



Zoo, Avian, Aquatic and Unusual Pets
Veterinary Consultancy

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Tortoise care

This fact sheet will give an overview of general tortoise care. It will discuss aspects for the more commonly kept tortoise's in the UK. Please use this as a guide to aid you but note that further information on your species should always be carried out.

A reliable source for information on individual species can be found at <https://www.tortoisetrust.org/care/care.html>

It is imperative that the correct set up/husbandry requirements are met in order for your tortoise to thrive.

Please also see our tortoise habitat guide, tortoise diet guides and tortoise hibernation guide.

Housing:

*Please also see our additional tortoise habitat guide for extra information.

The minimum enclosure guidelines for one adult tortoise is 8 x 4 PL (plastron length) (FBH, 2022). The plastron length is the flat, bottom part of the shell. For example, an adult tortoise that has a plastron length of 20cm (8inches) would require a minimum enclosure size of 160cm x 80cm (5' x 3').

FBH (Federation of British Herpetologists), 2022. *Code of practice for recommended minimum enclosure sizes for reptiles*. (Online) Available at: <https://www.thefbh.org/news>

However, always try to provide more space if you are able and always consider the other requirements your particular species may require.

Although there are no minimum requirements on the height of the enclosure be aware that if you own a climbing tortoise (Hermann's and Horsfield species) that the sides of the enclosure are tall enough to prevent escape and any injuries. Be aware of where you place any hides or similar structures in your enclosure as your tortoise may use these as a climbing frame to escape.

It is tempting to use a vivarium style enclosure to prevent escapes and historically tortoises were sold with a vivarium set up but these are not recommended for use with tortoise species.

Vivarium's are not recommended for a variety of reasons including size, they are usually not built large enough for adult tortoises. They lack adequate ventilation leaving tortoises to develop respiratory problems. There is no suitable heat gradient, tortoises tend to end up in a constantly hot environment with no area to cool down. Tortoises can also develop abrasions on their snouts where they rub themselves against the glass doors trying to get



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move through a surface they can see through but not get through, this can become stressful for them.

The ideal enclosure is termed a tortoise table. This consists of a solid floor, usually made from wood and four solid sides. The top can be enclosed with a wire like structure to allow for ventilation or left open. Heat lamps and UV lights are then suspended over the enclosure. A tortoise table enclosure offers more privacy than a vivarium and is much easier to clean.

Place your enclosure away from direct sunlight ie. the window and away from radiators to avoid changes in temperature fluctuations that are out of your control.

On the bottom of the enclosure there are various substrates that can be used. For a healthy tortoise a reptile safe sand, such as children's play sand can be mixed with top soil that contains no added fertilisers. This sand-soil mixture allows your tortoise to carry out normal digging behaviours. This should be deep enough that your tortoise can cover themselves completely if required.

Do not use loose substrate which contains large pieces, such as wood chip as these are often mistakenly eaten, causing impactions which require surgery to be removed.

Within the enclosure stones, branches, logs and hides should be used to provide enrichment. These should occasionally be moved around or changed to mentally stimulate your tortoise. As well as these a shallow bowl or reptile dish large enough for your tortoise to sit in should be provided as a bath. They should be able to rest in this bath with their nostrils comfortably out of the water. Note: this should not be a substitute for regular bathing every week.

Spot clean your tortoise enclosure every day with a full clean out once a week.

Outdoor enclosures

These are beyond the scope of this guide to discuss in detail. If planning an outdoor enclosure heating and UV light requirements must be met. The UK climate rarely gets up to the high temperatures (30-32°C) that most species require and the UV index is too low to be of any benefit. Tortoise that are kept predominately outside such as the larger Sulcata or African spurred tortoise species will usually have a purpose built shed which contains their heating and UV lighting requirements. Additional features to be aware of include predator and escape proofing the enclosure, being aware of adequate drainage and substrate where you plan to build your outdoor enclosure. Often outdoor enclosures allow for plenty of space, more than can be provided indoors but very careful planning and monitoring of temperatures, UV light and dietary requirements must be considered. Please speak with us if this is something you wish to discuss further.

Free-range:

We do not recommend keeping tortoises free range in the house or in one dedicated room. They can lose heat quickly and require access to ultraviolet light to carry out normal metabolic processes (see below). They are also at risk of injury from other pets, becoming



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trapped under furniture or electrocuted. It is also unhygienic to do this as reptiles shed salmonella in their faeces. However, regular stress-free handling for short periods of time outside their enclosure, a few times a day is recommended for bonding and checking for signs of illness.

Heating:

Tortoises are ectothermic meaning they require an external heat source to warm their bodies up to carry out normal metabolic processes. A basking heat lamp, usually a ceramic bulb should be placed at one end of the enclosure. A second heat lamp may then need to be placed in the middle of the enclosure to provide the correct temperature gradient. This can depend on your enclosure size and the strength of the basking lamp bulb. (Please see our additional information sheet on tortoise set up). Temperatures should be regularly checked to see if the extra heat lamp is required. In some cases, a heat mat placed underneath the outside of the enclosure can be used. This is useful to stop temperatures dropping too low at night-time. It should cover at least one third of the bottom of the enclosure and can be controlled by a thermostat.

With the correct set up a temperature gradient is then created. The warmest part of the enclosure is at the top and the cooler end at the bottom of the enclosure. Probe thermometers should be placed at the top, middle and bottom to ensure temperatures are correct. Alternatively, a thermometer gun can be used, and temperatures checked daily.

The heat lamp should be attached to a thermostat which can maintain the required temperature and attached to a timer which will allow the heat lamp to be on for 12 hours of the day.

Night-time temperatures should not drop below 20 degrees.

Avoid placing rocks or wooden bridges close to the heat lamps as tortoises that climb onto these, become too close to the heat and burn themselves.

Enclosure temperatures:

Spur thigh, Hermann's and Horsfield adult tortoises:

| | |
|---------------------|--------------------|
| Under basking lamp: | 30-32°C |
| Ambient (middle): | 26-28°C |
| Cool end: | 22-24°C |
| At night: | No lower than 20°C |

Please check your specific species temperatures

UV Lighting:

Tortoises are highly dependent on ultraviolet (UV) light for their health. It is a common mistake of inexperienced reptile keepers to forget this, which is extremely detrimental to their



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health. The most important ultraviolet light required is UVB. UVB allows tortoises to utilize the calcium in their body, regardless of the amount they might digest.

UVB strength is measured as a percentage. When buying a UVB light you will see this percentage on the side of the packaging. The strength required for tortoises ranges from 10-12% . There is a range as this can depend on the height of your enclosure and how close your tortoise will be to the light. The further away the higher the percentage you may require. Please check the distance of your light to the top of your tortoise and follow the guidelines on the ultraviolet light to choose the best percentage light for your tortoise.

Please have a look at the following website for further information:

<http://www.uvguide.co.uk/whatreptilesneed.htm>

We recommend using a strip UVB light across the top of your enclosure as this allows the whole of enclosure to be exposed to the light. Combined heat and UVB lights are available however once your tortoise has heated itself up adequately, they will walk away from the light meaning they are not exposed to the UVB light, which is far from ideal.

Over time UVB in the light degenerates, meaning although they are still producing light it is not the required UVB spectrum that your tortoise needs. This means the light needs to be changed every 10-12 months depending on the product you buy. The guidelines should be on the box as to when to change your light. Alternatively, you can check your lights UV output using a UV meter.

The UV light should be attached to a timer which allows the light to be on for 12 hours of the day.

Always use a reflector with your UV light to ensure all the UV rays are going down onto your tortoise.

Humidity:

We need to provide the correct humidity to keep our tortoises suitably hydrated. This will depend on the species of tortoise concerned. Arid species such as those from the Mediterranean and Africa will have lower humidity ranging from 45%-55%. Tropical or rainforest species would require a higher humidity around 80%. A hygrometer or a datalogger can be placed into the enclosure to allow you to monitor humidity levels.

A water bowl should be placed in your tortoises enclosure and changed daily to allow them the option to drink instead of taking water from their food.

We also recommend bathing a healthy adult tortoise once to twice a week. To do this use a small tray, fill it with warm water to reach the tortoise's plastron (bottom part of their shell). Your tortoise should be able to rest their head without submerging their nostrils. Watch your tortoise carefully and do not allow them to fully submerge their heads in the water. Allow them to bath for 10-15 minutes or until the water feels cool.

Pyramiding:



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This is the term used to describe a tortoise's carapace (top part of the shell) growing abnormally and developing bumps or pyramids. The majority of tortoise species should have smooth shells with no bumps or pyramiding. If you notice these developing in your tortoise please call us for an appointment so we can help address the situation. Unfortunately, once pyramiding develops it is irreversible but changes can be made to ensure it does not get worse.

Pyramiding occurs due to a multitude of complex factors and has been researched extensively. The key factors that can contribute to this are abnormal growth due to incorrect diet such as high protein, high energy diets that lack any calcium. A lack in humidity or general dehydration can also play a part.

Ensuring your tortoise has the correct husbandry and dietary requirements (including calcium) will help reduce the chance of pyramiding and other husbandry related issues occurring.

Cage enrichment:

Various sized branches or logs and stones should be placed within the enclosure for your tortoise to explore.

Branches can be artificial or real, however do not use any branches that produce sap as this could cause damage to your tortoise. All branches and stones should be thoroughly cleaned before being placed into the environment. This can be done by soaking them in a product called F10 which is available to buy on the internet.

Commercially available hides can be placed throughout the enclosure or alternatively plant pots or logs can be used to allow your tortoise a safe place to rest.

You can also plant tortoise friendly plants inside the enclosure to provide enrichment. A list of these can be found on our tortoise diet sheet or alternatively download the tortoise table app and search for plants on there.

Companions:

Generally, tortoises are solitary and can be very territorial, only sharing their space if mating. Living with another tortoise over a prolonged period can be very stressful for them. They often fight, damaging each other's shells and will compete for heat, UV light and food. Tortoises kept together from a young age will be competing without the owner realising until one is growing at a much slower rate than the other. If you own more than one, it is advised to house them separately. This is also ideal if any health issues were to occur and helps prevent the spread of any infections.

Medical conditions we most commonly see:

Many cases are connected to poor husbandry. Try to meet all their husbandry needs to avoid a vet visit. Conditions we may see are:



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- Endoparasites (worms) This is why we ask you to bring a faeces sample in when coming to your appointment. This is something we can easily rule out at the clinic if we have a fresh sample to check.
- Cloacal prolapse (this can sometimes be linked to the above)
- Egg bound/retention in females
- Nutritional secondary hyperparathyroidism (metabolic bone disease)
- Obesity leading to other conditions

Insurance

Unfortunately, we can never predict what may happen to our tortoises, so we highly recommend getting pet insurance. A monthly fee can give you peace of mind knowing your pet is covered for the best treatment should anything happen. There are many insurance companies available, so we advise contacting each of them to find a policy that is right for you. We advise a policy that will cover your tortoise for its whole lifetime, for chronic illnesses and for the maximum amount that is available. If this is not possible then covering your tortoise for as much as you can afford will give you peace of mind should an accident or emergency occur.

Useful links:

Please see the following website links for further information on tortoise care:

<https://www.tortoisetrust.com/>

<https://www.tortoise-den.co.uk/care/care-sheets>

<https://www.thetortoisetable.org.uk/>

<https://www.tortoise-protection-group.org.uk/site/1.asp>