT recommended, as degus can be 'claustrophobic' (they do not do well in small places) and can get overheated inside a ball.

Cage

These pets should be kept in very large cage, 2 story cages, minimum of 30" x 24" x 18". Degus love to chew, so make sure any toys, as well as cage, is chew proof. There should be a play wheel (one for each degu) in the cage, preferable an 11" solid metal without open rungs. A flying saucer 'Chinchilla wheel' will do the job. Degus need regular sand baths to keep their coats healthy and free from grease. Chinchilla dust is ideal for this. They should have access to this regularly, preferably two or three times a week, half an hour at a time. Daily sand bathing can make their coats soiled.

Temperature

Keep the cage in a cool place, preferably 68-70 F, out of direct sunlight and away from drafts.

DO NOT feed degus on rabbit food or mix.

Either a dried mix or pellets. It is highly recommended that your degus are fed on a good-quality guinea pig food or a degu-specific feed as these contain all the vitamins, minerals and other nutrients your degus need, without containing any harmful substances. The incidence of diabetes and cataracts can be drastically reduced by feeding your degu a hard feed that does not contain molasses and is low in sugar. Always check the ingredients list for molasses and other sugar substances (including honey, syrup, glucose and fructose) before giving it to your degus.

Nutrition

As an alternative, some owners feed their degus chinchilla pellets, or a mixture of these with guinea pig food. This is perfectly safe and provides a bit of variety. However, avoid feeding your degus chinchilla mix, as these feeds often contain pieces of dried fruit which is not suitable for your degus to regularly consume. **Degutopia**

Untamed degus, as with most small animals, can be prone to biting, but their intelligence makes them easy to tame. Regular non-predatory handling and food offerings help with this transition. It is important never to try to catch a degu by the tail because it will fall off easily and is painful to the creature. If this occurs it will not grow back. Degus often 'groom' their human owners, by a gentle nibbling action, and readily bond with any person spending time with them. wikipedia.org.

Taming

According to *Pet Info Packets*: "For the first few days, talk to your degu gently and offer it small treats. Once it is used to you then you can leave your hand in the cage with a treat in it. The degu should hop on and eat the treat. Do this for a while until the degu is fine with sitting still in your hand. Then, try lifting your hand a bit and then putting it back down. When the degu is ok with your hand moving you can slowly try moving your hand out of the cage. Another technique is sitting in a bathtub and allowing your degu(s) to run around and climb on you. They should be able to get used to you this way. Degus are very food-motivated and treats are a great way to socialize degus. I've also heard of wearing an old shirt for a few hours and then placing it in the cage so the degus learn your scent". *Pet Info Packets*

Training

Neuroscientists at the *Riken Institute* in Tokyo, Japan, used degus for research into tool use in animals with good eye-and-paw coordination, in which they spontaneously learned to use a tiny rake to retrieve out-of-reach seeds. Degus have also been found to spontaneously stack objects in order of decreasing size. In both cases it is the first time these behaviors have been recorded in animals other than apes and birds. *wikipedia.org.* For this reason, Degus can be taught Agility, Learning their name, riding on a shoulder and can be littertrained. For more information, see some of the links below or check out **YouTube.**

References

Wikipedia: http://en.wikipedia.org/wiki/Degu

Pet Info Packets:

http://www.petinfopackets.com/degus/deguinfopacket.html

Degu Information: http://www.degus.com/deguz.html

Degutopia http://www.degutopia.co.uk/index.htm



Ferrets

When ferrets were originally domesticated, they were used for the sport of hunting rabbits, called ferreting. The purpose was to frighten the rabbit out of his hole for the hunter to capture. In the wild, ferrets spend their time exploring, hunting, digging and tunneling. "Ferrets spend 14–18 hours a day asleep and are most active around the hours of dawn and dusk. Unlike their polecat ancestors, which are solitary animals, most ferrets will live happily in social groups. They are territorial, like to burrow, and prefer to sleep in an enclosed area." wikipedia.org/wiki/Ferret

Social

Ferrets should be socialized with humans and other animals between 4-10 weeks. They should be kept in pairs or groups. Young ferrets like to get up and explore, whereas an older ferret may be more apt to sit with his owner.

Exercise/Play

These pets require 3-4 hours out of their cage in a safe environment, esp if they live alone. They love to chew rubber, so make sure there is nothing they can ingest. Where the ferret is curious, be careful that there are no small holes in the wall that the pet can squeeze through. They also do have a 'prey' instinct, so be careful of other small animals within reach, such as reptiles, hamsters or birds.

They love to play and explore new areas, so if you have more than one room that is safe, try rotating locations each week. Also rotate their toys. Empty boxes, PVC piping, paper bags and a box filled with rice or soil for a dig box are just some examples of 'cheap toys' for outside of the cage. Concentrate on the animals natural instincts when it comes to exercising. This includes chasing toys on string, playing hide and seek with a towel, chasing or being chased, and using 'your' hand for wrestling. Throwing balls is a great game to play, but keep in mind to get a ball that is not made of rubber, as this can be torn apart and ingested. Some ferrets enjoy running up and down stairs, while others would like a dishpan filled with water to play in.

When playing with other ferrets, there may be the ambush, chase, running off to the side and then switching of positions between the two. This can be followed by neck bite, rolling and wrestling. There does not seem to be a hierarchy between ferrets, but be careful when introducing a new pet into the mix.

Harness/Leash

A great way to get your ferret a change in scenery is to use a harness and leash. A walking harness can be used that is specially fitted for your ferret. When putting your harness on for the first time, make it a positive experience. You do not want your ferret to be fearful – let him explore the object first. Once he finds it is not a threat, slip in on in a secure place and associate it with his favorite toy. Depending on his reaction, this may have to be done over several days – once he is used to the harness, then you can add the leash around the house. Do not bring your ferret to a stressful environment, such as the vet, until he is fully used to the harness and leash.

Ferret Agility

This is an exhibition event that has your pet run through a scaled down obstacle course, similar to that seen in dog agility. According to *Ferret Agility*, Novice Agility Ferrets have five pieces of equipment, including the Teeter Totter, the Hoop Jump, regular Jump, Balance equipment and the Open Tunnel. There is also the Advanced Agility Ferrets, which can add another three pieces of equipment that may include the Sea Saw, Long Jump, Closed Tunnel, Over Under or Weave Polls to be picked by the association or Ace Agility Ferrets with ten to twelve pieces of agility equipment. The hosting association can pick the time limit, deductions and layout of the course.

Ferret Olympics and Weight Pulling

Some clubs hold the Ferret Olympics, which can include as many games as people can think up. This may include: Lightest Ferret; Heaviest Ferret; Cup Tipping Contest (knocking over a matrix of cups over a 60 second time period – the one that tips the most cups wins; Paper Bag Escape Contest; Tube Races.

There is also weight pulling contests (not necessarily in the Ferret Olympics). This is similar to canine weight pulling where the ferret wears a specially fitted weight pulling harness (not a walking harness), and pulls a little cart to the finish line. The association can make the rules, but if you are going to enter your ferret in this event, make sure the harness you pick is padded in the front and does not cut into the joints. Like in weight pulling for dogs, you can entice your pet forward, but this should be fun for both you and your ferret. Ferrets cannot be forced, so either they will love it, or just find another game they will enjoy.

Cage

The cage itself should be multi-level with lots of ramps with ferret appropriate toys (see below and **Losttemplepets.com** for more information). A ferrets cage needs to large enough to allow ample roaming space in addition to including hammocks, shelves, food bowl, litter box, water bottle etc. Minimum size for a single ferret should be 3'w X 2'D X 2' H, (but the larger the better) and should be made out of coated wire spaced smaller than 1" to prevent any ferrets from escaping.

The cage should be placed away from any drafts, damp areas or directly in front of a window. As ferrets do not have sweat glands, they cannot handle heat or humidity well, ensure room temperature never goes above 80 degrees, the cooler the better (ideally 68-75). *Ferret Universe*

Temperature

In warm summer months, ferrets should be housed in the coolest area possible, or in an air-conditioned room. They do not tolerate heat well and will die of heat stroke if left for more than a few minutes in a very warm, unventilated area (over 90°F). *Pet Education*

Nutrition

Ferrets are obligate carnivores, and food passes through the digestive system of a ferret very quickly. They also lack the ability to derive nutrition from plant matter. For this reason, a ferret diet must be high in animal protein, high in fat, and low in fiber. Have Food Available at all Times Ferrets have a quick metabolism along with a short digestive system, so need to eat frequently (usually every 3-4 hours). It is best to have food available constantly.

High in protein - 30-40 percent on the label nutrition analysis. Protein must be high quality, highly digestible, and be animal-based (not plant-based). High in fat (at least 20 percent, perhaps up to 30 percent on the label analysis). Very low in carbohydrates and fiber (less than 3 percent fiber) *Feeding Your Ferret*

Vision, Hearing and Scent

Vision: Ferrets have binocular vision and must turn their heads to see what is at their side. Their visual acuity is very good at close range and decreases at greater distances. As ferrets in the wild chase prey, they will love chasing a toy or ball in the house or enclosed yard.

Hearing: Baby ferrets cannot hear until approximately 32 days (1 month) after birth. This is late compared to some other animals, such as kitten at 6 days and puppies at 10-18 days. Adult ferrets can hear at a range of 8-12 kHz (about the sound range of a squeaky toy), whereas lactating females can hear up to 16 KHz (the sound range of a baby ferret in the first few weeks of life).

Scent: 'Olfactory Imprinting' is very significant in accepting certain foods later in life. It is important that baby ferrets are offered a wide range of food within the first 90 days of life. Ferrets that have not been familiarized with the scent of their 'prey' or food within the first 60-90 days may refuse a different choice later in life. Ferrets also use their sense of smell for exploration and will sniff a new object before touching or visually examining it.

Locomotion

The normal locomotion of the ferret is an alternating gait pattern. The ferret has also been seen to hop or gallop with the rear legs. "When excited, they may perform a routine commonly referred to as the weasel war dance, characterized by a frenzied series of sideways hops and bumping into things. Despite its zeal, this is not aggressive but is a joyful invitation to play. It is often accompanied by a soft clucking noise, commonly referred to as dooking. When agitated or upset, on the other hand, ferrets will make a distinct hissing noise." wikipedia.org/wiki/Ferret.

References

Feeding Your Ferret http://exoticpets.about.com/cs/ferrets/a/feedingferrets.htm

Ferret Agility http://ferretagility.com/?id=395

Ferret Universe http://www.ferretuniverse.com/care/housing.asp

Pet Education http://www.peteducation.com/article.cfm?c=11+2069&aid=548

Wikipedia http://en.wikipedia.org/wiki/Ferret



Rodents: Gerbils, Hamsters, Mice, Rats

Rodents (these include gerbils, hamsters, mice and rats for this page) have a lot of similarities, as well as differences (see below). Rodents have very poor vision, and rats are known to be color blind. On the other hand, they all have very good olfactory senses. For all of these animals, they tend to be more active at night.

Social

Gerbils are fairly quiet compared to their counterparts, who tend to be more vocal. Chewing, hiding, burrowing. Gerbils, mice and rats tend to be more social animals, although they do need adequate space to move around in their cage. They should be housed in single sex communities, preferable female. Hamsters need more space, or can be housed by themselves.

Exercise

Many of these rodents, if properly socialized, can be taught many tricks, including agility. Although these are smaller animals, they can benefit from the *Grrreat Wall*, suggested with other pets on this page. This can be set up with various equipment for them to explore, chew and travel through. This wall is also large enough for you to fit in and let the animal explore you without having to pick them up against their will. As there are already several websites available on agility and games you can play, I will list a few of the websites I have found (see below). For more information on picking a small pet, go to my sister website, *Lost Temple Pets, Small Animals*.

Cage

They all like to burrow and will spend hours at night digging holes in the substrate. Multilevel cages with lots of tubes make great enclosures. Remember they like to chew and can squeeze through very small holes, so inspect the cages frequently.

Temperature

Rodents do not have sweat glands, so cannot regulate body temperature. Room temperature should be kept at between 65-79 deg with 30-70% humidity.

GERBILS



Gerbils live an average of 2-3 years (although up to 5 years has been reported). They have a body length of about 4 inches, with a furry tail that is almost as long as the body (never pick a gerbil up by that tail, though!). Gerbils are very active and social so are happier as a pair or group (get all males or all females to prevent prolific breeding). Introducing adults is difficult, though, so it is best to acquire a pair (or more) that are littermates or quite young. A recommended minimum cage size for a pair or small group of gerbils is 12 by 24 inches, with a height of 12 inches, although more space would be better. With regular handling, gerbils can become quite tame, and are interesting to watch as they play and interact with their cage-mates. About.com: Exotic Pets exoticpets.about.com

NUTRITION

The food that is nutritious for hamsters is usually very fattening for gerbils. Since the nutritional needs are different for the two animals, attention should be paid to commercially available food so that you do not end up feeding the wrong kind of food to your gerbil. The commercially available food will have a lot of sunflower seeds. However, gerbils are mainly insectivorous and sunflower seeds don't suit them. **Pet and Health Care**

A commercial food mix is excellent for a gerbil's primary food. Most should have all the nutritional requirements for a healthy pet. Oats, millet, wheat, cereal, and dry pasta make a wonderful addition to you pet's diet. Live mealworms, crickets, nuts, seeds and timothy hay and/or alfalfa can also be given as a food to gerbils. They are also an additional source of protein which is lacking in some pet foods. Treats should only be a small part of your gerbil's diet. There is a wide variety of commercial treats available that will be greatly enjoyed by your pet. Fresh fruits and vegetables can also be given as treats. Gerbil's like carrots, celery, peas, cucumbers, string beans, grapes, apples, pears, cooked potato, raisins, bananas, plain popcorn. Avoid spinach, lettuce and citrus fruits since some can be harmful to gerbils. Make sure all fruits and vegetables are washed before feeding them to your gerbil and only feed small portions to prevent leftover food from rotting. **Pet Gerbils.com**

HAMSTERS



"Syrian or golden hamsters live on average about 2-3 years. Adults are about 6 inches in length. They are solitary animals that should be kept one to a cage. A basic minimum cage size is 12 x 18 inches (and 12 inches tall), but since hamsters are quite active, the bigger the better (and those cute modular plastic hamster cages are often too small for hamsters). Syrian hamsters that are handled from a young age usually have an agreeable temperament, but if not handled much they can be defensive and can deliver a painful bite (they are also nocturnal and can be difficult to wake or act grumpy if woken during the day). Overall hamsters are widely available and make good pets, with the advantage that they can be kept single. Also, several species of dwarf hamster are becoming more widely available. These are smaller than Syrian hamsters and are often more social, at least with others of their species. Some have a reputation as biters, although that depends a bit on the species and how much they are handled". *About.com: Exotic Pets*

NUTRITION

Hamsters should have a simple diet of hamster pelleted food or blocks, fresh vegetables, hay and small amounts of fruit. Purchase the hamster food in small quantities so it remains fresh, and keep in mind that hamsters will only eat about a tablespoon of pelleted food each day. The hamster food should be supplemented daily with small amounts of fresh vegetables such as carrots, cabbage, celery, cauliflower and broccoli. Fresh fruits should only be given in very small amounts as treats. A handful of timothy hay should also be given two or three times a week.

Hamster owners should also remember to avoid feeding their furry friends raw beans, potato eyes, iceberg lettuce, citrus fruits, green potatoes, tomatoes, garlic, chocolate, and sugary or salty foods. Give commercial hamster treats sparingly. Since hamsters are nocturnal, it is best to feed them at dusk, when they wake up. **Pet Education.com**

MICE



Fancy mice live 1-3 years on average, and are quite easy to keep. They are the smallest of this group with bodies that are only about 3 inches long, with a long hairless tail. They are also social and females do well in pairs or small groups (males tend to fight if kept with other males). They need a relatively small cage, minimum 12 by 18 inches (and 12 inches tall), although a larger cage is recommended if you have more than a pair. Mice can become quite tame if handled regularly but are small, fast and can be skittish so are not the best candidates for human interaction. However, they are low maintenance and quite active and playful, so they are entertaining to watch. About.com: Exotic Pets *Exoticpets.about.com*

NUTRITION

Commercially prepared complete diets and balanced pellets for rodents or hamsters are acceptable for mice. Seed mixes are available, however, many times the mice will ignore the pellets in the mixture or eat only certain types of seeds in the mixture. This can result in dietary deficiencies even though a balanced diet "is fed," therefore the pelleted diets are recommended. The diet can be supplemented, in small amounts, with fresh fruits and vegetables, especially the cruciferous varieties like carrots, cauliflower, broccoli, and apples. **Pet Education.com**

RATS



Rats live an average of 2-4 years, and make nice pets. They are very social, and it is best to keep a same sex pair (male or female). Since they are larger, with a body length of about 8 inches (and a hairless tail about the same), they are easy to handle. With regular handling they become very tame and enjoy human companionship, and they rarely bite. They need time outside of the cage for social interaction and exercise, and can even be taught simple tricks (they have even been compared to dogs in their ability to bond and interact with people). They do need a large cage: a tall cage with at least 24 inches by 36 inches of floor space is recommended. Due to their social nature they need more time and attention than many of the other small rodents, but make rewarding pets. **About.com: Exotic Pets**

NUTRITION

Rats have similar dietary requirements to those of mice; however, rats require higher fiber and lower fat, so limit those high-fat foods like nuts and sunflower seeds. Rats do well on block type diets which also provide them with gnawing exercise. This type of diet also eliminates the possibility of the rats eating only a preferential selection of seeds. Rats crave sweets, so resist the temptation of feeding anything sweet. What he/she never gets will not be missed. *Pet Education.com*

References

Gerbil Agility http://www.gerbilagility.com

Hamster Agility http://www.hamsteragility.com

Mouse Agility http://mouse-agility.com

Mouse Agility http://www.mouseagility.com

The Agile Rat http://www.theagilerat.com

Ratz http://www.ratz.co.uk/agility.html

Pet Education.com - http://www.peteducation.com/article.cfm?c=18+1804&aid=1629

Pet Gerbils.com http://petgerbils.org/food-diet/

Pet and Health Care http://www.pethealthandcare.com/gerbils/gerbils-diet.html

About.com: Exotic Pets http://exoticpets.about.com/cs/resourcesgeneral/a/choosearodent.htm

Guinea Pig/Cavy

The guinea pig (Cavia porcellus), also called the cavy or domestic guinea pig, is a species of rodent belonging to the family Caviidae and the genus Cavia. Despite their common name, these animals are not in the pig family, nor are they from Guinea. They originated in the Andes, and earlier studies based on biochemistry and hybridization suggested they are domesticated descendants of a closely related species of cavy such as *Cavia aperea*, *C. fulgida*, or *C. tschudi* and, therefore, do not exist naturally in the wild.

In Western societies, the domestic guinea pig has enjoyed widespread popularity as a household pet since its introduction by European traders in the 16th century. Their docile nature and responsiveness to handling and feeding, and the relative ease of caring for them, continue to make the guinea pig a popular pet. Organizations devoted to competitive breeding of guinea pigs have been formed worldwide, and many specialized breeds of guinea pig, with varying coat colors and compositions, are cultivated by breeders.



Social

Companionship is very important to guinea pigs, since they often live in large groups in the wild. If you plan to keep just one guinea pig, you will need to give it extra love and attention to compensate for the absence of other guinea pigs. Guinea pigs are naturally social and generally adapt well to the introduction of a new cage mate. **Pet Education.com**

Exercise

Even the largest cage for your Cavy does not replace daily romps outside of the cage, approximately 3-4 hours. Getting enough exercise and not overfeeding can prevent obesity, arthritis and increase muscle tone. Just like rabbits, you may be able to let them run around in a hazard free room. Another possibility is an outside or inside pen. If letting them on grass outside, be careful that the grass is not wet, as this is very uncomfortable for their bodies, which is low to the ground. Also make sure there are no pesticides or poisonous plants, such as dandelions, that they can reach and digest.

Guinea pigs are not big on toys, but there are some items around the house that can be fun. Exercise balls and wheels are NOT a good idea due to potential injury to their back and feet. High ramps are also not a great idea. Cavies and do not do well at detecting their position on the edge of a ramp, bed or counter top, and may become injured falling off. They generally do not jump or climb, although if happy they will hop, call 'pop corning'. Some great toys are small paper bags, toilet paper rolls with some Timothy hay inside (cut a slit in the side so they don't get stuck), tunnels using PVC piping or commercial tubing, sheets of newspaper or crumpled up paper.

Cage

You should allow at least 7.5 square feet of cage space as a minimum for one guinea pig, or 10.5 for two. However, a bigger cage would be even better. The cage must have a solid bottom (not a wire bottom) to protect guinea pigs' fragile feet.

A lid is unnecessary if the walls of the cage are at least 12"-14" high.

Use caution with multi-level cages. A fall from higher than 6" can injure guinea pigs' feet or legs, and elderly guinea pigs should only be kept in flat cages.

Provide the guinea pig with several inches of bedding made of paper or aspen, and be sure to change it at least twice every week or more often if you live in a humid area. Make sure to never use cedar bedding, as it can cause respiratory problems. **WikiHow**

Temperature

They have a much better tolerance for cold than they do heat. Guinea Pigs prefer temperatures of around 65 –68 F, however, they do not do well with colder drafts. They are very susceptible to heat stroke at temperatures above 80 F, so try to place their cages away from heat vents and direct sunlight if possible. *VetPurdue*

Nutrition

The best diet for your guinea pig is one specifically formulated for guinea pigs.

Hay and pellets Guinea pigs should have hay available at all times. The best hay to feed your guinea pig is timothy or oat hay. Alfalfa hay is too rich in calcium and protein and should be given only sparingly. Fortified guinea pig pellets can be fed in small amounts in addition to hay.

Vitamin C Guinea pigs have a unique requirement for vitamin C. Adult guinea pigs require 20-25 mg/day while pregnant guinea pigs need 30-40 mg of vitamin C per day. Since they usually do not get sufficient quantities from their pellets and hay, their diet needs to be supplemented with vitamin C. Therefore, a variety of fresh vegetables rich in vitamin C should be offered daily. Excellent choices would include red pepper, kale, turnip greens, mustard greens, other dark green leafy vegetables and sugar snap or snow peas, . It is always best to feed a mixture of vegetables, instead of just one kind, to prevent mineral imbalances. Feed only small amounts of fruit - papaya, strawberries and kiwi are some of the fruits with the highest vitamin C content. **Pet Education.com**

Foods to Avoid: Long celery stalks should be avoided; the "strings" in celery are difficult to digest. Iceberg is on many of the "Avoid" lists because it is high in nitrates and has virtually no nutritional value. Raw beans and rhubarb are poisonous to these small animals. *Hartz*

Locomotion

Guinea pigs walk and run with alternating steps with all four pads hitting the ground. Weight is distributed evenly throughout all extremities. Occasionally when running they will kick out their rear legs and may hop when happy, called 'pop corning'. Like all animals, it is necessary to see how your piggy walks when he is well, so if there is a problem with his gait pattern it can easily be detected.

Guinea Pig Agility

Agility in cavies is even more simplified than in rabbits, as they do not jump. All equipment must be stable and low to the ground. This does not mean they cannot be taught to go over, around, under and through some objects. You can start with an open ended tunnel, such as oatmeal containers with the end cut off and coax your cavy through with his favorite treat.

When teaching your pet, some have used clicker training to mark the correct action, while others just use treats. I am not sure there are any associations for guinea pig agility, but could just be fun for you and your pet. There are surprisingly a number of sites on guinea pig agility.

References

Hartz http://www.hartz.com/Small_Animals/Health_and_Nutrition/Nutrition/small_animal_daily_diet.aspx

Pet Education.com

VetPurdue http://www.vet.purdue.edu/vth/sacp/documents/CareofGuineaPigs_001.pdf

WikiHow http://www.wikihow.com/Care-for-Guinea-Pigs



Hedgehog

The most common pet species of hedgehog are hybrids of the white-bellied hedgehog or four-toed hedgehog (Atelerix albiventris) and the North African hedgehog (A. algirus). It is smaller than the European hedgehog, and thus is sometimes called the African pygmy hedgehog. Other species kept as pets are the long-eared hedgehog (Hemiechinus auritus) and the Indian long-eared hedgehog (H. collaris). Hedgehogs are easily recognized by their spines, which are hollow hairs made stiff with keratin.] Their spines are not poisonous or barbed and unlike the quills of a porcupine, do not easily detach from their bodies. However, the immature animal's spines normally fall out as they are replaced with adult spines. This is called "quilling". Spines can also shed when the animal is diseased or under extreme stress. Wikipedia

> These solitary animals in the wild, typically couple only for mating. The young born each year, in litters ranging from one to eleven, remain with their mothers for only four to seven weeks before heading out on their own. Among the predators females must guard against during this period are other male hedgehogs, which will sometimes prey upon the young of their species. National Geographic

Social

Our best comparison of hedgehog intelligence is to that of a hamster. Hedgehogs do not typically come when called or actively seek out human interaction. Hedgehogs may learn certain behaviors through positive reinforcement or conditioning but only at a very basic level. We strongly believe that hedgehog personality is shaped and molded through owner interaction. Proper handling and consideration of the hedgehog's needs is critical to successful socialization and bonding as well as enjoyable pet ownership for both you and your pet.

It is common for people to notice a personality "change" in their hedgehog once it reaches its new home. This is generally due to the stressors of changing its environment and having a new person take care of it. You will need to be patient, and keep working with your new pet. Millermeade Farm's

Exercise

In the wild, hedgehogs get a lot of exercise foraging for food and excavating their burrows. Domesticated hedgehogs need exercise too, and should get most of it during out-of-cage time.

Before you can let your hedgehog run loose, make a room safe for it. Pick a room that you can easily hedgehog-proof, like a bathroom. Get down on all fours and survey the room from your hedgehog's point of view. Plug up any holes or crevices with a towel. Remove electrical, computer and telephone wires so they are out of reach, or cover them with flexible plastic tubing, which you can cut lengthwise (available at hardware stores). Be sure the room is clean and no residue from cleaning products is on surfaces the hedgehog touches. Small Animal Channel

In the wild, hedgehogs are primarily insectivores, but they will often eat whatever is available. Hedgehogs have been known to eat insects, slugs, baby mice, frogs, fish, worms, small snakes, eggs, and even fruit. For your pet hedgehog you want to provide a well balanced diet that is high in protein. How much you should feed him depends on his activity and metabolism. If you notice your hedgehog becoming fat, cut back on his portions.

Treats are a great way to add variety to his diet, but should be fed in moderation. Insects like crickets and mealworms make great treats. Other choices are moist cat or dog treats, and cooked foods like eggs, hamburger, and chicken. Giving him a small piece of your food is an easy way to supply treats.

Water - A hedgehog needs to always have a source of clean fresh water. A stoppered water bottle in his cage is the best way to supply water *Hedgehog Care.org*

Temperature

Nutrition

Place your hedgehogs new home in a comfortable, warm, well lit area that is free of drafts and direct sunlight. They are most comfortable at temperatures of between 65-80 degrees Fahrenheit. *Hedgehog Central*

Pet cages with a floor area measuring 5 square feet (0.46 m2) or more are suitable for pet hedgehogs. Cages with wired floors are dangerous for hedgehogs because they can easily slip and get a limb caught in the wire. Multi-level ferret or rabbit cages can allow a hedgehog more room to explore without taking up extra floorspace, but when using multiple levels, keep in mind that a hedgehog has poor eyesight, can climb easily, but has difficulty descending and often does not seem to understand heights, so it is highly recommended that ramps and levels be completely enclosed to prevent a fall. Some people use large glass aquariums but these can be heavy and awkward to clean and offer little ventilation. Very large steralite storage bins are a common DIY cage and are inexpensive, easy to clean, and versatile, but they must be of a considerable size and must be ventilated properly. Another popular Do it yourself cage is a "C & C" cage made out of cubes and coroplast, also called corrugated plastic. C & C cages can be made larger than store-bought cages and can be built one on top of the other to house multiple hedgehogs vertically without the need for shelving. wishing to attempt making one themselves. *Exotic Nutrition*

Cage

Bedding: Aspen, Pine or White shavings (NOT CEDAR!) are by far the best choice for bedding material. Crushed corn cob makes a relatively good bedding and is safe to use for females and adults, but it SHOULD NOT be used for young male hedgehogs. Place approximately two inches of bedding material evenly over the floor of the cage. Food bowl: The food bowl needs to be fairly wide and heavy to prevent your pet from dumping out its contents and using it as a toy. Small ceramic crocks that are designed for small rodents are perfect food dishes for hedgehogs. The width or diameter of the dish can be 3 to 6 inches and it should be no more than 3 inches high.

Water bottles are preferred over open dishes. Hedgehogs love to fill open water dishes with shavings and this prevents them from getting enough water to drink. Hiding place: This can be as simple as a piece of 4 inch PVC pipe, an old plastic pitcher, or an old shoe box with a hole cut in one end. (this should be replaced every 2 to 3 weeks). Litter box: Your pet will use a litter box if you provide it with one. A small box that is 2" deep x 6" x 9", half filled with dust free cat litter does very nicely. Non-clumping cat litter is the safest choice.

TOYS: If you choose, you can also add a few toys for your hedgehog to play with. An exercise wheel is an excellent addition and will help him to stay healthy and trim. Although a guinea pig wheel will suffice, there are now specially designed Hedgehog Wheels available from many pet suppliers. These are safer for your pet since they have a solid or mesh-covered running surface rather than the more common metal bars which they sometimes get their long legs caught in. *Hedgehog Central*

References

Exotic Nutrition http://www.exoticnutrition.com/hecare.html

Hedgehog Care.org http://hedgehogcare.org/food-diet/

Hedgehog Central http://www.hedgehogcentral.com/info.shtml#housing

Millermeade Farm's http://www.hedgehogheadquarters.com/secure/aspets.htm

National Geographic http://animals.nationalgeographic.com/animals/mammals/hedgehog/

Small Animal Channel http://www.smallanimalchannel.com/hedgehogs/hedgehog-housing/hedgehog-out-of-cage-time.aspx

Wikipedia, Hedgehog https://en.wikipedia.org/wiki/Hedgehog



Rabbits

A domestic rabbit or domesticated rabbit, more commonly known as simply a rabbit, is any of the domesticated varieties of the European rabbit species. Rabbits were first domesticated in the Middle Ages and are used as sources of food, fur, and wool, as research subjects, and as pets. The male is called a buck and the female is a doe; a young rabbit is a kitten, kit, bunny or even pup.

The American Rabbit Breeders Association (ARBA) was founded in 1910 and is the national authority on rabbit raising and rabbit breeds having a uniform Standard of Perfection, registration and judging system. The domestic rabbit continues to be popular as a show animal and pet. Many thousand rabbit shows occur each year and are sanctioned in Canada and the United States by the ARBA. Today, the domesticated rabbit is the third most popular mammalian pet in Britain after dogs and cats. *Wikipedia*

Social

Rabbits are very loving, social animals, which means they not only love to spend time with their humans – they require it. Without human interaction, rabbits can get bored, even to the point of becoming lonely and depressed. While toys can alleviate some of their boredom, they still need human attention and interaction. Many rabbits also enjoy having another rabbit as a friend. *Indiana House Rabbit Society*

Exercise

Like most animals, rabbits need daily exercise. This is to alleviate boredom and increase mental health, as well as physical needs to help decrease obesity, spinal injuries, arthritis and help increase muscle tone. Rabbits, in general, should be housed with enough room for them to stand up in their cage. (See *Losttemplepets.com* for more information about housing, etc).

Rabbits should be allowed to roam around either in a secure room or outdoor pen free from dangers for several hours each day. They can be given species appropriate toys, toilet paper rolls, untreated wicker baskets and other toys that cannot be chewed, as well as tunnels or paper bags to explore. Rabbits also like to climb, so provide a safe platform, either single or multiple layers for your bunny to get onto safely. A large box makes a wonderful toy, as they can get on top or inside as a place to hide.

Leash Training

Some rabbits are able to be trained to walk on a leash. This is not like walking a dog – they walk you and you follow (same as most cats). Leash training is needed if you are planning on trying any of the rabbit 'sports', such as rabbit hopping (see below). Before even attempting to put a harness (not a collar) on your pet, it is essential that they have been properly socialized and are used to handling. If your rabbit cannot be handled, they could injury themselves with a harness or leash. Second step is to get an H-back style harness for rabbits or cats that fit properly. Rabbits have delicate necks and should not use a collar.

When training, always combine something positive, such as a favorite snack, with the harness. Let the rabbit investigate the harness first and then slip it on. The harness should fit snug enough that the rabbit cannot slip out of it, but not so tight as to limit the range of motion of the joints. Leave it on for short periods of time and work up. Do not leave the harness on unattended, as it may snag on something, or left tied to an object whether indoors or outdoors. Gradually add the leash.

Cage

If kept in a cage, rabbits need a lot of room to easily move around. A rabbit's cage should be a minimum of five times the size of the rabbit. Your rabbit should be able to completely stretch out in his cage and stand up on his hind legs without bumping his head on the top of the cage. Additionally, cages with wire flooring are hard on rabbits' feet, which do not have protective pads like those of dogs and cats. If you place your rabbit in a wire cage, be sure to layer the floor with cardboard or other material. Place a cardboard box or "rabbit condo" in the cage so the bunny has a comfortable place to hide, and respect your animal's need for quiet time (rabbits usually sleep during the day and night, becoming playful at dawn and dusk). **Petfinder**

Temperature

Rabbits cannot tolerate heat over 85 deg F, so keep this in mind that if your rabbit is running around or exercises, the temperature should be well below this. Panting is inefficient and they will stop panting if dehydrated. Sweating is very minimal through glands on their lips and only a fraction of heat is dissipated through the surface of their ears. (*Exotic Pet Behavior, Bays, Lightfoot and Mayer*).

Rabbit Hopping, Show Jumping and Agility

This is an animal sport that was founded and is still very popular in Sweden. The rabbits hop over appropriate size obstacles, as in equestrian horse jumping. The purpose is to jump 'long' and 'high'. The rabbit must be on a leash and is led to jump over a number of hurdles over either a straight or curves course. The rules vary among countries, although Scandinavia continues to be more organized in this sport, as it continues to be extremely popular there to this day.



Although any rabbit is welcome to participate, as with people and other animals (such as dogs), there are certain body types that excel in this sport, and some that should never compete. For example, lops (long eared rabbits) can trip over their own ears and angoras (if not clipped) may not only pick up debris on their coats, but may have trouble seeing. Some smaller breeds may not have the range to go over the long jumps and larger breeds may cause injury to their joints when landing due to their body weight.

Like in canine sports, specific rabbits were bred for their body type and athletic ability. The Swedish Hare and the Elfin rabbit, were developed simultaneously in Sweden and the United States, specifically for outstanding performance at sporting events for rabbits. Rabbit hopping and Rabbit Agility have become popular and a more competitive animal was desired. See the following links for more information on these breeds. *Wikipedia Swedish Hare*

Rabbit Agility

Unlike rabbit hopping, agility is similar to the canine sport. The rabbit is usually not led on a leash and must be able to maneuver through tunnels, up/down ramps, go over jumps and through rings. This is a timed event in a closed off ring. For the most part, the equipment is a miniature (bunny sized) version of canine counterpart, but concentrates more on going over, under and around. The rabbit with the best time and least amount of errors is the winner.

See Rabbit Hopping for information on bunnies that excel at these sports. Unlike rabbit hopping, a larger rabbit may not come in first, but could participate for fun provided there are very low jumps and is just going around and under obstacles.

Locomotion

When a rabbit hops they use their large, powerful hind legs to push off. Both feet leave the ground at the same time and they use their whole foot, whereas when they 'walk' they only use their toes. The two front paws have 5 toes, the extra called the dewclaw. The hind feet have 4 toes. They are plantigrade animals while at rest; however, they move around on their toes while running, assuming a more digitigrade form. <code>wikipedia.org/wiki/Rabbit</code>. It is important to pay attention to the way your pet walks or hops when he is healthy, so if there are any changes in this pattern you can address it with your veterinarian immediately. Make sure the toe nails are trimmed aproximately every 2-4 weeks depending on growth, as this can also cause problems in gait, as well as get caught on objects and possible be torn off. Declawing is not an option, as this throws off their balance.



Nutrition

Hay

Rabbits need hay—specifically, Timothy grass hay. Rabbits should have access to a constant supply of this hay, which aids their digestive systems and provides the necessary fiber to help prevent health problems such as hair balls, diarrhea, and obesity. Alfalfa hay, on the other hand, should only be given to adult rabbits in very limited quantities, if at all, because it's high in protein, calcium, and calories.

Vegetables

In addition to hay, the basic diet of an adult rabbit should consist of leafy, dark green vegetables such as romaine and leaf lettuces, parsley, cilantro, collard greens, arugula, escarole, endive, dandelion greens, and others. Variety is important, so feed your rabbit three different vegetables at a time. When introducing new veggies to a rabbit's diet, try just one at a time and keep quantities limited.

Fruits and Treats

While hay and vegetables are the basis of a healthy diet, rabbits also enjoy treats. Cartoons and other fictional portrayals of rabbits would lead us to believe that carrots are the basis of a healthy rabbit diet. Many rabbits enjoy carrots, but they are a starchy vegetable and should only be given sparingly as a treat. Other treats your rabbit might enjoy are apples (without stems or seeds), blueberries, papaya, strawberries, pears, peaches, plums, or melon. Extrasugary fruits like bananas, grapes, and raisins are good too, but should be given on a more limited basis.

Foods to Avoid

With such sensitive digestive systems, there are a number of foods that rabbits should avoid eating. These include iceberg lettuce, tomatoes, cabbage, corn, beans, peas, potatoes, beets, onions, rhubarb, bamboo, seeds, grains, and many others. Also, don't feed your rabbit chocolate, candy, anything moldy, or most human foods. If you are not sure about a certain food, ask your rabbit's veterinarian.

Pellets

If you choose to make pellets a part of your rabbit's diet, it is best to use them as a supplement to the dark green, leafy vegetables, not as a substitute. These pellets should only be given in small quantities (1/8 -1/4 cup per five pounds of body weight per day, spread out over two daily feedings). Also, make sure to purchase Timothy-based pellets. Many brands of rabbit feed contain seeds, corn, and other foods that are too high in calories to be the basis for a healthy rabbit's diet.

Water

Rabbits should always have an ample supply of fresh water available. Be sure to change your rabbit's water at least once each day. Water can be kept in a sipper bottle or bowl. If you use a sipper bottle, watch new rabbits to make sure they know how to use the bottles, and clean bottles daily so the tubes don't get clogged. If you use a bowl, make sure that the bowl is heavy enough to avoid tipping and spilling.

Chewing is part of a rabbit's natural behavior, but it doesn't have to be destructive. To keep rabbits active and amused, you may want to put untreated wood blocks or cardboard in their cages. Bowls, balls, and rings made of willow wood are big hits with many rabbits and can be purchased online or in specialty stores. You can also use paper-towel rolls, toilet-paper rolls, and other chewable cardboard materials that can be tossed in the trash once they've served their purpose. Avoid objects with sharp edges, loose parts, or soft rubber that rabbits could chew into pieces and swallow. **Petfinder**

References

Exotic Pet Behavior, Bays, Lightfoot and Mayer

Indiana House Rabbit Society http://www.indianahrs.org/ihrs/

Petfinder https://www.petfinder.com/pet-care/rabbit-care/care-domestic-rabbits/

Wikipedia Swedish Hare http://en.wikipedia.org/wiki/Swedish_Hare and http://www.bryngyld.com/Elfingallery.html

Wikipedia - Domestic Rabbit

Sugar Gliders

The sugar glider (Petaurus breviceps) is a small, omnivorous, arboreal, and nocturnal gliding possum belonging to the marsupial infraclass. The common name refers to its preference for sugary nectarous foods and ability to glide through the air, much like a flying squirrel. They have very similar appearance and habits to the flying squirrel despite not being closely related, an example of convergent evolution. The scientific name, Petaurus breviceps, translates from Latin as "short-headed rope-dancer", a reference to their canopy acrobatics.

Sugar gliders are characterised by their gliding membrane, known as the patagium, which extends from their forelegs to hindlegs. Gliding serves as an efficient means of both reaching food and evading predators. They are covered in soft, pale grey to brown fur, which is lighter in colour on their underside. *Wikipedia*

Social

Sugar gliders are very social and need companionship. This makes them bond well to their owners (especially if you use a bonding pouch) but even if you can provide a lot of attention and spend the necessary time with your glider, keeping a single glider is not ideal. Sugar gliders have a language all their own and live in colonies of up to 30 gliders in the wild. Housing a glider by themselves can lead to behavioral, mental, and emotional, and even physical problems for your pet. Strongly consider keeping more than one glider, if not several of them, in a flight cage. Humans cannot offer the same type of companionship and socialization that other sugar gliders can provide to each other. The vocalizations, grooming, and bonding that they provide for each other is irreplaceable by a human. *About, Inc. - Sugar Gliders*

Sugar gliders need room to climb so the cage should be as large as possible. For one glider the cage should be at least 20" x 20" x 30". Since sugar gliders like to climb and prefer their food to be placed high up, a tall cage is best. With your pet's home, bigger is always better, so go with the largest cage possible. The cage should use wire mesh or metal bars. Tall bird cages often make excellent homes. The cage needs to be in an area that is away from human traffic during the day so your pet can sleep. The cage should be in an area that gets enough light to distinguish between night and day, but avoid direct sunlight.

Nesting Box - Being nocturnal, your sugar glider will need a nesting box to sleep in during the day. The nesting box can be a cloth pouch with a slit in front and attached to the side of the cage, a wooden birdhouse, or even a plastic hamster house.

Cage/Exercise

Bedding & Substrate - Wood shavings, shredded plain paper, or bedding made from recycled paper can be used on the floor of the cage and will help to absorb urine, droppings, and dropped fruit. There are many suitable commercial beddings available. Whichever substrate you choose should be non-toxic, in case your pet eats it, and good at absorbing waste. Food & Water - Heavy flat bottom dishes or dishes that attach to the sides of the cage are best for food and water. Sugar gliders like to eat up high so containers that attach to the side of the cage often work best. A stoppered water bottle that attaches to the cage is an excellent choice for water.

Decor - Sugar Gliders love to climb, so climbing branches should be provided in the cage area. Make sure you use non-toxic wood. When your pet strips the bark on the branches or the branches become soiled replace them with fresh branches.

Toys - Sugar Gliders like to play and will enjoy bird toys, ladders, chew toys, tunnels, and bells. Solid exercise wheels and run about balls can also be exciting toys for your pet sugar glider. **Sugar Glider Care**

Temperature

Temperature should be at least 65 °F degrees or higher.

Your sugar glider's diet should contain a variety of fresh fruit and vegetables and about 1/4 of its food should have protein. Gliders tend to prefer fruits and vegetables that have a sweet taste. Gliders should not be fed raw sugar, sugar substitutes, candy and never give your glider chocolate. If possible, all fruits and vegetables fed to your glider should be fresh and not canned. *Treats* - Sugar Gliders love live insects. Crickets, mealworms, and earthworms are easily attainable insects. Don't feed your glider insects that have been collected outside where they may have been contaminated with pesticides. Although great sources of protein, insects should only be used as treats due to their high fat content. Nuts are extremely popular treats with sugar gliders. The nuts should be raw and unsalted and be given out sparingly. Although loved by gliders, nuts are high in fat.

Nutrition

Supplements - Sugar gliders can sometimes be picky eaters. Even with a well balanced diet your pet may be lacking in important vitamins and minerals. Reptile multivitamin and calcium with D3 supplements can help make sure you have a happy healthy pet. Even though sugar gliders aren't reptiles, the reptile supplements are convenient, affordable, and supply the needed dietary vitamins and minerals.

Water - Even though sugar gliders drink very little and get most of their water from food, fresh water should always be available for your pet. A stoppered water bottle is a great way to keep water available.

Sugar Glider Care

Locomotion

Each foot on the sugar glider has five digits, with an opposable toe on each hind foot. These opposable toes are clawless, and bend in a way that they can touch all the other digits, like a human thumb, allowing the sugar glider to firmly grasp branches. The second and third digits of the hind foot are partially syndactylous (fused together), forming a grooming comb. The fourth digit of the fore foot is sharp and elongated, aiding in extraction of insects under the bark of trees. The gliding membrane extends from the outside of the fifth digit of each forefoot to the first digit of each hindfoot. When the legs are stretched out, this membrane allows the sugar glider to glide a considerable distance. The membrane is supported by well developed tibiocarpalis, humerodorsalis and tibioabdominalis muscles, and its movement is controlled by these supporting muscles in conjunction with trunk, limb and tail movement.

Gliders glide with the fore- and hind-limbs extended at right angles to their body, with their feet flexed upwards. The animal launches itself from a tree, spreading its limbs to expose the gliding membranes. This creates an aerofoil enabling them to glide 50 metres or more. For every 1.82 m travelled horizontally when gliding, sugar gliders fall 1m. Sugar gliders can steer by moving their limbs and adjusting the tension of their gliding membrane; for example, to turn left, a sugar glider will lower its left forearm below its right. *Wikipedia*

References

About, Inc. Sugar Gliders http://exoticpets.about.com/cs/sugargliders/p/sugargliders.htm

Sugar Glider Care - http://sugarglidercare.org/food-diet/

Suggie.Info - http://sugarglider.info/care/behaviors-common-indicators/

Wikipedia, Sugar Glider https://en.wikipedia.org/wiki/Sugar_glider



