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## EPISTAXIS

### ***What is epistaxis?***

Epistaxis means simply “bleeding from the nose”. The term can therefore cover anything from a tiny trickle down one nostril to a heavy gushing from both nostrils. Blood which appears at the nostril can originate from anywhere in the upper or lower respiratory tract including the sinuses or other closely related structures of the head. External examination alone might not reveal the cause.

### ***What causes epistaxis?***

The most common cause of epistaxis in the horse is trauma to the head. Blunt trauma, such as knocking the head on a stable door, or a kick or fall can cause hemorrhage into a sinus, which then drains via the nostril(s). There may be a related fracture of the skull bones or some soft tissue swelling of the injured area. Bleeding is often mild but can be marked and usually appears worse when the horse lowers its head as this encourages drainage of the sinus of accumulated blood and further hemorrhage. Occasionally sinusitis (infection in the sinus) can cause epistaxis where a large blood vessel is eroded, but in such cases there is usually some purulent (pus like) material seen as well as blood. Damage to or abscesses in the lining of the nostrils, nasal cavities and pharynx can also result in blood at one or both nostrils. Foreign bodies such as twigs or pieces of wood can be picked up in hay or enter the nostrils while grazing. Injury to blood vessels by foreign bodies can cause hemorrhage. Less often, tumors occur, particularly in the very upper regions of the nasal passages (e.g. ethmoid hematoma or squamous cell carcinoma). These can cause large hemorrhages at variable intervals. Guttural pouch mycosis, where a fungal infection attacks one or both of the guttural pouches (pocket-like extensions of the inner ear canal which open into the pharynx) occasionally causes sudden and life-threatening hemorrhage. The fungus damages and erodes the wall of the artery (a branch of the internal carotid artery) that passes along the wall of the pouch, resulting in severe hemorrhage. It has been known for affected horses to be found dead in a pool of blood.



**Bleeding from the  
nose  
(Epistaxis)**

Exercise Induced Pulmonary Hemorrhage (EIPH) is a common condition that occurs in performance horses while at fast exercise. While EIPH often goes undetected, it can result in epistaxis. Hemorrhage is caused by rupture of capillaries in the lung due to the enormous differences in pressure that occur there during strenuous exercise. In most cases, the hemorrhage, although adversely affecting athletic performance, causes no illness. More severe EIPH may result from rupture of larger vessels and this may be fatal. EIPH is often diagnosed and monitored by regular endoscopic exam.

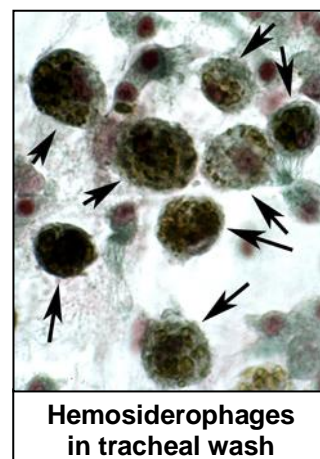
### ***How are epistaxis and its causes diagnosed?***

Epistaxis is easy to diagnose when blood is seen at one or both nostrils. Immediate hemorrhage is bright red whereas older hemorrhage is dark red or brown. Establishing the cause

can be more difficult. If there is evidence of trauma to the face, then further investigation may be unnecessary, although radiographic examinations may help to find or rule out fractures. Radiographic examinations can also help demonstrate fluid (including pus and/or blood) in the sinuses, displacement of soft tissue structures by foreign bodies, or abscesses or tumors. A thorough endoscopic examination of the upper and lower respiratory tract will usually discover the source of the bleeding, but occasionally there can be so much blood that it may not be possible. Where hemorrhage occurs in the sinuses there may only be signs of blood at or near a sinus opening, during endoscopic examination. Traumatic injury or foreign bodies can usually be detected endoscopically as can blood in the trachea associated with EIPH. Diagnosis of guttural pouch mycosis requires passing the scope into the guttural pouch. Suspected cases usually require referral to a surgical for treatment.

### ***How is epistaxis treated?***

An accurate diagnosis of the cause of the hemorrhage is a prerequisite for appropriate treatment. Simple sinus hemorrhage, following minor trauma, will resolve with rest and time. The horse should receive antibiotics for several days as blood is an excellent medium for bacterial growth and secondary sinusitis may develop. Sinusitis sometimes responds to antibiotic treatment alone but occasionally it is necessary to flush the sinus contents into the pharynx down the nose through a small hole drilled into the appropriate sinus. In severe and chronic sinusitis cases, radical surgery may be required to scrape out (curette) infected or cancerous tissue. Foreign bodies must be removed and this is often possible via an endoscope. Guttural pouch mycosis requires surgical treatment to tie off the damaged artery and local flushing of the infected pouch with appropriate antifungal medication. Carotid ligation surgery may be risky, as the patient has often lost a large amount of blood. Ethmoid hematoma cases may also lose large amounts of blood before and during surgical treatment. These cases usually need repeated surgical or laser treatment to remove the mass and, in spite of treatment, they often recur.



EIPH has no specific treatment though there are numerous products on the market claimed to help. 60% of racing Thoroughbreds suffer from EIPH and many still win races. Diuretic medication and/or nasal dilator strips are the only methods that have been scientifically proven to reduce the severity of EIPH. Some horses respond to rest.

### ***Is epistaxis an emergency?***

If the amount of bleeding is small and stops quite quickly, the horse does not appear unwell and there is no other evidence of injury, it is not unreasonable to monitor the horse closely and call a veterinarian. The horse should be kept quiet and fed from the floor until there is no evidence of blood or brownish discharge from the nose. If, however, there is a more significant bleed, if the bleeding is recurrent or persistent or if there is obvious related damage or illness, you should call your veterinarian immediately so the cause of hemorrhage can be determined and treated appropriately.

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