

**Damory Veterinary  
Clinic**

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# Damory Veterinary Clinic

## Small Animal Factsheet



### TORTOISE HIBERNATION

Most tortoises kept as pets in Britain are mediterranean tortoises and include the Hermanns, spur-thigh and Marginated tortoises. The Horsefields is from Central Asia. These areas have a warmer climate with more sunshine and longer day length than Britain.

Tortoises of these species normally hibernate for up to 20 weeks each year. In our climate tortoises may hibernate for up to 6 or 7 months if not provided with additional heat or UV lighting in a vivarium and this greatly increases their risk of dying during or following hibernation. Note that most African species of tortoise do not hibernate normally and must not be hibernated in captivity.

#### PREPARATION

Although tortoises would normally hibernate in the wild from their first year as hatchlings it is not recommended for beginners to do so at such a delicate age. It is recommended to keep hatchlings up to three years old or up to {100mm} plastron length awake during winter in a heated vivarium.

Older tortoises can be hibernated safely providing they are of good weight, are generally healthy and show no signs of respiratory problems. By using a vivarium it helps to prolong extend our short British summer and also allows the temperature to remain stable when they wake up in the spring, which will help them come out of hibernation safely and stimulate their appetite.

In the autumn, as early as the first week in September night temperatures start to become cold and many tortoises stop eating, this is far too early for tortoises to start their hibernation. Again by using a heated vivarium you can extend their summer to the end of October by maintaining a constant temperature. When preparing to hibernate you tortoise the temperature should be gradually reduced to 13 °C (no lower) for 3-6 weeks prior to the start of hibernation, during which time tortoises will become less active, with a reduced appetite. Continue reducing the temperature and start counting the days from when they last fed. A minimum of 3 weeks should elapse after the last meal to allow food to clear the digestive tract. Fresh water should be continue to be offered during this time, so the your tortoise is nicely hydrated before hibernation starts. Once your tortoise is ready for hibernation the temperature should be reduced to 10 °C maximum and no lower than 0°C, and you should obtain an accurate weight with kitchen scales.

#### KEY POINTS

The main issue of safe hibernation is to be able to maintain the tortoise's body temperature between 3 & 7 °C and not to allow it to fluctuate. This is to ensure your tortoise doesn't freeze to death, but also that it doesn't wake up, using valuable energy reserves which make it highly susceptible to illness.

Hibernating tortoises the old fashion way in a box with straw, hay or news paper, often leads to them waking up during the winter months and they tend to be in poorer condition when they wake up in spring. This is due to our winters being long and generally mild which can fluctuate daily and by keeping your tortoise in straw, hay or paper the air circulating around your tortoise will fluctuate its body temperature. This will take it in and out of sleep and will unnecessarily burn off calories and lose body weight; it will also cause dehydration which causes kidney failure. Remember that dehydration kills tortoises in hibernation not starvation as many people think.

#### HOW TO HIBERNATE

Using a large strong plastic box at least 30 cm deep and with a strong clip on ventilated lid, fill it half way with relatively dry garden compost or fine soil. Even when it feels relatively dry to the touch it will naturally have some moisture content which will help prevent dehydration in hibernation.

Once you have gone through the last stages of cooling and your tortoise hasn't eaten for about two weeks it should be ready to be placed in the hibernation box. If the tortoise is still very active try cooling it for another week. Place the tortoise in the box and let him settle for a couple of hours, then put some more loose soil in the box around the edge banked up the sides. As the tortoise moves around over the next couple of days it will bury itself, don't worry it will not suffocate. In fact at this stage there breathing is so slow that enough air will filter through the soil but not enough to cause any problems with fluctuating air temperatures.

Clip on the ventilated lid and place the box somewhere that stays cool between 3 - 7 °C. Brick buildings like outside garages are the best places to keep it as it tends to stay very cool and is protected from the frost which is very important. It is a good idea to use a min- max thermometer just underneath the soil in the hibernation box with the tortoise so that you can check the temperature every couple of weeks. If it is at the lower end of the range { 3 - 4 °C} you may wish to place the box higher up away from the floor as it will be one or two degrees warmer away from the floor, or on the other hand if the temperature is at the higher end of the scale { 6 - 7 °C} place the box closer to the floor or on the floor. You may wish to check this from time to time during the winter.

### **WAKING UP IN SPRING**

Tortoises tend to start waking up around March when the weather becomes very mild and we start to get the first sunny days of spring. This is a perfect time to let your tortoise wake up naturally.

By moving the hibernation box to an area which is slightly warmer your tortoise will start slowly moving around the box , this may take a couple of days. At this stage you should get your vivarium warmed up to the mid 70's f (22-24 °C) After the first two or three days of movement it is important to remove the tortoise and bath it in luke warm water for about ten minutes to re-hydrate it and then return it to the warm vivarium . This should be done every day for about ten days and during that time every other day you should increase the temperature one or two degrees until the low 80's F (26-28 °C) is achieved.

Again the reason we use vivariums in the spring is that between spring and summer temperatures are very unstable. In April we get a lot of rain and frost which are both dangerous to tortoises. Don't forget they can still go outside when it's fine warm weather but should always go back in to their vivariums at night and stay there if the following days are wet and cold. This is to help extend their summer. Many tortoises that wake up in spring and are left outside sometimes try to go back to sleep in April because its cold, wet and sometimes frosty which is not a good idea, once they are awake they should stay awake.

### **IMPORTANT NOTES TO REMEMBER**

Vivariums are one of the most important things to have when keeping tortoises as they can be used to extend the summer and reduce hibernation time.

Remember that you must make sure your tortoise has emptied its stomach before hibernating.

The hibernation box must be strong with a vented clip on lid and stored between 3 - 7 °C in a rodent-free place.

Make sure you use soil or compost which will prevent dehydration, temperature fluctuation and weight loss.

Don't forget to bath your tortoise every day when it wakes up in spring to re-hydrate it, which will help it recover from the hibernation.

Always remember that tortoises are cold blooded creatures which depend on you to provide the right conditions for them to survive long term, only put them outside in dry warm weather, never leave them outside in damp wet and cold conditions.

*Updated October 2012*