

IS YOUR HORSE'S AIR SAFE TO BREATHE?

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A chronic hacking cough, decreased exercise tolerance and increased effort in breathing – do any of these clinical signs of respiratory disease sound familiar? And then the unwelcome news – your horse is suffering from Small Airway Inflammatory Disease (SAID), the equine equivalent of human asthma; also known as Chronic Obstructive Respiratory Disease (COPD), or in layman's terms, “the Heaves”

Horses, by nature of their habitat and diet, are at high risk of exposure to environmental allergens, in particular minute dust particles which may predispose to small airway inflammatory disease (SAID). An “allergen”, by definition, is any substance capable of inducing an allergic or hypersensitivity reaction in the body. With SAID, this reaction involves narrowing of the small airways in the lungs and inflammation of the lung tissue where oxygen exchange occurs. The result is reduced intake of air, reduced transfer of oxygen from the lungs to the blood stream and hence reduced exercise tolerance and performance on the horse's behalf. In extreme cases, substantial effort is required to breathe, even at rest, characterized by increased abdominal effort as the horse tries to force air through its lungs by actively contracting and relaxing its abdominal muscles – the classic “heavy” horse.

In animal housing, 70%-90% of the dust is organic in nature, meaning that it is biologically active and can induce an inflammatory reaction in the respiratory system. Included in this organic barn dust are particles of feed such as grain and hay chaff, dried fecal material, hair and skin cells, pollen, insect parts, moulds, fungi, viruses and bacteria; all of which have the potential to act as allergens in stimulating a hypersensitivity reaction in the horse's respiratory system. Our job, as horse owners, is to recognize this danger and do our best to manage our horses' environment to reduce the level of exposure to “organic dust” and hence the risk of SAID.

Let's face it. To a great extent, SAID is a man-made disease; a product of housing horses where ventilation may not be adequate, bedding and feed may be dusty and the feeding of preserved roughage, namely hay, is a mainstay of our horses' diet. While our intentions are honourable, we often fail to recognize that, in fact, we may inadvertently be predisposing our horses to SAID. Do horses need to live indoors? No! With proper shelter from environmental elements such as wind, rain, snow and sun (a three-sided run-in shed works well), a continuous source of fresh water, sufficient feed intake to generate body heat and maintain body condition, and blanketing, if required, the majority of horses will happily survive outdoors year round. In countries where horses are left outdoors and where hay is not a mainstay of their diet, the incidence of respiratory disease drops dramatically. A major predisposing factor in performance decline or even the eventual inability to perform at all, relates to how we keep horses. Much of this can be attributed to poor ventilation in horse barns. To compound the issue, SAID is not the only type of respiratory disease related to poor barn ventilation. Horses are extremely sensitive to

drafts and high humidity, commonly found in older, poorly ventilated barns. Drafts and high humidity are both known to predispose horses to viral and bacterial respiratory infections, especially in young foals. Does this mean that all horses housed indoors are destined to develop respiratory disease? Absolutely not! By recognizing problem areas and taking proactive preventive measures; we, as horse owners, can ensure that our horses receive proper air quality in their housing. For information on how horse owners can improve the air quality in older barns, please see “Improving Air Quality in Older Barns.