

## COMMERCE AND EMPLOYMENT DEPARTMENT

### GUIDANCE FOR THE WELFARE OF PET RATS

#### MADE UNDER SECTION 13(6) OF THE ANIMAL WELFARE (GUERNSEY) ORDINANCE, 2012

#### GUIDANCE – FOOD AND WATER

##### Food

Rats are omnivores and eat both plant and animal materials. They need certain essential amino acids, fatty acids, vitamins and minerals from their diet, as they cannot produce these themselves.

They feed mainly at dawn and dusk, and drink mostly during the night time and eat some of their own fresh droppings. This normal behaviour helps them absorb all the nutrients and minerals that they need to stay healthy.

Rats must be provided with a balanced diet that contains all the nutrients, vitamins and minerals that they need. This can be achieved by providing a commercial compound ration formulated for rats.

Care must be taken when feeding coarse mix to rats as they may selectively eat only certain seeds and grains and leave others. While the whole of a coarse mix diet will be balanced, they will only receive a balanced diet if they eat all of it. If coarse mixes are used then they should not be replenished until all of the ration is eaten in order to ensure that rats receive a balanced diet.

For this reason pelleted foods are recommended over coarse mixes because each individual pellet provides balanced nutrition.

Diet can be varied by occasionally providing small amounts of fruit and vegetables, a cooked egg, grains or seeds. This should be given as part of a daily nutritional ration and not in addition to it otherwise it could lead to obesity and associated health problems.

Rats must not be fed:

- a) onion, citrus fruits, walnuts, rhubarb, grapes/raisins and chocolate as these are harmful to rodents, or
- b) food formulated for rabbits, guinea pigs, hamsters or other herbivores as it will not meet the nutritional protein needs of rats.

Sweet and fatty food should only be provided occasionally as a treat. More frequent feeding with these foods can lead to obesity and other health problems.

Rats should be fed twice a day, once in the morning and again in the evening.

Food should be provided in an open bowl to encourage them to carry their food away to handle and eat it in an area of their choice. Some food should be scattered and hidden to encourage natural foraging behaviour, manipulation of food and activity.

### Water

Rats must always have access to fresh, clean drinking water and water containers should be refilled daily.

Water should preferably be provided from a bottle with a valveless sipper tube as rats may have difficulties in overcoming the resistance in a traditional 'ball-valve' sipper tube.

## **GUIDANCE – ENVIRONMENT**

Rats are highly curious and inquisitive, and are strongly motivated to explore. They have an excellent sense of touch and like mice are thigmotactic (they prefer to hug walls rather than cross open spaces where they cannot hide). For this reason rats prefer opaque verticals to transparent verticals but tinted plastic or glass is a reasonable compromise which enables owners to observe their pets easily.

### Housing

Accommodation must:

- a) provide a space for rats to hide and build nests and a separate space for them to exercise and this space should be high enough to allow them to stand on their back legs without their heads touching the roof,
- b) be predator proof,
- c) be free from hazards such as sharp objects or wood treated with chemicals which are hazardous to rats health,
- d) have a solid floor to contain bedding material,
- e) be provided with bedding material that covers the floor as well as quantity of soft nesting material,
- f) be ventilated, but protected from draughts,
- g) provide daylight or light equivalent to daylight during normal daylight hours, and
- h) allow continuous access to water and provide food twice daily, the largest portion being in the evening because that is when the rat will be most active.

If rats gnaw at their cage bars, then they might need a bigger cage as this behaviour can be a sign that they are trying to escape.

A cage must not be made of wood as this material is not easy to clean and a rat can gnaw through wood.

### Shelter

Rats spend a lot of their time sleeping and like to hide and sleep in dark, safe shelters. Rats often have preferred resting sites.

Each rat must always have access to a safe, dark, refuge or hiding place where they can escape if they feel afraid, where they can build a nest and sleep and rest, and where they can get out of the light.

### Exercise and Enrichment of the Environment

Rats are active animals that need space to run, stretch up on their hind legs, climb, forage and explore. Rats should be able to rear up in at least part of the cage. As a guide, this will require an area with a height of around 18 cm for juveniles up to 150g, 22 cm for rats up to 450g and 30 cm for large, adult males.

Rats should be provided with space to exercise (ideally a minimum space of 1500cm<sup>2</sup> (50cm x 30cm)). The space should include enrichment to encourage exercise, such as tubes, untreated fruit tree branches, ladders, raised platforms, horizontal and vertical barriers.

An exercise wheel can be provided, but should not be the only means by which a rat can exercise. A wheel should be of a large diameter, ideally axle free and have a non-slip running surface (but not rungs).

Rats should be provided with the opportunity to climb. Providing ropes helps them to develop their sense of balance. Rats not only climb ropes but they will also chew them, and ropes that are provided must be made of natural fibres (such as cotton).

### Swimming

Some rats enjoy swimming. If water is provided, it must be provided in a shallow container that they can easily climb out of. A rat must not be forced to swim.

### Burrowing Material

Given the chance, rats will dig tunnels and create burrows. Dried peat, straw, hay and dust free, preparatory, unscented wood shavings which are marked safe for rodents (Aspen wood shavings are a safe alternative) are suitable materials.

### Bedding Material and Nesting Material

Bedding material must be provided. Non-coniferous wood chips from wood that has not been treated with products hazardous to the health of rodents, cellulose based chips or shredded filter paper are suitable. Rats express a preference for wood-based litter with large particles to a minimum depth of 2 cm.

Dusty materials (such as sawdust), fragrant and coloured material and any bedding made of coniferous wood shavings must not be provided as these can result in health problems.

All rodents need nesting material to assist with the regulation of their body temperature and they like to make their own nests and spend a lot of their time playing with nesting material. Suitable materials are hay, shredded paper, paper strips and paper tissues.

Nesting materials that separate into thin strands such as cotton wool or similar 'fluffy' bedding products must not be provided as they are a risk to a rats health.

### Noise

Rats can hear ultrasound and communicate extensively with one another using a large repertoire of ultrasonic squeaks. Rat housing should be placed away from noisy equipment such as television sets, music systems or vacuum cleaners, electrical equipment (such as computer screens) anywhere where water might run into metal containers (such as the kitchen) and any other high pitched, ultrasonic or sudden bursts of sound.

### Light

Rats eyes are adapted to work in very low light levels between 1 and 40 lux (40 lux is about the same as the light from sunset/sunrise on a fully overcast day) and they can see ultraviolet light. For this reason rats should be kept out of bright light and direct sunlight and lighting should be below 60 lux for pigmented strains and 25 lux for albino strains. This can be achieved by selecting appropriate lighting systems (with a UV component where possible) and/or fitting shading above cages. Wherever possible, lighting regimes should be set so that the rats active period is during the time of day that the owner is at home, this makes it easier for owners to monitor the rats wellbeing.

### Heat

Rats should be kept in an environment that keeps the temperature at between 19°C and 23°C.

### Smells

Smell is an important sense which rats used to identify other rats and determine their age, rank, sexual status and family relationships. Rats should be kept away from strong artificial smells (such as air fresheners) and smoke.

## **GUIDANCE - HEALTH**

Rats feel pain in the same way as other animals, but may not show signs of pain or distress until a particular condition is quite advanced. Small changes in the way they normally behave can be an early sign that something is wrong.

Rats in pain can show aggression towards their cage mates.

### Monitoring Health

A rat should be visually inspected daily when they are active for signs of illness and injury and physically examined once a week. Rats recognise humans as individuals so it is always best if they are handled by a person familiar to them - a good relationship with a handler makes an important contribution to the welfare of these animals. Rats should be weighed regularly and this should be recorded to check for rapid gain or loss of weight.

### Injuries

A rat should be physically examined when handled for injuries and lumps and bumps. Veterinary advice should be sought if any injury is severe.

### Illness

Sign of illness in a rat include:

- a) not eating or drinking,
- b) increase drinking and urination,
- d) losing weight, or quickly putting weight on,
- e) diarrhoea,
- f) avoiding social interaction,
- g) starey coat (piloerection of guard hairs, oily, clumped matted and/or unkempt) or not grooming,
- h) sneezing, wheezing, or abnormal breathing,
- i) sunken or dull looking eyes,
- j) discharges from the eyes or nose,
- k) reduced activity,
- l) sleeping more than usual (when it would normally be active),
- m) hunched, stiff body posture,
- n) abnormal gait,
- o) difficulty balancing and
- p) guarding a painful area.

This list is not exhaustive.

If a rat develops bald patches, it may have a skin problem such as mites or an allergy or hormonal problems.

A rat must only be treated with medicines that have been recommended by a veterinary surgeon. Human and other animal medicines can be very dangerous to rats.

### Care of Teeth

Rats teeth grow continuously throughout their lifetime. They therefore need to gnaw and chew to wear their teeth down.

A rat must be provided with a suitable gnawing material, such as an untreated hard wood block, untreated fruit wood branches or low calorie dog biscuits.

A rats front teeth must be checked regularly. If dental problems may occur, veterinary advice must be sought.

### Care of Coat

Rats have a strong motivation to groom and spend a large proportion of their waking time grooming. They must be able to express this behavior.

### Whiskers

Rats use their very delicate and highly sensitive whiskers to maintain balance and guide them around objects. The whiskers must never be trimmed.

### Frustration and Stress

Rats are very clever and naturally curious, and will quickly become bored unless given things to do. They will suffer if their environment does not suit them or if they are not allowed to behave naturally in a suitably enriched environment. Rats that are stressed are more likely to become ill.

Rats are very sensitive to light and bright light can cause stress and harm their eyes – particularly albino strains (pink-eyed white rats).

Rats can hear sounds of higher pitch than humans (ultrasound), and extreme noise can be stressful for them. In extreme cases excessive noise could cause a rat to have a seizure/fit.

Moving a cage and disturbing rats whilst they are resting or sleeping should be avoided as this can be stressful for them.

Rats should be kept away from the sound, sight and smell of animals which they may be afraid of such as cats, dogs, ferrets and birds of prey.

If a rat urinates or defecates when exposed to a new environment, this indicates that it is frightened or distressed and it should be returned to a familiar environment.

Environmental enrichment is achieved by providing rats with deep litter in which food can be hidden for them to forage for. Provision of pipes which create burrows and refuges, raised platforms which provide vantage points and climbing apparatus between them for exercise.

Signs of stress are:

- a) grooming of the head and forepaws more than usual,
- b) increased aggression,
- c) vocalisation,
- d) chromodacryorrhea (red tears and staining around the eyes and nose).
- e) hiding more than usual,
- h) increased thigmotaxia (tendency to remain close the walls / solid objects / the junction of vertical and horizontal surfaces),
- i) increased fear of novel things,
- j) anxious behaviour in a rat which is normally confident and
- k) exaggerated escape behaviours.

Veterinary advice should be sought if a rat shows extreme signs of stress or if it develops stereotypical behaviour (such as repeated chewing of metal cage bars).

### Hygiene

Rats prefer to keep their toilet areas separate from their sleeping, resting and feeding areas.

Accommodation should be thoroughly cleaned at least once a week. Cage cleaning does not appear to be a major cause of stress for non-breeding rats housed in stable groups, so these animals should be cleaned as often as is necessary to maintain a healthy environment and prevent levels of ammonia and micro-organisms from becoming harmful or unpleasant.

However, breeding rats should not have their cages cleaned during the final third of pregnancy (the last of the three weeks) or the first three days following birth. Cannibalism in breeding rats is especially likely if pups are under two days old at first cleaning.

Wet, damp or smelly bedding material and objects soiled with faeces must be cleaned and replaced daily and nesting material must be kept clean and dry at all times.

Uneaten food, especially moist fruit and vegetables that will rot, must be removed daily.

### Handling

Rats can find exposure to humans stressful until a comfortable relationship has been formed.

Rats are stressed by sudden exposure to unfamiliar people, or inappropriate handling.

Regular interaction (on a daily basis) will enable a rat to become accustomed to people and to being handled. A rat should be:

- a) allowed to investigate handlers hands in their own time, and
- b) picked up in a confident but gentle manner with one hand placed under the body and the other loosely over their back.

Extra care must be taken if pregnant females are handled.

A rat must not be picked up by its tail as they find this stressful, and it can cause injury.

### **GUIDANCE BEHAVIOUR**

Rats are nocturnal, and so they are most active at night and during dawn and dusk. They are naturally cautious of new things, they use scent (e.g. urine) to mark their territory and to help them find their way and make vocal calls in many situations, particularly when meeting other rats or people. Most of these vocalisations cannot be heard by humans as they are too high pitched.

#### **Companionship**

Rats are very social animals and should be kept with other rats. They should be housed together from a young age, and ideally be siblings of the same sex (unneutered males and females should not be housed together unless they are to be breed). Housing rats in groups of up to 5 individuals of the same sex usually works well.

Cage-mates that are not siblings should ideally be introduced to one another soon after weaning to minimise fighting. Adding or removing individuals from a familiar group will disrupt stable social groups and can lead to aggression. If unfamiliar adult rats are housed together there will be a period of high aggression, however if they establish a dominance relationship the levels of aggression should reduce. Providing an enriched environment in a sufficiently large cage will reduce the risk of social stress and aggression.

Rats must be regularly monitored for aggression. If aggression occurs and levels of aggression remain high and an individual is hurt or frightened, the affected individual should be removed.

If housing a rat individually is unavoidable, it should be able to see, hear and smell other rats in adjacent cages.

#### **Training**

Rats can build close relationships with their owners. They are intelligent and can be successfully trained. Training will help to keep them physically and mentally active.

Positive reinforcement training techniques are most appropriate for rats.

## **GUIDANCE - BREEDING**

Breeding rats should be planned and owners should inform themselves of what is required and ensure that there is a home or a market for the offspring.

### **Neutering**

Rats can breed at any time of the year and are quick to breed if males and females are housed together. They become sexually mature from as early as six weeks of age and consideration should be given to having rats neutered to avoid unwanted pups.

### **Selection of Breeding Stock**

Rats are sexually mature from six weeks of age. Ideally female rats should be bred from before 8 months old, particularly if a second litter is planned.

Both of the parents must be healthy and of good temperament.

Males and females should always live and play separately and only be brought together for a planned mating

### **Care of Pregnant Females**

Most does give birth on the 21<sup>st</sup> day of pregnancy, it is rare for them to give birth early, but sometimes birth can be later on the 22<sup>nd</sup> or 23<sup>rd</sup> day. If there is any delay beyond this time, veterinary advice should be sought.

During pregnancy normal feeding should continue, but supplemented with extra protein such as cooked meat, cooked fish, nuts or bread soaked in milk from the last week of gestation onwards.

Clean nesting material should be provided in sufficient quantity to allow the a doe to construct a nest large enough for herself and her young. The average litter size is 8 to 12 young, but may be as large as 20.

The male should be removed from the female after mating. If a male is present a female can get pregnant again immediately after giving birth, which is not healthy for her or newborn young.

### **Care of Young**

Unless there is cause for concern, the doe and the pups should not be disturbed in the first few days. After a week the pups may be handled and this will help them to become accustomed to people.

For the first couple of weeks the pups will survive solely on milk from the doe. After about 2 weeks the pups will start to taste and play with solid food. Suitable soft food, such as oatmeal, must be provided. Within 2-3 weeks they will begin to eat the same food as adult rats.

Juveniles can be weaned at 4-5 weeks, but females can remain with the doe if necessary. Males should be separated from females before they are 5 weeks old to avoid inter-breeding.

If there is an exercise wheel in the cage, it must have a clearance with the bottom of the cage of at least 50mm otherwise it must be removed while pups are 2-3 weeks old to avoid them becoming trapped under the wheel and suffocating.

### **GUIDANCE - TRANSPORTING RATS**

Rats should be transported in a secure pet box or cage (one that they cannot gnaw at and escape).

A travelling box or cage must be provided with nesting material for comfort and on longer journeys, food pellets) and water (by means of such things as a piece of fruit or a vegetable) should be provided.

If possible cage-mates should be transported together to reduce stress and avoid problems of reintroducing rats that have been separated for a period.

A box or cage must be secured and protected as much as possible from noise, bright light, vibration, heat and cold. It may be covered, but care must be taken not to block ventilation.

Rats should be transported in conditions that maintain a temperature of 19° and 23°C.

This guidance is given by the Department with a view to securing the welfare of pet guinea pigs. It is additional to the Welfare Recommendations set out in the **Code of Recommendations for the Welfare of Pet Rats** made by the Department and available at [insert link etc.]. A breach of the Code may be relied upon in Court proceedings.