Respiratory conditions in tortoises

Mammals, lizards and snakes have ribs, whereas the tortoise’s ribs fused millions of years ago to make his shell. A tortoise cannot move its shell to breathe, but has developed a clever way of breathing.

How do tortoises breathe?

Inside the bodies of mammals there is a big sheet of muscle called the diaphragm; this separates the chest, where the lungs are situated, and the abdomen where the stomach and intestines are. This muscle moves in and out all the time. Instead of a diaphragm, your tortoise has a pseudodiaphragm; this isn’t a muscle, it’s a large sheet of tissue attached to the front and back legs. In order to breathe, your tortoise has to pull his legs and his head out very slightly... watch him and you will see him breathe! It is also important to be aware of his normal breathing level is so you can pick up on any labored breathing.

Can tortoises cough?

No, tortoises are unable to cough.

This can be a problem because if they get a build-up of fluid in their lungs, they are unable to clear it by coughing. This can affect breathing and cause infections so ensure if you see labored breathing to take your tortoise to the veterinary practice.

Tortoises have huge spongy lungs that fill up a large part of the space in the shell. The wind pipe (trachea) splits into the bronchii very soon after leaving the back of the throat which allows the tortoise to pull his head right back into his shell. This is usually a defence mechanism. The neck is also S-shaped, and without this early split in his windpipe he would not be able to breathe when he draws back into his shell to hide.
Do tortoises get respiratory disease?

A runny nose (upper respiratory tract disease) is very common in tortoises.

This can sometimes be caused by a piece of grass or hay becoming stuck inside the nose, but it can also be caused by bacterial and viral infections. A respiratory infection can make your tortoise very unwell.

It is important that different tortoises are not mixed; special consideration should be taken before you consider looking after someone else’s tortoise.

Alternatively, if you are going away on holiday its important you have someone caring for your tortoise who has the knowledge and experience. Try to find a carer that will come to your house to care for your tortoise or take your tortoises whole vivarium to their tortoise free house. Good hygiene should ways be practiced when handling different tortoises and also to wash your hands in between handling.

Keeping your tortoise at the correct temperature helps to ensure that all his organs are working properly, and that the immune system remains healthy. A balanced diet also helps to fight off infection. Your tortoise should also be healthy before hibernation.

Respiratory disease could mean a visit to the veterinary practice; serious infections may need antibiotics or a feeding tube may need to be fitted.

What about pneumonia?

Pneumonia is inflammation and infection of the lungs. This condition is common in tortoises and often develops due to poor housing. Ensure your tortoises vivarium is at the correct temperature and kept at the correct humidity. The vivarium should have a warmer and a cooler end to allow your tortoise to control his temperature. Ensure you are feeding your tortoise a good balanced diet which helps to protect the immune system. Practice good hygiene.

Serious lung infections can cause the tortoise to stretch their neck and open their mouth,
gasping for air. This can affect breathing and cause infections. If you see labored breathing immediately take your tortoise to the veterinary practice.

Hibernation uses up a lot of nutrients and infections are common after hibernation. If your tortoise is showing signs of illness, then you must take him to the veterinary practice. Pneumonia can be very difficult to treat and sometimes an operation is needed to treat the lung infection.

It is important you are aware of your tortoise’s normal activity level. Most tortoises when ill become very quiet and subdued.