Purpura hemorrhagica is due to a vasculitis (inflammation of the blood vessels) that results from an inappropriate response of the body's immune system. Traditionally, cases of purpura hemorrhagica are associated with previous bouts of strangles. Unlike strangles, purpura is not infective; horses cannot catch purpura from other horses. Cases of purpura have been reported to be associated with other upper respiratory tract bacterial and viral infections.

In cases of purpura, the immune system damages vessel walls, causing them to become leaky. Blood components leak into the tissues, resulting in swelling. The head, legs and underbelly of the horse are most often affected. Hemorrhage into the tissues may occur and may be visible as areas of red spotting on the gums and other mucous membranes. Serum may begin to seep from the skin and, in severe cases, the skin may die and slough off, exposing the tissues beneath. Purpura is not limited to the skin. The effects extend to wherever blood vessels run, including the lungs, muscles and the kidneys. This body wide involvement can lead to other clinical signs such as lameness, laminitis, colic, weight loss, and neurologic signs.

If a horse has recently had a respiratory tract infection or been recently vaccinated for strangles and signs of purpura are observed, contact a veterinarian. A veterinarian may be able to make a diagnosis based on the history and examination findings. Blood can be checked for high levels of antibodies to *Streptococcus equi* (the strangles bacteria) while the skin, via a biopsy, can be checked for signs of vasculitis.

Treatment involves dampening the immune response and removing the inciting cause. Horses are usually started on dexamethasone, a corticosteroid, which works to suppress the immune reaction. In addition, the horses are often put on antibiotics to eliminate any underlying respiratory infections and to prevent further infections while they are undergoing immunosuppressive treatment.
Purpura hemorrhagica is difficult to predict and prevent. If a horse has experienced a reaction to the strangles vaccine, a veterinarian may recommend the horse not be administered that vaccine again, at least without further testing. Research has found that horses that have high serum levels of antibodies to *Streptococcus equi* may be at increased risk of developing purpura hemorrhagica. High levels of antibodies are particularly likely when horses have been exposed to strangles and have been vaccinated.

Outcomes of purpura hemorrhagic vary wildly. Many times the disease is mild and horses recover well. Other times, horses are severely affected and may die or are euthanized. Early recognition and treatment of purpura is crucial for a positive outcome.