

Signs of a Gravid Tortoise

Indications that a tortoise is gravid may vary from tortoise to tortoise, but can include any or all of the following:-

Loss of appetite

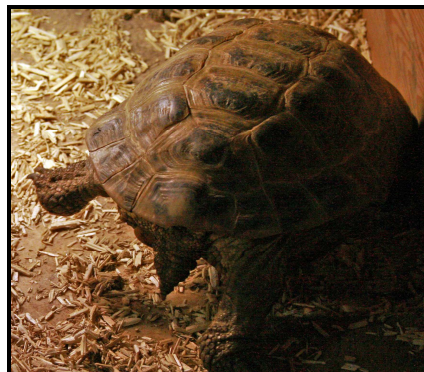
The physical space occupied in the body by the eggs, together with hormonal changes, can depress the appetite and this is often an early indication that your tortoise may be gravid. However, despite the reduced food intake, your tortoise continues to put on weight.

Change in behaviour

She may become quieter than usual and want to hide away more. More typically, the female becomes restless, and will constantly pace the perimeters, try to scale the boundaries, and clamber over obstacles in an attempt to find the perfect nesting place. If you have other tortoises, she may behave aggressively towards them, even mounting other females in an attempt to gain dominance. It is thought this aggressive behaviour may be designed to secure the best nesting site.

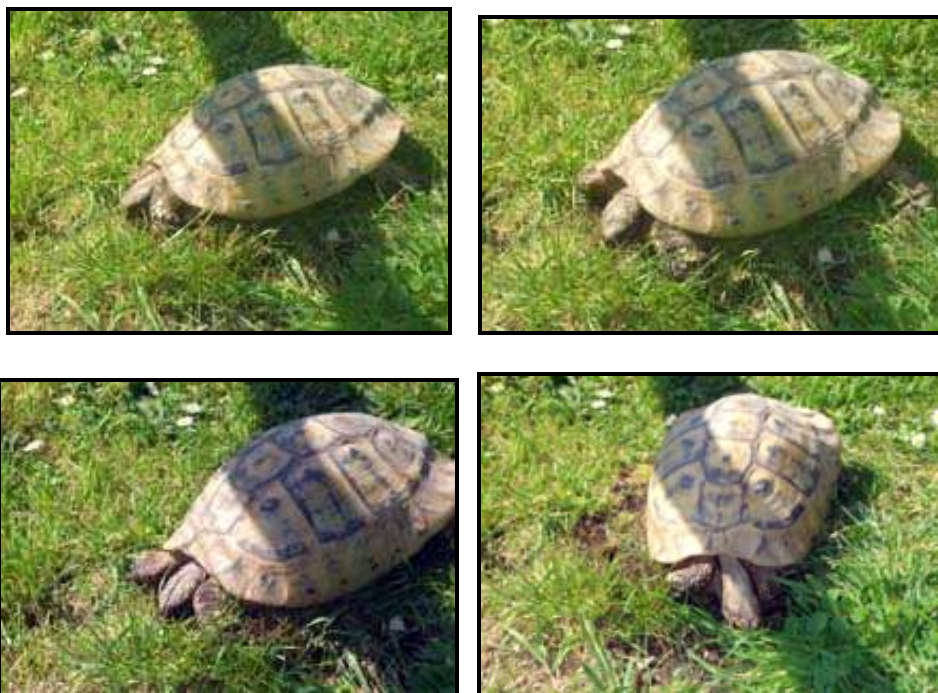
Leg wiggling

When the female tortoise is nice and warm, i.e. basking on a sunny patio, or under a basking lamp, you may notice her back legs moving alternately in a circular motion.



‘Scratch and sniff’

You may see your tortoise scraping the top layer of soil away with her front legs and touching the surface with her nose, as though she is sniffing it. She is actually testing the temperature of the soil to see if this is a suitable place to lay her eggs.



Trial nests

Some females will settle down and dig a single nest and deposit their eggs. Others may dig trial nests; this may go on for several days or even weeks as she hunts for the perfect nesting area.

Nesting Site

(Mediterranean Tortoises i.e. Testudo hermanni, Testudo graeca, Testudo horsfieldii).

The gravid female will not normally deposit her eggs unless she has a suitable nesting place, and it is vitally important that she has access to such an area. If she does not, this can lead to egg retention, a potentially serious condition. Calcium continues to be deposited on the egg shells, leading to a thickened and rough surface, rather like that of a golf ball. The eggs will eventually get so large that the tortoise cannot pass them, requiring invasive veterinary intervention.

The female tortoise will choose her nesting area carefully. Once she has laid her precious eggs, she will have no further contact with them, so she needs to ensure that she gives the eggs the best possible chance of hatching. The eggs need to incubate at a certain temperature and humidity to allow them to develop, and the hatchlings need to be able to dig their way out of the nest

once they emerge from the egg, so location, temperature and consistency of the soil are all important. In the wild the favoured nesting site would be on a south-facing slope where the sun warms the soil, and drainage is good, and the substrate is light and sandy, but often in an area with a lot of plant roots.



Sites are likely to be rejected if the soil is cold or waterlogged, heavy clay, very hard, or stony, or too sandy, which results in the nest collapsing inwards as she digs. The tortoise herself also needs to be warm to allow her to dig her nest and lay her eggs.

Creating an Artificial Nesting Site Outside

If you are not lucky enough to have the perfect spot in your garden, or if it is the wrong time of year to lay eggs outdoors, you can create a suitable nesting site for your tortoise. If you have a suitable outdoor area, but the weather and the substrate are cold, you may be able to rig up a basking lamp over the favoured area. Please ensure that the lamp is fixed securely, and that you use electrical items suitable for outdoor use. Alternatively, depending on the weather, a cold frame or similar may warm the ground sufficiently acting as a mini solar panel. The tortoise will need to be thoroughly warm too, so make sure that she has access to a basking lamp before venturing outside.



Inside

If an indoor nesting site is needed, there are several factors to take into consideration:-

- Temperature
- Temperature of substrate

Slope
 Depth of substrate
 Consistency of substrate

If you have a greenhouse with a soil base, you can easily create an artificial nesting site by making a mound of suitable soil under a basking lamp. If this is not possible, depending on the size of the tortoise, you can either use wood, breeze blocks or bricks etc. to section off an area which you can fill with soil. For smaller tortoises, a large plastic storage box or similar can be used, with a ramp for access.



The soil does need to be roughly twice the plastron length of the tortoise in depth: if it is too shallow and she hits the base when digging her nest, she will abandon it. The soil enclosure should be sited under a basking lamp to warm the substrate and the tortoise. You can use soil from the garden, as long as it is reasonably light and sandy, preferably with some plant roots running through it to help hold it together. A jug of warm water poured over the soil will often encourage a reluctant nester.



Egg Retention and Induction

There are occasions when despite having access to a suitable area, the female will not lay her eggs, and in these cases, the eggs may need to be induced by your vet. The tortoise may also suddenly no longer appear gravid,



despite the fact that no eggs have been laid, but will have trouble using her back legs, and in these cases a visit to the vet is definitely needed.

The vet will confirm by X-ray whether eggs are present, and if so, the quantity, size and position of the eggs, and whether the eggs are 'normal' or have thickened, rough shells due to retention. If the vet decides to induce the eggs, this is a relatively simple procedure consisting of injections of oxytocin and calcium. The tortoise should be kept warm, and will normally produce the eggs within a few hours of the injection. The tortoise will not normally dig a nest if labour has been induced, and care should be taken to check that all the eggs are passed. After the eggs have been successfully produced, you may notice that the female continues to exhibit gravid behaviour. This is due to the continuing presence of the pregnancy hormones, and will gradually stop.

You should never attempt to hibernate a female tortoise that you suspect may be gravid: either delay hibernation and provide a nesting site and encourage her to lay them naturally, or if this is not successful, consult your vet.