

### Horse Owners Introduction to Common Hoof Infections

Hoof infection control is so important in Applied Equine Podiatry that there is a whole section devoted to it in Holistic Equines 'Spectrum of Usability (Recommendations)' form.

The reasons for this can be found by reading the spectrum form but essentially, infection undermines the health and conformation of tissues. In practical terms, infection can reduce spectrum (or ability of the hoof to perform properly), leading to a loss of equilibrium, performance, soundness and ultimately lameness.

Infection can be defined as an invasion and multiplication of microorganisms in body tissues, especially that causing local cellular injury due to competitive metabolism, toxins, intracellular replication, or antigen-antibody response. In the equine hoof, infection is often opportunistic in nature which can be defined as infection by an organism that does not ordinarily cause disease but becomes pathogenic under certain circumstances, (e.g. post trimming whereby hoof wall tubules are undermined and exposed leading to infection where poor environmental stimulus is present).

The equine hoof invariably has on its' surface (and within the external hoof capsule) bacteria and fungi as well as other microorganisms. With a healthy hoof and within a healthy environment, these microorganisms cause no threat, and may even be of benefit to the structures (as the microorganisms in the gut work in harmony or symbiosis with the horse). However, when the environmental stimulus is not appropriate, the microorganisms become out of balance and opportunistic infection can occur. For more information about environmental stimulus, visit the article ['Environment and the Horses Health'](#)

Common external hoof infections seen in the domestic horse are thrush and hoof wall cracks. Poor structures can also cause pockets of infection to occur in the frog and this is most commonly seen with poor internal structures giving rise to weak heels and hoof walls at ground surface where the frog is receiving more stimulus than is healthy.

Infection can also occur within the sensitive structures due to systemic infection or disease elsewhere in the horse (where opportunistic bacteria travel to the peripheral tissues, i.e. the foot) or from bruising and trauma to the inner foot itself via the hoof capsule. This can manifest as an abscess or a less common disease; quitter for example and these diseases will be covered in a separate article.

Hoof wall infection is more common where there is poor metabolism and/or an unhealthy environmental stimulus causing weak hoof wall matrix (blending of inner and outer wall). This leads to weak protein bonds making the inner wall more vulnerable to microorganism invasion and infection. Correct trim method and a more appropriate environmental stimulus (diet, exercise, infection control, etc) and improved metabolic function can correct this.

Ironically, horses undergoing a programme of rehabilitation (barefoot) using AEP can become more susceptible to infection. This is due to the increased proper stimulus and holistic approach (from correct exercise and trim for example); improving blood flow and movement (and therefore heat) in the capsule. Heat brought about by exercise and weak structures created by poor environmental stimulus are unfortunately more susceptible to infection, but without proper exercise, hooves cannot improve (as *correct* pressure via movement is the correct stimulus for correct growth of structures). By following recommendations by your DAEP however, you can avoid any interruption to your horses' rehabilitation and you and your horse can benefit from the improvements that AEP can bring!

Infection from whatever cause is more likely to occur in a horse with less ideal environmental stimulus and where structures in the hoof or foot itself lacks health. For example, a horse with a low health spectrum (below 4/10) will be much more likely to develop thrush in the frog in the winter months if it lives out. But why? It is highly likely that the weak structures present in the external hoof will be less resilient to infection and the wet weather coupled with less ideal stimulus to the internal foot (soft ground, less movement, etc) will make infection more likely. It will also be more difficult to deal with so as always; prevention of infection is better than cure.

When a DAEP (Degreed Applied Equine Podiatrist) completes a Spectrum of Usability, they are rating the structures in the hoof for health and its ability to perform at the recommended level of use expected from the horse. The evaluation also takes into consideration environmental stimulus which has occurred, that which is present and that which *may* occur, and how the horse will respond to it. As AEP is proactive in nature, *and* DAEP's are always looking to protect the horse from harm, it is crucial that susceptibility to infection is both recognised, is properly treated and prevented. At the time of your consult, your DAEP may use products such as Silvetrasol immediately to deal with and control infection, but after that it is down to the owner to follow recommendations supplied by their DAEP to continue improving the health and therefore performance of their horses' hooves.

Appropriate environmental stimulus for the individual horse is the key to the treatment and control of common hoof infections. Holistic Equine will recommend products and give guidance on how to use products. We will also give recommendations on management changes too, such as a change of diet or exercise plan for instance. Sometimes, unhealthy structures in the horses' hoof and infection can be as a result of an underlying disease and if we suspect this is the case we may recommend you seek veterinary advice, as a holistic approach is more effective, humane and cost effective.

The most common products used by Holistic Equine for both the treatment and control of common and mild hoof infections are Silvetrasol, Field Paste, and Arti-mud. These are all inexpensive and totally harmless products and should be on every horse owners tack shelf, whether their horse is barefoot trimmed or shod! They are usually available from [your local DAEP](#), and from [Holistic Equine](#).

[Silvetrasol](#) is a non-necrotizing (safe), antibacterial and antifungal colourless liquid which is supplied in a spray bottle. It is effective on all hoof infections as well as wounds (except in the eye). It can treat and help prevent white line disease, thrush, fungal disease and infection caused by nailing on horse shoes. For the barefoot horse it can also be used to harden soft and vulnerable tissues in the hoof. The frequency of application will depend on your horses' Spectrum. If an infection is present, it can be used twice daily. For healthy hooves at low risk of infection (health Spectrum of 7 and above), we recommend using at least twice weekly as part of your routine hoof care. Silvetrasol should be used prior to the application of other hoof products such as Art-mud and Field Paste and can also be used to disinfect tools and surfaces.

[Field Paste](#) is a lovely smelling, natural product produced and sold by Red Horse Ltd and is also sold by [Holistic Equine](#). It is designed to work on treating current infection and also to help prevent it. As it is a thick paste it can act as a barrier to poor environment when applied to the entire solar surface of the hoof. The domestic horse is frequently exposed to an unhealthy physical environment; poo and urine infected bedding and soil for instance, especially in the winter months. Again, Holistic Equine will recommend you use this product weekly and up to once a day if the horse is at risk of infection, if there is infection present (usually thrush) and in particular in the field kept horse in winter and the stabled horse. Field Paste is also useful when the horse receives infrequent hoof care (such as in breeding stables with many horses) to help prevent infection.

[Arti-mud](#) is also produced by Red Horse Ltd and sold by [Holistic Equine](#) too. It has more clay in it than Field Paste and is better suited to filling cracks, crevices and nail holes. Again, it is used in a similar fashion to Field

Paste but has more 'staying power'. At Fenland Lodge, we use Art-mud after Silvetrasol on all our horses and only need to apply both products twice weekly to keep infection at bay! We find it stays in the collateral grooves and central culcis of the frog very well and the distinctive eucalyptus smell of the Arti-mud can be found when the hooves are picked out. Our horses live in an all weather turnout area with stone, rubber and wood bark surfaces which tends to help prevent infection better than stabling and field turnout in the winter.

We also recommend these products for the shod horse as part of regular hoof care. Why not ask your farrier to apply it after trimming and before the application of the shoe? You can then plug the nail holes with Arti-mud and apply Field Paste to the soles and frog to help prevent infection in these already vulnerable structures. If used regularly it can also help keep the sole and frog hard and help protect it from trauma.

Farriers, natural barefoot trimmers, podiatrists and owners self trimming should use Silvetrasol after every trim, no matter how little hoof wall is removed. Exposed hoof wall tubules are more vulnerable to infection by microorganisms and this can lead to hoof wall cracks and more serious hoof infections. Holistic Equine recommend owners use sanding paper to smooth down the hoof wall every week or so, especially if cracks or chips appear between trims. If Silvetrasol is applied before sanding down the hoof wall, the tubules sanded off will fill in any minute gaps within the matrix of the hoof wall at ground surface and will help deal with any infection far better than without following this practice!

In the horse transitioning from shod to barefoot, these products really come into their own when the hoof is most vulnerable to infection and trauma. Use Silvetrasol all over the hoof and sole daily, followed by Arti-mud in the nail holes and any cracks and crevices including stretched golden (white) lines. Then apply Field paste to the entire solar surface of the hoof including the sole and frog.

The above products have also been used successfully on more serious hoof infections and disease such as abscesses and canker and infections associated with laminitis (and Equine Digital Elastosis/Deformed Hoof Capsule). Within AEP they are often combined with other products aimed at helping deal with infection and poor structures in the foot such as Clean Trax, Hydropathics, Solemate pads and Perfect Hoof Wear. These will be covered in future articles.

If you would like to discuss hoof infection with Holistic Equine or purchase hoof infection control products, visit our website [www.holistichequine.co.uk](http://www.holistichequine.co.uk). Here you can also learn more about AEP and how to book a consult with Beccy.

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