Equine hearing senses

We're all familiar with the feeling of our horse's ears perking up when they catch something that's unusual. Our expert, Sophie Wilkinson from Fellowes Farm Equine Clinic, tells us more.

Your horse's hearing is finely tuned to detect even the smallest sound made by approaching predators, which can explain how they react to certain noises. Sophie Wilkinson from Fellowes Farm Equine Clinic tells us more.

The equine ear

The equine ear can be divided into three parts: the outer ear, middle ear, and inner ear.

The pinna is the main part of the outer ear and consists of cartilage covered with a thin layer of skin. It is specially shaped to capture sound waves, which are then funnelled into the ear canal.

The ear canal is a narrow, buried structure that amplifies sounds before they reach the eardrum.

The eardrum (tympanic membrane) is a thin membrane that separates the outer ear and the middle ear. It vibrates as sound waves move over it.

On the other side of the eardrum is the middle ear (tympanic cavity). This air-filled cavity contains three tiny bones: the hammer, anvil, and stirrup. One end of the hammer is attached to the eardrum, then the bone is attached to and, with the stirrup at the end of the chain, attached to a membrane called the oval window.

DID YOU KNOW?
Money in the middle ear: The middle ear is filled with air to allow for the transmission of sound waves, while the oval window is a membrane that allows sound to pass from the middle ear to the inner ear.

The inner ear contains the cochlea, which is a snare in a shell that moves fluid. These vibrations travel through the middle ear, where the movement in the fluid stimulates tiny hair cells within the cochlea that create electrical signals. These signals are interpreted as sound.

Two tubes connect the cavity in the middle ear to the throat, called the eustachian tubes. These tubes allow the pressure in the middle ear to be adjusted so there is equal pressure on either side of the eardrum, which allows it to vibrate effectively.

Each ear has 10 muscles and is able to rotate 180 degrees

Special features

Your horse's ears have several special features that enable them to effectively collect sounds...

- Their large cup shape makes them like a radar, which enables him to detect even soft, faint noises.
- They are able to rotate 180 degrees, so he is able to hear all around him without moving his body.
- Each ear contains 10 muscles that enable them to move in this way, whereas humans only have three.
- Each ear can be moved independently so your horse can collect sounds from different directions at the same time.
- When your horse hears a sound, his ears will automatically flick towards it so he can hear it better.

DID YOU KNOW?

Your horse can project his ears from loud sounds by laying them flat back.
Horses are particularly sensitive to the high-pitched squeaks and cracks associated with the stealthy approach of a predator.

Desensitising to sound
Some horses are more sensitive to sound than others and while some are on high alert after hearing even relatively everyday noises, others simply aren’t that bothered, even by loud, more unusual ones. If your horse is a more sensitive type, exposing him to new sounds in a safe and familiar environment is the best way to teach him to accept them. Rewarding him, typically with food, will help him associate the sound with something pleasant.

When you know sudden noises are likely to be a problem, such as a thunderstorm brewing or a local fireworks display, cotton wool or equine earplugs can help to muffle sounds and make your horse feel less stressed.

DID YOU KNOW?
It is thought that horses are more spooky when it’s windy because the wind distorts sounds and prevents them hearing clearly, and it also carries sounds that the horse is unable to pinpoint the source of.

DID YOU KNOW?
Horses hear better than people and are able to detect sounds at both higher and lower frequencies. They hear in the range of 14 Hz to 25 kHz, whereas humans hear in the range of 20 Hz to 20 kHz. Horses are also particularly sensitive to the high-pitched squeaks or cracks associated with the stealthy approach of a predator.

Keep Condition and Stay Cool

Reasons to feed TopSpec Cool Balancer
1. Promotes condition and topline
2. ‘Non-Heating’ and low in sugar and starch
3. Low feeding rate – just 2 mugs per day for a 500kg horse
4. Very palatable for fussy feeders
5. Can be fed alone or with other feed if more calories or energy for work is needed
6. High levels of a pure protected yeast to support a healthy digestive system
7. Includes vitamins and minerals
8. Vitamin C for lung health, important for stalled horses

*Available from participating retailers throughout February and March, and whilst stocks last.

Typical feed regime for a 15.2hh horse (500kg) in light to medium work:
As a good quality hay or topdressing, plus
1. 1/2 mug per day of TopSpec Cool Balancer
2. Plus two feeds per day – each consisting of:
   • 2 x 1/2 mugs of food (see chart)
   • 1 x 1/2 mug of TopSpec Supplements (TopSpec Equine Care, TopSpec Digestive Aid, TopSpec Hot Weather Care)

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