



# Horse Breather

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## “My horse’s breathing is fast / heavy”

One of the most common queries to Equine Breathing is “Why is my horse’s breathing heavy, (or fast, hard, loud, rapid, slow, shallow, deep, noisy, out of breath etc)?”

These adjectives all describe breathing that is excessive. The amount of air taken in to the lungs is too much, whether the rate of breathing is fast or slow. Over breathing lowers carbon dioxide levels which causes the airways to constrict, making the breathing noisy and more difficult.



### So what causes this over breathing?

The short answer is stress. One response by the body to stress is increased adrenaline production. Adrenaline causes an increase in the amount of air breathed. This is actually a beneficial evolutionary design that enables animals to respond to stress by ‘flight or fight’. In natural circumstances the body would do a short lived burst of activity resulting in resolution of the stressful situation for example galloping off and escaping from predator.

But if the stress is prolonged and ongoing, the adrenaline and therefore breathing remain at a higher level and become chronic especially if the horse’s natural flight response is prohibited (by stabling, enclosures etc).

Most owners go to great lengths to reduce stress from their horse’s lives but unfortunately many causes of stress are not recognised and therefore not addressed.

For example, horses have evolved over 50 million years as prey animals and their physiology and anatomy is designed for a life of continuous movement and trickle feeding (grazing). Physiological stress results when the horse is kept in conditions such as stables that do not suit these physiological needs.

Horses also evolved as herd animals with strong and complex social interaction that needs physical proximity and body language – just seeing or hearing other horses does not fulfil this need. Prohibition of social interaction causes emotional stress.

So restricting a horse’s natural movement, social interaction and natural grazing pattern by stabling, lone turn out etc results in stress. It may be a low level stress compared to acute fear of a specific situation but it is insidious because it is ongoing and so the breathing doesn’t get a chance to recover.

Horses, like other animals, are good at coping with stress and many horses seemingly cope quite well with a stabled lifestyle (although I believe that if measured their breathing would be above normal). But some horses develop ailments related to over breathing such as head shaking, COPD, sweet itch, lethargy, behavioural problems etc.

### Why did symptoms develop after an injury or illness?

I am often told that a horse has developed bad breathing, chronic ailments or behavioural problems after an injury or illness. This makes sense because the enforced inactivity (such as being off work or on box rest) imposed for the treatment period is detrimental to the breathing.

The more a horse over breathes, the more carbon dioxide they lose. Carbon dioxide is one of the body's main regulators and if levels in the body go down it has significant detrimental effects. The body produces carbon dioxide when it works so if movement and exercise are restricted for example by box rest, less carbon dioxide is produced to offset the increased loss by the over breathing. Levels go down to a point where the physiology is so compromised that the horse develops symptoms.

### **Why is my horse's breathing so noisy?**

One of the many important functions of carbon dioxide is that it enables muscles to relax. If carbon dioxide levels get low through over breathing, the smooth muscles round the airways constrict, making the airways narrower. This makes it more difficult for air to pass through and the resistance makes it noisy.

This physiological response may account for why so many owners report that the vet has scoped their horse but found no obvious blockage responsible for the difficulty in breathing.

In some cases there is mucus in the airways which adds to the noise of the breathing.

Equine Breathing reduces the horse's breathing which reduces the loss of carbon dioxide, allowing levels to build enough to allow muscles to relax and then the airways open and breathing is easier.

At the same time, reducing the breathing enables the body to utilise MORE oxygen. To find out how this works see the 'How does it work?' page on the Equine Breathing website.

These two effects would explain why Equine Breathing is so relaxing for horses; it enables physical relaxation of muscles and it provides the horse with more oxygen for less breathing effort. On top of that, reduced breathing results in a lowering of adrenaline production which allows the horse to go into a calmer state.

Unfortunately it seems that most horses these days tend to over breathe so many of us are not familiar with normal breathing. The horse's breathing can increase to the point where it is blatantly noisy, fast, heavy, difficult etc before the owner realises anything is wrong.

But it is easy to recognise over breathing **before** it becomes this bad just looking at the nostrils. In horses that over breathe you can see the nostril move or flare with each breath and the breath is audible when the horse is at rest. In addition the nostrils are a wide and open shape and may have thickened edges.

In a horse with normal breathing the nostril is slit like nostril with no movement during the in or out breath and no audible sound of breathing.

### **What to do if your horse's breathing is fast / heavy, (loud, deep, noisy, rapid etc)**

Fortunately Equine Breathing is able to train the horse to reverse the over breathing.

Equine Breathing is easy to do. The Equine Breathing website has free instructions on how to do One nostril, or 1N so anyone can try it for themselves.



Horse with no 'recognised' breathing symptoms but nostril shape indicates over breathing

A more normal slit like nostril

