

Stall Cleaning Impacts Stable Air Quality in New Study

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A change in your approach to horse stall cleaning might result in improved air quality in the stable, report researchers from Georg-August University of Göttingen, in Germany.

Researchers measured the air quality in the stable with different bedding types (wheat straw, wood shavings and straw pellets) and mucking out regimens. The experiments were carried out in an enclosed, roofed stable with five box stalls housing two warmblood mares with foals and two warmblood riding mares.

They found the use of wheat straw reduced the amount of ammonia in the air compared to wood shavings and straw pellets, but wood shavings and straw pellets kicked up fewer particles.

In this study, waiting two weeks before mucking out did not increase ammonia concentrations in the stable. "On the contrary, this mucking regiment offered some advantages by lowering particle and gas generation," said study co-author Kathrin Fleming, PhD. "But it is important to maintain stable hygiene by refilling with new straw every day."

Previous research has shown that even healthy horses housed in a conventional stable environment can show evidence of airway inflammation as a result of breathing in gases and particle matter.

"A constant exposure to excess dust is highly associated with chronic airway diseases like (recurrent airway obstruction). In addition, acute respiratory diseases caused by infectious agents may be exacerbated and prolonged by permanent dust inhalation," Fleming said.

Stable air quality is influenced by other factors, she said, including air temperature, humidity, stable size and height, as well as air movement, so they would also have to be considered in any cleaning regimen.

The report, "Gas and particle concentrations in horse stables with individual boxes as a function of the bedding material and the mucking regime," was published in July online ahead of print in the *Journal of Animal Science*. [The abstract is available on PubMed](#)

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Readers are cautioned to seek the advice of a qualified veterinarian before proceeding with any diagnosis, treatment, or therapy.

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