Chinchilla Factsheet

Introduction

Chinchillas are South American rodents with soft, dense coats, large ears and eyes and a long hairy curled tail. They are becoming increasingly popular as pets in the UK and can commonly be found for sale in pet shops. This species has complex social, environmental and behavioural needs which need to be met if they are to be kept happily as pets. This information leaflet is about the history and natural behaviour of the chinchilla, and how to meet their behavioural needs as pets. If you already have chinchillas, this guide will help you understand your chinchillas so that you can provide for their needs, and if you are thinking about getting chinchillas it can help you to decide whether they are the right pet for you and your household.

The Natural History of Wild Chinchillas

Chinchillas belong to the family Chinchillidae, which consists of chinchillas and viscachas (Marcon & Mongini, 1984). There are two species of chinchilla; Chinchilla lanigera, the long-tailed chinchilla, and Chinchilla brevicaudata, the short-tailed chinchilla (Spotorno et al, 2004). Chinchillas have a broad head with large ears and eyes, small forelimbs and a long, hairy tail. They have rootless teeth which grow continuously and enable them to cope with the constant dental wear caused by eating abrasive plant material (Spotorno et al, 2004).

Chinchillas were once widespread along the Andes, but commercial hunting for their fur in the 19th Century decimated the population (Jimenez, 1996). Wild chinchillas are protected under CITES Appendix 1 (CITES, accessed 2011), and classed as ‘Threatened’ under the IUCN (IUCN, accessed 2011). They exist mostly in the Reserva Nacional las Chinchillas in Auco, Chile (Jimenez, 1996). Captive chinchillas have descended from 12 wild chinchillas (C. lanigera) captured in 1923 by Mathias, F Chapman and taken to the USA (Spotorno et al, 2004). Today, they are kept as fur-bearing animals, laboratory animals and pets.

Habitat

Their natural habitat is arid and barren with sparse vegetation and rainfall occurring mostly between May and August (Spotorno et al, 2004). Living in an arid environment, chinchillas are specially adapted to conserve energy - they produce concentrated urine and small, dry faeces, and their dense hair (with around 50-75 hairs per follicle (Wilcox, 1950)) prevents heat and water loss (Spotorno et al, 2004). Their lifespan in the wild is around 6 years but in captivity it can be up to 20 years (Spotorno et al, 2004).

Diet

Chinchillas are generalists and opportunistic herbivores – an adaptation to living in areas where food availability fluctuates. They feed on different plants when they become available so their diet varies greatly between the wet and dry seasons (Cortés, Miranda & Jiménez, 2002). Their main food plants are the bark and leaves of native herbs and shrubs, and succulents such as bromeliads and cacti (Cortés, Miranda & Jiménez, 2002). Chinchillas rarely drink in the wild but obtain all their fluids from their diet (Spotorno et al, 2004).

Behaviour

Chinchillas are social animals which live in colonies of 100 or more individuals (Spotorno et al, 2004). They construct burrows or shelter in crevices under rocks or in plants, and dustbathe frequently in the area near the burrow entrance (Spotorno et al, 2004). Chinchillas are crepuscular and nocturnal (active at dawn and dusk and throughout the night) (Jiménez, 1996). They use conspicuous rocks for observing their range, resting and forming latrines sites which serve to advertise their presence to others (Spotorno et al, 2004). Chinchillas are a prey species - their natural
Care of pet chinchillas

Environment

Accommodation
Chinchillas are highly active animals and captive chinchillas show peaks of activity in the early morning and evening, and throughout the night (Kay, 2004; Dzierzanowska-Goryn, Kaleta & Kowalczyk, 2005). They need a large and interesting environment to live in and explore so their home should consist of a spacious home cage and free access from the cage to a large and enriched exercise area.

The Home Cage – When chinchillas first started to be kept in captivity on fur farms they were housed in cages which are typically 40 to 60 cm wide, 35 to 50cm deep and 35 to 40cm high (European Commission, 2001) and cages of this design and size are still readily available to buy for pet chinchillas. These traditional style cages are far too small to accommodate a pair or group of chinchillas but there are now a greater variety of cage sizes and designs available.

Choose the largest cage possible to enable your chinchillas to hop, jump, explore, hide and avoid each other if they wish. The cage should be made of strong metal and strong wire mesh, with wooden shelves at several levels (Spotorno et al, 2004; Saunders, 2009; Hoppmann, & Wilson-Barron, 2007).

Avoid cages with plastic shelves and bases – chinchillas are prodigious chewers and will destroy these quickly.

Shelves should be arranged so that there are no uninterrupted heights of 60cm or more to avoid injury from falls (Saunders, 2009). Many cages have wire mesh floors – these help to prevent chinchillas’ coat from coming into contact with damp litter which can cause matting. However, prolonged sitting on wire mesh floors can cause pododermatitis (blistering on the soles of the feet) so it is important to provide solid shelves for chinchillas to escape from standing on wire mesh (Hoppmann, & Wilson-Barron, 2007).

The Exercise Area – Chinchillas need access to a safe exercise area to run around in at least each evening if it is not freely available to them at all times. Ideally, this should be attached to their cage so that they can come and go as they please. A good option is to locate your chinchillas’ cage in a chinchilla-proofed room where you can safely let them out to run around at night. Another option is to attach a secure playpen, with a roof to prevent escape, to their cage.

Chinchilla-proofing an exercise area

Chinchillas are notorious chewers so you should ensure that any area you allow your chinchillas to exercise in is fully chinchilla-proofed to protect them from injury or from ingesting materials which could be harmful to their health.

Make sure that:

• Skirting boards and the lower half of walls and doors are covered. This can be done by covering them with wood or cardboard, or placing small animal playpen panels along the edges of the room.
• Electrical items are either removed or covered. Hard plastic tubing to cover electrical wiring can be bought from most DIY stores.
• Any items you do not want chewed are removed.
• Cover the flooring if you do not want urine stains – chinchillas are not fussy about where they wee!

Transporting your chinchillas to a separate exercise area can be stressful for chinchillas as this often involves being caught from their cage and exercise area, being handled, being away from familiar scents and places to hide, and lack of access to resources such as food and water. Rooms such as kitchens, living rooms, bathrooms and bedrooms are not ideal places to allow chinchillas to exercise freely as they can reach high places and squeeze into tight spaces so can be hazardous for chinchillas.

Enrichment
Plenty of environmental enrichment will help to keep chinchillas mentally and physically stimulated (Saunders, 2009) and enables them to express natural behaviours such as hiding, chewing and jumping.

Your chinchillas’ cage and exercise area should contain boxes, tunnels and tubes to explore, hide in and jump on, and branches of wood to chew to help wear their teeth down (Spotorno et al, 2004; Hoppmann, & Wilson-Barron, 2007). Provide a selection of enrichment items and swap them for new ones frequently to help maintain your chinchillas’ interest in their environment.

A very large metal wheel with a solid running surface (i.e. no open rungs) may be provided but this should not be the only source of enrichment and exercise for chinchillas.

As a prey species, chinchillas need places to hide and rest undercover away from predators. Providing chinchillas with nest boxes helps them to manage stress by enabling them to retreat from things which scare them (Saunders, 2009; Hoppmann, & Wilson-Barron, 2007; Kay, 2004). There should be at least one nest box for each chinchilla housed together to ensure chinchillas can hide from and avoid each other if needed, and a larger one for them to rest or hide together if they wish.

Bedding and Nesting materials
Provide bedding at the base of the cage to absorb waste, and nesting materials within the cage and nest boxes for your chinchillas to rest on. Wood shavings, newspaper, shredded...
paper or recycled wood or cardboard litters are suitable bedding materials, and hay or soft, shredded paper bedding can be used as nesting material.

The cage should be spot cleaned daily to remove droppings and damp bedding and nesting material. Once a week, the entire cage should be cleaned and all bedding and nesting material replaced.

Chinchillas, like many rodents, recognise their environment as being familiar through scent, and thorough cleaning is likely to remove all familiar scent which may cause stress. When cleaning the cage, use an unscented, pet-safe disinfectant. Retain a handful of old but dry bedding and nesting material to replace in the cage once it has been fully cleaned. Replacing these used materials will help to maintain some familiar scents and reduce the stress of cage cleaning. It’s best to clean your chinchillas’ cage in the evening when they are naturally awake and active to avoid disturbing their rest during the day.

**External environment**
The presence, scent or sound of predatory animals such as cats and dogs may be stressful for chinchillas (Johnson, 2006). Make sure that other pets such as cats and dogs are kept out of sight from your chinchillas’ home. In the wild, the chinchilla’s main predator is the owl, so stimuli coming from above can be frightening, therefore the cage should be raised off the floor so that it is not possible to approach its top, and overhead fans should be avoided(Sobie, 2010). Chinchillas are sensitive to noise so should not be housed close to sources of household noise (e.g. washing machines, TV’s, stereos) (Johnson, 2006).

Chinchillas must be kept as indoor pets as they do not tolerate fluctuations in temperature well. Cages should be kept in a draft free area which permits daytime sleep as they are largely nocturnal (Spotorno et al, 2004). Chinchillas should be housed at temperatures between 16 to 25°C in areas of low humidity and should never be kept at temperatures exceeding 30°C due to the risk of heat stroke(Spotorno et al, 2004; Hoppmann & Wilson-Barron, 2007).

**Diet**
Chinchillas are mainly herbivorous (eat only plant material) and caecotrophic (they produce two types of faecal pellet, the first type, the ‘ceca’ or ‘ceca-poth’, is eaten by the cecotrophs directly from the anus to produce a second, smaller, dry pellet) (Boussarie, 2002; Kupersmith, 1998). A rich diet in plant fibre is needed to maintain this special digestive process so chinchillas must have ad lib access to good quality, fresh, dust-free grass hay at all times. A chinchilla’s typical daily diet consists of 30g of pellets and unlimited hay (Wolf et al, 2003), with fresh water provided daily from a bottle.

Fresh herbs and leafy greens can be fed in very small amounts daily as treats. Chinchillas have been shown to prefer dead and dry leaves to fresh leaves (Portes, Miranda & Jiménez, 2002), and can be given dried herb and plant mixes, which can be found in most pet stores, to supplement their hay-based diet and add variety and interest to it.

**Feeding enrichment**
Chinchillas would naturally spend most of their waking hours in the wild searching for food so try out some of these ideas to occupy their time and provide an outlet for natural foraging behaviour:
- Scatter their daily pellets around their cage and exercise area instead of feeding from the bowl. This has the extra advantage of preventing one chinchilla from monopolising the food bowl area and preventing other chinchillas from getting their fair share of food.
- Hide hay, pellets and greens in paper bags, cardboard tubes and boxes
- Try out some special activity toys suitable for small animals, such as puzzle boards, feeding balls or small animal kongs.

An inappropriate diet can cause health problems in chinchillas. Obesity and malocclusion are common problems in chinchillas due to ad libitum feeding of concentrate foods, selective feeding on ‘muesli-type’ foods and lack of hay in the diet(Wolf et al, 2003; Legendre, 2002). A recent study in rabbits has indicated the extent of health problems caused by muesli foods (RAW, 2013) and due to the similarities in the dietary requirements, digestive system and dentition of rabbits and chinchillas, it is likely that those concerns are applicable to chinchillas. It is therefore advisable to feed a pelleted diet and avoid muesli mixes. Sudden changes to the diet should be avoided can cause serious digestive upset(Saunders, 2009) so any changes must be made very gradually by mixing a very small amount of new food to their old food and gradually adjusting the proportions over at least 14 days. It has been suggested that chinchillas will reject certain food items by throwing them out of the cage if they are not easily held in their forepaws (Weir, 1967) which may influence which items of muesli diets are selected to eat.

**Muesli-style foods – What’s the Problem?**

**Selective feeding on high fat and sugar items** - Chinchillas will tend to pick out items high in fat and sugar, such as seeds and dried fruits, and leave healthier, high fibre pieces. This is a natural, adaptive behaviour to ensure survival - in the wild, chinchillas would rarely come across high fat and sugar foods so when they do they tend to eat all they find in order to gain the most amount of nutrition from it. However in pets, this tendency can lead to obesity and other health problems as high sugar/fat items are more freely available to them.

**Lack of abrasive material** - Chinchillas’ teeth grow continuously so that they can feed on abrasive plant material which constantly wears their teeth down. Muesli foods are very soft so do not provide enough dental wear, leading to overgrown and misaligned teeth.
Lack of fibre - Chinchillas require high levels of fibre in their diet in order for their digestive system to work properly. Low fibre muesli-based diets can lead to digestive problems and potentially life-threatening gut stasis.

Behaviour

Dustbathing

Chinchillas must dustbathe regularly to keep their fur clean (Barber & Thompson, 1989). Chinchillas should be allowed to access their dustbaths daily, however time-limiting access to dustbaths may be necessary to prevent eye irritation (Saunders, 2009), protect the coat from contact with soiled sand or prevent dry skin due to over-bathing (Sobie, 2010). Specialist chinchilla bathing sand can be bought from most pet stores. Play or builder's sand is not suitable for chinchillas to dustbathe in as it does not have the properties required to keep a chinchilla’s coat clean and may damage the chinchillas coat or skin.

Chinchillas have a distinct sequence of dustbathing behaviour consisting of three phases: ‘paw phase’ involves digging in the sand and drawing it towards the body, ‘cheek phase’ involves rubbing the cheeks in the sand, and the final ‘spin phase’ involved rolling over completely (Stem & Merari, 1969). Watch your chinchillas dustbathe to spot these three stages. Chinchillas will spin more in their dust baths the longer they have been deprived of a bath (Stem & Merari, 1969).

Dustbathing may also be an important means of social bonding and maintaining a group scent (Eisenberg, 1962). In other species such as the degu, individuals have been found to bathe more regularly in areas where other familiar individuals have previously bathed (Ebensperger & Caiozzi, 2002). This may be important for territorial defence near the burrow entrance and for recognition of group members (Ebensperger & Caiozzi, 2002). Further research into the dustbathing behaviour of chinchillas is required to determine all of its functions to them.

Socialisation and Handling

The socialisation period is a sensitive period during an animal's early development when it is most receptive to learning about other social objects (i.e. other chinchillas and people). It is important that chinchillas have good experiences with people during this time in order for them to be comfortable in their presence during adulthood. The socialisation period for chinchillas has not been determined, but in rabbits this may occur between 4 and 6 weeks of age as handling rabbit kits at this age helps them to become accustomed to people and more easily handled later in life (Der Weduwen, 1998). Other studies have confirmed that gentle handling of young rabbits, especially after nursing, reduces fear of humans (Csatadi et al, 2005; Jezierski & Konecka, 1996).

Chinchillas can be nervous of humans if they have not experienced human contact at an early age, and the behaviour of the mother towards humans may be an important influence on the kits' socialisation (Saunders, 2009; Sobie, 2010).

There has been little research investigating the behaviour of chinchillas towards humans. One study tested the reaction of chinchillas to hand intrusion into the cage and found that chinchillas elicited four different responses - curious, indifferent, anxious and aggressive, with most chinchillas (47%) responding with curiosity (Shuurman, 1996).

Introducing Chinchillas to Handling

Chinchillas are prey species and will associate handling with being caught by a predator. It’s important to introduce them to handling very gradually and gently, and in association with positive experiences (e.g. tasty food) so that they never feel threatened. It’s best to do this in the evening when chinchillas are naturally awake.

1. Start by so that they begin to associate your presence with good experiences.
2. Once they are confident with taking food from your hand, try gently and briefly stroking his/her back, then stop and reward with a treat. They will begin to learn that your hands around them are a good thing. Repeat this many times, slowly building up the length of time you stroke them for.
3. The next step is to gently cup one hand underneath your chinchilla’s bottom and the other underneath the chest as if you are preparing to lift him/her. Then remove your hands and reward your chinchilla for staying still and calm. Repeat this many times until your chinchillas are completely relaxed and happy with it.
4. Next, with your hands supporting under the bottom and chest, gently lift your chinchilla briefly, then set him down and reward with a treat. Never hold too tightly as this can make a chinchilla panic and struggle.

Another method is to train your chinchilla to climb onto your arms:

1. Again, start by offering your chinchillas a small, healthy treat from the palm of your hand.
2. Once they are confident with taking food from your hand, move the treat higher up your hand, nearer to your wrist so that your chinchilla has to walk onto your hand to retrieve it.
3. Next, move the treat up your forearm so that your chinchilla has climb entirely onto your arm to retrieve it. Repeat this many times until your chinchilla is confident to climb on your hand.
4. Whilst he/she is on your arm, gently place your other hand supporting his/her, back/behind, slowly lift him/her a short distance then put him/her down and reward. Gradually build up the length of time your chinchilla is lifted up for.
Vocalisation
Chinchillas produce a variety of vocalisations which can be categorised as exploratory, contact, bark and alarm calls (Hunyady, 2008). Exploratory calls were made during investigations of the environment (Hunyady, 2008). Contact calls were made before interacting with a desired person, chinchilla or object, and are an expression of pleasure or contentment (Hunyady, 2008). Bark calls were produced when a chinchilla was agitated or felt threatened and were directed towards the aggressor or threat, serving as a defensive warning (Hunyady, 2008). The alarm call was a high pitched shriek or squeal, produced when a chinchilla was highly fearful or in pain (Hunyady, 2008).

Body language and physical communication
A chinchilla’s body posture communicates its emotional state; frightened chinchillas will crouch down, lower their ears and turn away from fearful stimuli, inquisitive chinchillas attend to and move towards what interests them, or they may stand on their hind legs when interested or alarmed (Sobie, 2010). Chinchillas may gently nibble objects and people to investigate them - this is normal behaviour and should not be punished in any way as punishment may create a fear of humans (Johnson, 2006; Sobie, 2010). Chinchillas maintain social bonds through mutual grooming and mouth sniffing (Pavia, 2003) and will often sleep in close contact with other chinchillas which they are familiar and friendly with.

Defensive behaviour
Chinchillas can shed their fur (known as ‘fur-slip’) or the hair at the end of the tail (known as ‘tail-de-gloving’) when restrained or handled roughly to enable them to escape (Saunders, 2009). Chinchillas spray urine when scared and this may be directed at humans or other chinchillas (Weir, 1967). Females are more likely to urine spray than males, and are more likely to successfully target their perceived threat with urine (Sobie, 2010). Chinchillas may growl and bear their teeth when threatened but only bite if forced to defend themselves (Saunders, 2009; Kay, 2004; Weir, 1967).

Behaviour Problems in Chinchillas
Chinchillas may develop behaviour problems due to medical or pain issues, inappropriate interactions with humans or because their needs are not met by their living environment and husbandry. Some common behaviour problems are outlined below:

Fur chewing
Fur chewing is a behaviour problem occurring in chinchillas which involves the chinchilla repeatedly chewing the fur, usually on its sides and back, until it becomes very short and matted. It can range in severity from mild, where only a few tufts of hair are chewed, to severe, where there is extensive fur loss or damage (Ponzio et al., 2007).

Many causes of fur chewing have been suggested (European Commission, 2001; Ponzio et al., 2007). Fur chewing may be influenced by dietary factors such as the amount of hay in the diet (Berthelsen & Hansen, 1999; Lidfors, 1997; Kersten, 1997), parasites such as ringworm and fleas (Hoppmann & Wilson-Barron, 2007) inherited behaviour (Iglauer et al., 1995; Malmkvist & Hansen, 2001), or environmental factors such as frequency of cage cleaning, number of chinchillas housed, access to a dustbath and noise in the environment (Ponzio et al., 2007) or attention from human caregivers (Kersten, 1997).

Recent research indicates that fur chewing is a stress related behaviour with a female bias, as chinchillas displaying severe fur-chewing show raised cortisol levels (a hormone released during stress) (Ponzio et al., 2012). Husbandry and management practices employed by owners may be a source of stress to pet chinchillas, which may influence fur chewing. A study investigating the relationship between behaviour problems and management practices in pet chinchillas indicated that fur chewing behaviour was associated with smaller cages, cages that were cleaned less frequently and lack of access to a nestbox (Hacking & Taggart, 2011), however further research is required to confirm these associations and investigate the reasons for them.

Repetitive behaviours
Chinchillas in captivity may show repetitive movements such as spinning, pacing back and forth, or rapid, repeated locomotion along the cage walls (Johnson, 2006; Sobie, 2010; Kersten, 1997). Chinchillas may also gnaw or shake the bars of the cage due to sources of stress in the environment, lack of access to shelter, or frustration due to lack of physical or mental stimulation.

Bar gnawing, back-flipping and other repetitive movements were common in pet chinchillas and these behaviours were significantly inversely associated with the number of chinchillas owned (Hacking & Taggart, 2011), meaning these behaviours were less likely to occurred in households with more chinchillas. This may be because a higher population has a stress-reducing effect (Ponzio et al., 2007), reducing the need to perform these behaviours.

A Chinchilla with signs of extensive fur damage due to fur chewing (Marina Ponzio, University of Guelph, 2008)
Aggression to cagemates and owners

Chinchillas may show aggressive behaviours such as aggressive vocalisations, lunging and biting due to fear or stress. Aggressive biting must be distinguished from normal investigative biting and nibbling that is often directed at owners whilst they are exploring them - this is normal chinchilla behaviour (Johnson, 2006; Sobie 2010).

One study indicated that aggression to cagemates was associated with exercise provision, and biting people was associated with cage size, handling frequency and the number of chinchillas owned (Hacking & Taggart, 2011). Owners with chinchillas that bit people had smaller cages for their chinchillas than owners of chinchillas that did not bite (Hacking & Taggart, 2011). A smaller cage may mean that chinchillas have less space to escape threats, so are more likely to bite to defend themselves (Weir, 1967). Alternatively, small cages may increase frustration which could be expressed as aggressive behaviour (Hacking & Taggart, 2011).

Preventing problem behaviour

Whilst the causes of fur chewing and other behaviour problems in chinchillas are largely unknown, an understanding of the chinchilla’s natural behaviour and the ability to provide for these fully when kept as pets is likely to help prevent the occurrence of behaviour problems. Chinchillas need a proper diet, the right accommodation, plenty of physical and mental stimulation and to be kept in stable and compatible social groups in order to help prevent problems. If any of your chinchillas are exhibiting a behaviour problem, see your vet first to identify any medical reasons which may be causing or influencing the problem. Once these have been identified and treated, your vet can refer you to an APBC member for further help.

Company

Social environment

Chinchillas are social animals that live in large groups in the wild (Spotorno et al., 2004) so providing appropriate company is important for pet chinchillas. Chinchillas may be kept in same sex pairs or groups, or a castrated male with one or more females (Johnson, 2006). Chinchillas kept in same sex pairs or groups must be littermate pairs which have been raised together, or individuals that have been introduced to each other at an early age, and pairs must be closely monitored due to the possibility of fighting at sexual maturity (Saunders, 2009; Kay, 2004). Some authors suggest that aggression is common in females towards males and other females (Boussarie, 2002; Weir, 1967) and threats include growling, teeth chattering and urine spraying (Spotorno et al., 2004).

Mounting behaviour may be observed in any combination of gender pairs outside the context of reproduction (Sobie, 2010). This behaviour may be more prevalent in situations lacking environmental enrichment and individuals that have been subject to mounting avoid areas of conflict, such as feeding and exercise areas, in the presence of the mounting individual (Sobie, 2010).

Are chinchillas the right pets for you?

Taking on any kind of pet is a big decision which requires serious thought and research beforehand. Consider the following to help you decide whether chinchillas are the right pet for you, your family and your circumstances:

- Chinchillas are not cheap pets. Consider the cost of suitable accommodation, food, bedding, toys and veterinary care. Remember you will need to provide for at least two animals, as chinchillas need suitable company of their own kind.
- As chinchillas are a long-term commitment it’s worth considering taking out specialist exotic pet insurance to cover any unexpected veterinary fees.
- Chinchillas live a long time – up to 20 years! It’s important to make sure you can commit to caring for chinchillas for their entire lifespan. Consider whether your life is likely to change in any way which will affect your ability to keep you chinchillas. Chinchillas can be destructive – they like and need to chew, and if you’re not prepared, your furniture, skirting boards, walls and wallpaper can be the focus of their chewing.
- Chinchillas are messy – they produce thousands of small poos daily which they leave everywhere, in addition to bits of bathing sand, hay and bedding – you need to be happy to use a dustpan and brush frequently.
- Chinchillas need plenty of exercise – living entirely within a cage is not an option for chinchillas – they need to get out for free exercise every evening so you will need a safe place for them to do this.
- Rooms such as kitchens, living rooms and bedrooms are not ideal as chinchillas can reach high places and squeeze into tight spaces, so these places can be hazardous to chinchillas. If you have other pets you will need a safe place for your chinchillas to live and exercise well away from them.
- Chinchillas are not children’s pets – they dislike being held and cuddled and are awake late at night making them unsuitable for children.

References


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