

newsletter

APRIL 2016

BLENDING NATURE AND TECHNOLOGY



in this month's issue

1. Things you should and should not put on a horse's wound
2. Surviving the price changes

THINGS YOU SHOULD AND SHOULD NOT PUT ON A HORSE'S WOUND

Horse owners and veterinarians have been treating equine wounds for centuries. After all, horses are unabashedly practiced at the art of sustaining wounds. Over the years horse owners have tried many different wound ointments and salves, cleansers and dressings, but not all of them are backed by evidence of safety and/or efficacy.

So, Dean Hendrickson, DVM, MS, Dipl. ACVS, professor of equine surgery at Colorado State University, went back to basics, describing effective and ineffective wound-cleaning agents to an audience of veterinarians at the 2015 Annual American Association of Equine Practitioners Convention.

Although intentions are good, "most wound-cleaning agents and techniques will cause chemical or mechanical trauma to the wound bed," he said. "Weigh the benefits of cleaning the wound against the trauma that agent will cause."

In other words, ask yourself: Is that cleaning agent ultimately going to speed up or retard wound-healing?

Before applying anything, however, clip the hair around the wound to prevent it from contaminating the area. Then, use sterile gauze to very gently scrub the wound. "If gentle scrubbing doesn't work, use a different technique," said Hendrickson. "Don't scrub harder."

One approach is saline lavage (cleaning or rinsing, using water or a medicated solution) to remove surface debris—"One of the best things we do," he said. Again, don't use much pressure; a gentle showerhead-type sprayer works well.

Hendrickson then delved into the common topical treatments we apply to wounds and which ones are safe to use.

Saline

Saline is one of the most simple, yet effective, wound-cleaning agents. Hypertonic saline (containing more sodium chloride than is found within the body), in particular, is very effective for debriding (removing surrounding dead, damaged, or infected tissue) while lavaging and for reducing bacteria in the wound. It does have the ability to damage normal cells, as well, he cautioned, so use it only in infected wounds.

Povidone Iodine (PI)

While povidone iodine has been used extensively in equine wound care, Hendrickson cited several studies showing that it causes tissue necrosis, impairs healing, and leads to increased infection. "Consequently, PI should only be used around the wound over intact skin and never in the wound itself," he said.

Chlorhexidine

Hendrickson explained that chlorhexidine has low systemic toxicity, but studies have shown little evidence of its safety and efficacy reducing bacterial numbers without causing wound trauma. It also causes tissue necrosis and bacteria regrowth, he said.

Hydrogen Peroxide

Popular for its effervescent activity, which can convince the user it's thoroughly working, hydrogen peroxide has few beneficial or negative effects. "Its antimicrobial properties are probably greatly overestimated," said Hendrickson.

Acetic Acid (Vinegar)

"There is science behind using common distilled vinegar, even though most people don't consider it," he said. "Its low pH is not compatible with certain bacteria like *Pseudomonas*," meaning it can be effective against this common disease-causing pathogen.

He suggested using this agent as a 15-minute gauze soak or compress per day and then rinsing with saline.

Surfactant-Based Cleansers

Surfactant-based wound cleansers work by reducing the surface tension around the wound, allowing for the removal of fluid, cells and other substances that naturally seep from the wound area without the need to scrub the wound. This leaves healthy tissues to continue their good work of healing the wound. These cleansers are minimally toxic and irritating, but not necessarily nontoxic. "They are very effective on minimally contaminated wounds and should be applied, allowed to sit for 1 to 2 minutes, rinsed off, and reapplied as necessary," he said.

Topical Antibiotics

Drugs in this class are effective at reducing bacterial numbers, but their overuse contributes to antibiotic-resistant microbes. Hendrickson suggests using them for only one to two weeks after selecting one to which the infecting pathogen has confirmed sensitivity. Common topical antibiotics for wound care include:

- **Silver** Several studies have shown the efficacy of this antimicrobial agent. It is most commonly found in the form of silver sulfadiazine cream, but is also available in a dressing form. According to Hendrickson, silver also contributes to less exuberant granulation tissue than other ointment options.
- **Nitrofurazone** Hendrickson emphasized the lack of evidence of any positive effects of this common topical antibiotic and felt that, in fact, it might even retard healing. "Don't put it in open wounds," he said bluntly.
- **Triple Antibiotic Ointment** This product, used since the 1950s, still has good bacterial susceptibility and many studies (although primarily in humans) have confirmed its efficacy. "Along with silver, it's one of the best topical agents available to use in a wound," he said.
- **Honey** Honey derived from plants like the Manuka bush has an antimicrobial effect and can be used with great effect. Remember, however, that not all honeys are the same and to apply only ones with no added extras.

Dressings

Debridement dressings are used to remove bacteria and dead tissue from the wound. These dressings can be traumatic to the wound area, and should only be used when there is infected or dead tissue in the wound. One good example of a debridement dressing is a hypertonic saline dressing. This dressing is a very concentrated salt solution that kills bacteria and removes diseased tissue. Once the wound has been cleared of dead and infected tissue, the debridement dressing should be discontinued in favor of a different type of dressing.

Moistening dressings are used in wounds that have dried out. These dressings supply moisture to the wound through a mixture of water and glycerin. They are very effective in providing moisture in dry wounds; however, they completely seal the wound and so should only be used in dry wounds. Once the wound has been moistened, they should be discontinued in favour of a different type of dressing.

Granulation and wound contraction dressings are used to encourage healing granulation tissue formation, and to stimulate the wound to close. A good example of this type of dressing is the calcium alginate dressings. These dressings are made from a derivative of seaweed and create a mild inflammatory response, sending infection fighting cells to the area that will encourage a healthy bed of granulation tissue. Once the wound has enough granulation tissue present, they should be discontinued in favour of an epithelialization dressing.



Calcium Alginate dressing before applying:

Epithelialization dressings are designed to help normal healthy skin tissues form over the wound. These dressings increase the surface temperature of the wound by 1-2 degrees which encourages the skin cells to migrate across the wound.

Veterinarians or veterinary supply wholesalers can assist in selecting the right product for a horse's wound.

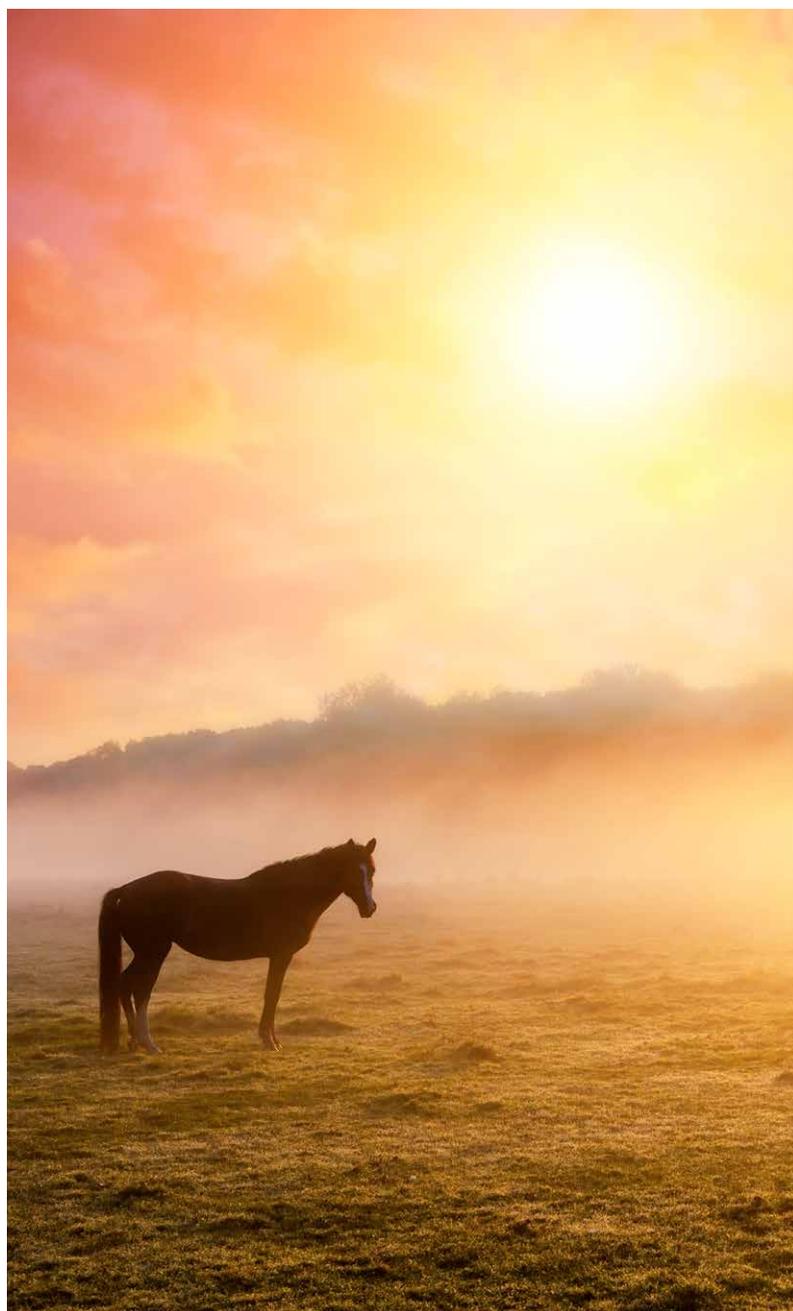
Take-Home Message

In summary, Hendrickson encourages horse owners to forget about "magical cleansers" purported to heal wounds and rather to take a line from human medicine: "Don't do to a wound what you wouldn't do to your own eye."

Saline, surfactant-based wound cleansers, silver, and triple antibiotic ointment are of the few treatments that should be applied to wounds.

By Alexandra Beckstett, The Horse Managing Editor

<http://www.thehorse.com/articles/37165/things-you-should-and-should-not-put-on-a-horses-wound>



TESTIMONIALS

Dear Equus

I just wanted to thank you for your help with my horse Brandbach Danseur.

Helen Gilfillin in particular has regularly visited with me, checked in to ensure all is ok, helped me reduce Brandbach Danseur's food when he had a break and helped me adjust it back when he went into work again. This hands on service is fantastic.

I use the **Equus All Time Balancer** and **Equus Cool n Perform** and I don't need to feed much at all. When we are leading up towards big shows **Equus Race N Replace** plays a important role, and we adjust the **Cool n Perform** depending on his condition.

I can honestly my 15year old horse has never felt or looked better and I have had him since he was 8 years old.

Kind regards

Mariatha (Mickey) van der Merwe



SURVIVING THE PRICE CHANGES

Over the past year many owners have seen the price of feed rise dramatically. But are feed companies taking advantage?

In short, this is not so and feed companies are simply trying to produce the same quality feed without crippling both the consumer and the business.

But I don't understand why?

In the last 12 months, many companies have been overwhelmed by price hikes due to the weak rand and the country's devastating drought. These conditions have now reached a crisis situation and shortages of several raw materials are being experienced countrywide. Some raw materials are not even available locally anymore and companies must now import.

To make matters worse, local suppliers of raw materials are now dictating import parity prices for their products. The maize price and prices for several other raw materials for example have increased by more than 40% since June 2015. Grain SA has predicted that large volumes of maize and other staple grains will have to be imported in the next twelve months to meet local demand. Roughage is very scarce and very expensive. To keep track with this situation and the escalating price of raw materials, animal feed manufacturers have unfortunately had to increase feed prices to above the normal annual adjustment. In 2015, all feed companies had an increase of between 15-18% or R35-R40 per bag.

What does this mean for 2016?

Unfortunately, there will be continuous upward pressure on raw material prices and that means further feed price increases until the drought conditions have abated. However, companies will continuously strive to minimise price increases where possible.

Should I change feed companies?

No, all companies are going to be affected, so irrespective of brand choice, the price will be affected. The way you feed, however, can be adapted:

- Don't cut costs on hay. In the long term restricting a horse's hay will impact on expenditure due to higher vets bills. Drought conditions unfortunately reduce hay supplies, making it difficult for owners to maintain consistent hay supplies. If it is impossible to maintain a consistent hay type, source, and quality, gradually reduce the amount of the original batch and mix it with an increasing amount of the new hay (over three to five days) to ease the transition. When purchasing hay from a new source, always examine it carefully for mould, dust, and weeds. Hay should be the staple of the equine diet and should never fall below 1% of body weight per day. Even if it is not of great nutritional value, it should still be provided.
- Cut the supplements. If supplements are being fed for a specific issue, continue with these. However, adding extras "just because" is not cost effective or necessary for the horse.
- Don't buy cheap. Sourcing the cheapest feed can be counterproductive, and often results in having to feed more to obtain the required results.
- If feeding large amounts of concentrate feed, re-examine the product/brand. If your horse is not looking or performing well, then that product is not working for him. Rather select the correct product than add extras to "make" the feed work.

Written by Hannah Botha (MSc Equine Science), Equus Technical Support



Feeding Advice: 073 423 5491 / 083 998 6824 | Email: info.equus@driehoek.co.za or tech.equus@driehoek.co.za

For an absolutely free consultation with no further obligation contact our professional consultants to schedule a visit to your yard.

Hannah - 073 423 5491 - tech.equus@driehoek.co.za | Helen - 083 998 6824 - helen@driehoek.co.za