

Health food for rabbits and guinea pigs
Recovery food for small herbivores



My rabbit or guinea pig has special requirements... what do I do now?



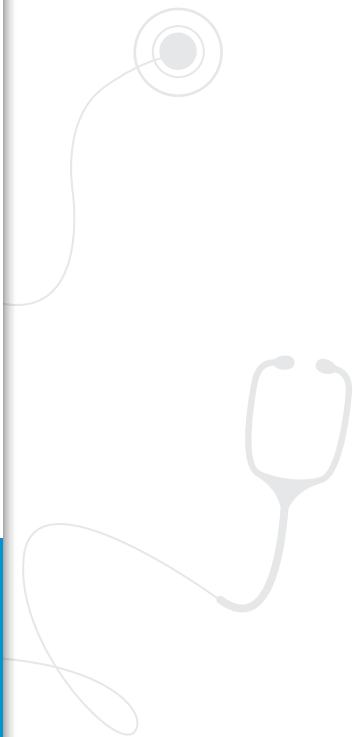
Veterinary exclusive



reliable and affordable dietary pet food



Veterinary exclusive



You want the best for your rabbit or guinea pig. This means that, next to the appropriate care and accommodation, you pay attention to a good diet. Did you know that the cause of a number of health problems in rabbits and guinea pigs is due to a wrong diet?

TROVET has health food for rabbits and guinea pigs. Quality food that helps to keep your pet healthy and vital. In addition, the TROVET range includes a complete recovery food for rabbits, guinea pigs and other small herbivores such as turtles and iguanas. In this brochure you can read more about this.

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Herbivores eat (almost) exclusively plants or plant materials, such as leaves, roots, seeds, fruits, flowers, nectar, bark, wood, or plant juices. Within the group of herbivores, there are specialised animals that primarily eat leaves (folivores) or fruit (frugivores).

Nutrition for rabbits and guinea pigs

Improper nutrition is the foundation of many health problems. Rabbits and guinea pigs may develop obesity or bladder, gastrointestinal, kidney and/or dental problems. Nutrition plays a major role in the prevention thereof.

Good nutrition in kibbles

Next to an unlimited supply of hay, your rabbit or guinea pig should also get kibbles. These contain important nutrients, such as vitamins and minerals. With the optimal proportion of nutrients your rabbit or guinea pig requires.

Make sure, especially for the guinea pig food, that you deposit the weekly amount of food in a tightly sealed storage tin, so the rest of the food is not exposed to oxygen daily. Vitamin C amounts will diminish when the food comes in contact with oxygen for prolonged periods.



Did you know that...

- > Guinea pigs and rabbits are most comfortable in the company of a congener?
- > Guinea pigs like to hide?
- > Rabbits and guinea pigs should not have fasted before an operation?
- > Guinea pigs have poor eyesight but compensate with an excellent hearing, smell and touch senses?
- > Guinea pigs are incapable of creating their own vitamin C. Nutrition also has to be rich in vitamin C. Bell peppers are very rich in vitamin C?



Selective eating

Rabbits and guinea pigs which get mixed kibbles can develop selective eating behaviour. Many rabbit and guinea pig foods contains different types of pellets and kibbles in different colours. Even though the kibbles look cheerful and tasty, most rabbits and guinea pigs will only eat the most tasty ones. These are often the energy rich kibbles, which are then disproportionately being eaten, at the expense of the 'less palatable' kibbles.

The importance of fibres

Too little fibre in the diet may cause disruption of the digestion of plant materials. This can easily give rise to diarrhoea. In addition, a diet with too little fibre leads to less tooth wear. Because the teeth of rabbits and guinea pigs continue to grow for life, too little tooth wear can lead to dental problems. Rabbits and guinea pigs that ingest insufficient amounts of fibre will have to find an alternative source of fibre. Hair is a good alternative. The animal will then ingest its own coat to complement their dietary fibres. However, the ingestion of too much hair can lead to blockages in the stomach and cause hairballs. Because rabbits and guinea pigs are unable to vomit, these hairballs will stay in the stomach and will lead to loss of appetite. The already formed hairballs will therefore have to be surgically removed by your veterinarian.

Fibres are very important for the proper functioning of the gastrointestinal tract of the rabbit and guinea pig. The main source of fibres is hay. To provide



rabbits and guinea pigs with sufficient dietary fibre, it is essential to provide unlimited daily access to fresh hay. In addition to fibres from hay, rabbits and guinea pigs also require various other nutrients.

The importance of hay:

- > Hay contains important nutrients for a healthy intestinal flora.
- > Hay is an important source of fibres, which stimulate the bowel function.
- > Chewing on hay requires a lot of chewing motions. This ensures natural dental wear and can help to prevent sharp edges on the teeth.
- > The fibre in hay reduces the formation of hairballs in the stomach. Hairballs can cause blockages in the stomach and may lead to refusal of food by the animal. The intake of high amounts of fibre helps to expel hairs already present in the stomach and reduces excess grooming.
- > Eating hay reduces boredom.



Cecal pellets

The gastrointestinal tract of rabbits and guinea pigs is specialised in the fermentation of difficult degradable plant material, also called fibres. To make this happen, the gastrointestinal tract of rabbits and guinea pigs contains a large caecum, where these plant materials come together with intestinal bacteria, which are able to degrade these materials.

Both rabbits and guinea pigs produce two types of faeces: normal droppings and so-called cecal pellets.

Once or twice a day, the content of the caecum is secreted as a soft stool (cecal pellets). Cecal pellets have the characteristic shape of a bunch of grapes. Typically, you will not be able to see the cecal pellets, because these are ingested directly from the anus. Eating this soft stool is normal behaviour and enables the animal to absorb important nutrients released by the intestinal bacteria. Not eating of cecal pellets may indicate obesity, disease or energy and protein rich food. In addition to these soft stools, rabbits and guinea pigs produce hard droppings, which contain materials that are undegradable for both the animal and intestinal bacteria. These are not eaten.



Cecal pellets



Normal droppings

Water

Check each day whether your rabbit or guinea pig has sufficient water. During the winter this has to be done at least three times a day. Before the start of the winter, let your rabbit or guinea pig acclimate to small amounts of vegetables with moisture content. This way they are not solely dependent on the water from the bottle or bowl. Did you know that most rabbits and guinea pigs prefer water from a drinking bowl over water from a bottle?

Castration/sterilisation

The main reason to castrate/sterilise your rabbit or guinea pig is to prevent unwanted litters. Castration or sterilisation also reduces the risk of health problems, such as uterine tumours, and uterine inflammations. It also reduces the risk of aggressive behaviour caused by sex hormones.

What does your rabbit or guinea pig want more?

In addition to a balanced diet, there is also a need for a pleasant living environment. The following tips around the care and accommodation contribute to the welfare of your rabbit or guinea pig.

Friends

Rabbits and guinea pigs are social and need a mate. Especially in the dark winter months, when you do not come outside very often, they should not be alone. In rabbits, you can best keep one doe and a castrated buck. In guinea pigs, all combinations with sows and castrated boars are possible.

Also keep animal shelters in mind when purchasing a rabbit and guinea pig.

Toys

Toys in the form of cardboard boxes and balls to put food in ensure hours of fun and pastime. Rabbits and guinea pigs also like to chew on willow, apple and pear tree branches, rather than to their own hutch! They can spend hours chewing on branches. This also ensures your rabbit or guinea pig is able to exhibit natural behaviour. Boredom is prevented and natural tooth wear is promoted.



Petting

Not picking up, but stroking. Many rabbits and guinea pigs love cuddling and attention. They are naturally prey animals, which are sometimes attacked from the air. For them it is unpleasant to be picked up. Their preference is petting and getting attention, while they may remain in their housing. This way you do not take them out of their comfort zone.

Fruit and vegetables

Rabbits and guinea pigs love fruit and vegetables. But these contain a lot of moisture and may therefore cause diarrhoea. Next to this, fruit is packed with sugars that can cause gastrointestinal disorders and dental problems. Fruit in the diet of a rabbit or guinea pig can therefore better be omitted. When giving vegetables, the daily quantity should be slowly increased.

Appetite

A rabbit or guinea pig without an appetite is not feeling well. If your rabbit or guinea pig does not eat anything for a day, you should contact your veterinarian. Fasting can result in damage to the intestines. The entire digestive system can come to a halt, which could even lead to the death of the animal. If you notice that the behaviour (while feeding) of your rabbit or guinea pig is not curiosity, but quietly sitting in a corner, it is important to consult your veterinarian.

Short nails

Especially in rabbits and guinea pigs which are housed on soft ground, the nails do not wear down sufficiently. In order to avoid the nails from growing too long and cause discomfort, it is necessary to regularly check their length. The nails can also be cut at the veterinarian.

Clean bottom

Foods with a high moisture or too low fibre content can cause diarrhoea. This may stick to the bottom of your rabbit. Diarrhoea and urine attract the blue-green coloured '*Lucilia sericata* fly', which lays its eggs in the caked faeces on your rabbit or guinea pig. This condition is called myiasis. The maggots, which come from these eggs, feed on muscle tissue of you rabbit or guinea pig and can lead to death. In order to prevent myiasis, it is important to regularly clean the hutch, especially in the summer.

Housing

For the purpose of physical and mental health, it is important that rabbits and guinea pigs are often able to run loose. Both rabbits and guinea pigs are prey animals and feel the need to hide when they are scared of something. Compared to their wild cousins, tame rabbits and guinea pigs get little movement. Rabbits and guinea pigs are curious and like to explore their environment. Exercise reduces the risk of obesity and boredom.

Guinea pigs are, in contrast to rabbits, less well able to cope with low temperatures. Pay special attention to guinea pigs when the temperature drops below five degrees Celsius. Never bring a guinea pig inside during the winter, because of the large differences in temperature. A barn is an attractive solution.

Bedding

Depending on your needs, there are several options for the bedding of a rabbit or guinea pig hutch. Pressed (wood) pellets do not give a dust hassle and are excellent in taking up moisture. Other options for bedding are hemp fibre, flax fibre and rape straw. Sawdust (which is often used) from some brands is made from wood that has been processed with chemicals and is therefore not suitable. Straw is not preferred, because of the sharp and hard ends.

Grooming

A shiny coat is one of the indications that the rabbit or guinea pig is healthy. If you noticed bald spots, a dull coat or (red) spots with scabs, it may be that your rabbit or guinea pig has a (skin) disease. A dull coat may indicate an incorrect diet with insufficient nutrients.

For long-haired rabbits or guinea pigs, it is advisable to groom the coat on a daily basis.

Behaviour

Rabbits and guinea pigs are not animals that sit quietly in a corner. Young animals are generally very active and cheerful. This is expressed by a lot of jumping and running through the hutch and clearly showing that they are present. An older animal is quieter and is due to potential stiffness in muscles and joints no longer as active. However, this may differ per animal.

Vaccination of rabbits

Examples of diseases in rabbits with a very poor prognosis (low survival) are Viral Haemorrhagic Disease (VHD) and myxomatosis. The most important symptoms of this condition are brain and nerve problems, such as paralysis and a crooked head. To reduce the chance of infection, your rabbit may be vaccinated. In addition, it is important you deworm your rabbit or guinea pig.



picture: Dierenziekenhuis Eindhoven, the Netherlands

Diet-related health problems

Bladder and kidney problems

Even though gnaw stones are ideal for inducing dental wear, they may lead to health problems. The high calcium level in these stones can cause bladder and kidney stones. The basis for healthy teeth is a correct dental position and dietary fibres. Providing hay is the healthiest way to induce dental wear in rabbits.

To support the functioning of bladder and kidneys, it is advisable to feed your rabbit or guinea pig food that is low in calcium. When dietary phosphorous is also low, the chance of calcification of the kidneys is reduced.

Overweight

Many rabbits and guinea pigs are overweight. Obese animals are not able to move or wash themselves properly. Moreover, it is difficult to ingest cecal pellets. Animals may also suffer from lethargy, fatty liver and fat accumulation around blood vessels. Next to hay, it is advisable to feed low energy kibbles with high fibre content. Fibres increase satiety.



*picture: Dierenkliniek de Ruwaard,
Oss the Netherlands*

Dental problems

The teeth of rabbits and guinea pigs continue to grow for life. Not only the incisors, but also the very difficult to see cheek teeth can cause dental problems. During feeding, the teeth wear out in a wrong way. Overgrown teeth and sharp edges on the cheek teeth may be the result and can cause a lot of discomfort. A harder kibble will cause more tooth wear.

Vitamin C deficiency in guinea pigs

In contrast to other herbivores such as rabbits and chinchillas, guinea pigs are not able to synthesise vitamin C. Vitamin C is a nutrient that is very important for the formation of connective tissue. Vitamin C deficiency causes connective tissue to lose its firmness. In places in the body where these structures are common, such as in the skin, in blood vessels and joints, problems may arise. Vitamin C deficiency can be recognised by tenderness when touching or moving, bruising, pain when eating due to loose teeth, etc. A guinea pig who does not want to eat and seems to be in pain (a lot of squeaking and grunting) may very well suffer from a lack of vitamin C.

So it is very important that the guinea pig gets sufficient vitamin C via the diet. This is the reason why guinea pig diets have a high amount of vitamin C.

Giving a rabbit diet to a guinea pig is discouraged, because rabbit diets (usually) do not contain sufficient amounts of vitamin C for guinea pigs.



The amount of vitamin C in food drops rapidly after opening of the package, due to the influence of sunlight and oxygen. Three months after opening the package, the vitamin C content is decreased to 30% of the initial amount and after one year, this is reduced to 1%. It is therefore always important to seal guinea pig food as air-tight as possible. Because of this, a guinea pig should never receive 'old' food.

It is also not advisable to add vitamin C in drinking water, because it affects the taste. Additionally, water intake is very variable. Exposure to metal, water, and light is detriment to the efficacy of vitamin C.

Tip:

Keep food for the guinea pig in a sealable light and air-tight container. Take the weekly amount of food out of the container once a week. This prevents that the diet comes in contact with too much oxygen and the vitamin C content drops too low.



TROVET Rabbit | RHF

Rabbit is a complete health food that is suitable for all rabbits in the growth and maintenance phase, with the exception of lactating does. It is specially formulated for the prevention of diet-related diseases and as a follow-up food after recovery from illness. Next to the diet, fresh hay should always be available. The inclusion of hay contributes to the positive effects of Rabbit.



Properties TROVET Rabbit:

- > Has a high palatability by selection raw materials
- > All kibbles have the same complete composition and prevent selective eating
- > High fibre content reduces the risk of constipation
- > The hard structure of the kibbles promotes natural dental wear
- > Low phosphorous level and high magnesium level reduce the risk of calcification of the kidneys
- > Low calcium level reduces the risk of bladder and kidney stones
- > No additions of sugar and artificial flavours and colourings

TROVET Guinea Pig | GHF

Guinea Pig is a complete health food for guinea pigs during all stages of life. It is specially formulated for the prevention of diet-related diseases and as a follow-up food after recovery from illness. Next to the diet, fresh hay should always be available. The inclusion of hay contributes to the positive effects of Guinea Pig.



Properties TROVET Guinea Pig:

- > Has a high palatability by selection raw materials
- > All kibbles have the same complete composition and prevent selective eating
- > High vitamin C content prevents vitamin C deficiency
- > High fibre content reduces the risk of constipation
- > The hard structure of the kibbles promotes natural dental wear
- > Low phosphorous level and high magnesium level reduce the risk of calcification of the kidneys
- > Low calcium level reduces the risk of bladder and kidney stones
- > No additions of sugar and artificial flavours and colourings

Recovery nutrition for critical small herbivores

Small herbivores are highly susceptible to diseases. Due to pain and discomfort they often stop eating. In that case, they may get into a critical phase, such as hypothermia or shock, within as quickly as 24 hours. Therefore, continuing to eat is vital for these animals.

Recovery nutrition is an important part of the treatment. Critical patients often stop eating but require more nutrients to recover. Not eating causes delayed wound healing, reduced resistance and impaired organ function, resulting in an increased risk of infection. Proper nutrition can help in the recovery.



Administering the recovery diet is not always easy, because the patient is weakened and the administration causes a stressful situation. A recovery diet is thus often formulated in order to be easily dissolvable in water, in order to be administered with a syringe.

There is a big difference between 'regular' nutrition and recovery nutrition. It is recommended to make use of recovery nutrition in critical patients, instead of regular nutrition or fruit mush.

TROVET Recovery (Small Herbivores) | RSH

Recovery (Small Herbivores) is a complete recovery food for rabbits and guinea pigs and other small herbivores, such as turtles and iguanas. It is specially formulated for animals that are unable to ingest sufficient food or eat by themselves. The fine structure of Recovery (Small Herbivores) helps prepare a thin feed mixture without lumps. The diet is easy to administer with a syringe. Because the suspension is thin and smooth, it is less likely for the syringe to become clogged. The addition of anise enhances the palatability and promotes intake.



Properties TROVET Recovery (Small Herbivores):

- > The addition of anise improves palatability
- > Source of energy that is easily absorbed in the body
- > Contains fibres with variable fermentation speed and can prevent energy peaks
- > Addition of prebiotics ensures a stabilising effect on the micro-organisms and can thus stimulate the immune system and the gut barrier
- > Helps to reduce infections, to prevent further weakening of the animal
- > The addition of sodium and potassium helps compensate for losses of important electrolytes
- > Increased level of zinc promotes wound healing
- > High vitamin C content in order to cover the requirements of guinea pigs
- > High water content rehydrates the animal

The recovery process

If your pet is not able to take in enough food or is not capable to eat by itself, then recovery nutrition is vital. Although your pet possibly refuses to eat, the body is in need of nutrients.

The veterinarian suggests a treatment plan with you and informs you about the condition of your pet and if the recovery is going as expected. In many cases improvement can be seen after 2 to 4 days.

Tips:

- > As an owner of a rabbit and/or guinea pig it is sensible to have recovery nutrition at home.
- > Intake is promoted by administering the recovery nutrition lukewarm.
- > Prepare a first aid kit containing recovery nutrition, a syringe for recovery nutrition, a heat lamp or a jar and towels.





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products, visit: www.trovvet.com



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