Winter Traction Devices: Get a Grip Before You Slip!

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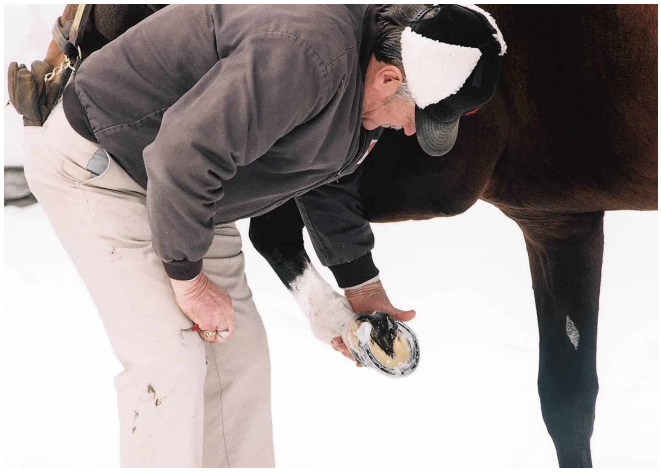

Consult with your farrier before deciding to use traction devices on your horse–chances are good that your mount might not need them at all. | Photo: Anne M. Eberhardt/The Horse

Snow and ice during winter can cause footing problems for horses, especially those which are called upon to do something other than loaf in the pasture or paddock. The problems include snow and ice, which translate into difficulty in maintaining balance on slippery surfaces and possible injury to horse and rider. Horseshoe manufacturers through the years have come up with a variety of traction devices to help solve the problems with ice, snow, and frozen surfaces, making our rides safer.

Traction devices have advanced a good deal in recent years. In days gone by when horses were heavily used in agricultural pursuits and for moving freight in the country and the city, there were, generally speaking, two types of shoes for draft horses of the north. In the summer they were fitted with regular plates, and in the winter they were “sharp shod.” Being sharp shod meant that the draft horses were outfitted with shoes that carried calks at the heels and at the toe.

The calks' purpose, of course, was to provide traction for slippery surfaces–especially ice and frozen ground–because a bare foot or a regular plate wouldn't allow the horse to get the traction he needed.

Some of the same basic principles involved in the design and construction of those shoes are still in vogue today. However, the materials used often are more sophisticated, and perhaps there is more concern about matching a particular traction device to a horse and the discipline with which he is involved. At the same time, there are concerns that traction devices then and now are not foolproof and can cause harm. They could have caused harm to the legs of those early-day draft horses by increasing torque on bones, joints, tendons, and ligaments, and they are capable of causing those same problems in today's pleasure and sport horses. So while the times have changed, the problems haven't.

Decide Carefully

It has been said that adding an iron shoe to a horse's foot with nails causes an insult to the hoof. Adding traction devices to the shoe opens the door for additional insults to other parts of the limb anatomy, such as joints, tendons, and ligaments.

"When a horse sets a foot down," says farrier Frank Clark of Riverton, Wyo., "there is a slight sliding action. With traction devices, that motion is halted, and that can put extra pressure on tendons and ligaments."

Clark received his farrier training at Eastern Farrier School in Virginia and spent four years shoeing horses in Massachusetts before moving to Wyoming. From his experience, he says that some farriers feel the horse needs time to get used to winter traction devices before he experiences snow and ice.

“I know a farrier back East who puts traction devices on his clients’ horses in October so that they have a chance to get used to them on bare ground before winter hits with its ice and snow,” he says.

Many farriers feel that traction devices are misused and overused; it’s very common for owners to severely cut back their riding schedule in winter. And why not? It’s freezing out there!

However, while many owners want to make sure their horses won’t slip on those rare winter rides, the benefit of the added traction on those infrequent rides might be outweighed by the problem of increased torque on the horse’s joints and ligaments from the traction aids. This is bad news, especially for horses that already have lameness problems.

Also, horses can easily stress their joints with additional traction when playing in pasture, and can cause significant damage to their pasturemates should they get into a kicking contest.

The bottom line is that you should consult with your farrier before deciding to use traction devices on your horse–chances are good that your mount might not need them at all.

Digging In

Perhaps one of the most basic shoes that provides traction is the rim shoe, although it has limited value on ice and snow because it doesn’t concentrate the horse’s weight onto a few small points to dig in. However, if the horse is to be ridden or driven on frozen dirt surfaces, the accumulated earth along the rim provides for dirt to dirt contact and provides a form of traction.

If additional traction is needed, Clark’s choice is Borium (a tube metal product), which is welded to the shoe in spots, often at the heel and sometimes at the toe. Borium, he says, is harder than steel and will outwear the shoe. However, he adds, it’s important that the shoe be shaped to the hoof and leveled before the Borium is added.

If it is not, the Borium can be knocked free when the shoe is hammered into shape. In addition, Borium is so hard that it can cause damage to the shaping hammer.

There are some drawbacks to Borium, says Doug Butler, PhD, of Butler Publishing and Farrier Services of LaPorte, Colo. (Before entering private business, Butler taught farrier science at Colorado State University and was coordinator of the equine science department. Today, he is a well-known lecturer on hoof care and shoe making as well as the author of the classic books on farrier science, The Principles of Horseshoeing I and II.) One of the prime drawbacks

of Borium is cost, Butler says.

“Treat Borium like gold,” he advises fellow farriers. “A little goes a long way.”

Another drawback for Borium, in Clark’s opinion, is the damage that can be inflicted if Borium is attached to the rear shoes of a kicker. “In many cases, Borium is used only on the front feet,” he says, “because it can really rip up a horse if there is a kicking match.”

How and when to use Borium depends on the activity in which the horse is engaged. For winter use, Clark recommends spots on the toe and heels.

While Borium can be an excellent traction device, it sometimes also is used to prolong the life of a steel shoe. This, Butler believes, is inappropriate usage because the shoe often wears out next to where the Borium is applied.

“Borium must be applied with judgment,” he says. “It is easily overdone.”

A similar option to Borium is composite rod (such as Drill-tex or Carbraze), which has chunks of composite that tend to give a rougher effect than Borium. Both traction aids are offered with granules sized from one-eighth-inch to table salt size, so farriers can choose the roughness of traction they feel best for each horse.

Winter “Cleats”

An old standby for winter traction is a calk or stud that can either be attached as a permanent part of the shoe or as a temporary traction aid that can be removed as conditions warrant. These come in two varieties–those that are driven in and those that are screwed in.

There are pros and cons for each type. The positive aspect of drive-in studs, says Clark, is that they do not work loose in the shoe. “With each step the horse takes, that stud is held in place.”

Drive-in studs are relatively simple to install–first, a hole of corresponding circumference is drilled into the shoe. Then the stud is driven home with a soft-face hammer. If a hard-face hammer is used, the stud can easily be chipped.

One risk with studs is that they can “bottom out” and come into contact with the horse’s foot. If that happens, the horse can wind up with a sore foot. Mustad Inc., a manufacturer of shoes, nails, and traction devices (among other things), recommends that the farrier “leave a credit card width between the stud and the shoe to avoid the stud being expelled out.”

The negative aspect is that they can't be removed or changed without removing the shoe. Once that is done, the stud can be punched free of the shoe and, if in good condition, the stud can be reused.

The screw-in calk, on the other hand, can be removed while the shoe remains on the foot. A plug that fits flush with the ground surface of the shoe can be screwed into the hole after removing the calk to prevent rust and damage to the threads.

During the summer, Clark says, hunter/ jumper horses often are fitted with this type of calk because field conditions will vary from location to location. The calk that is right for one show might be too long or too short for ground conditions at another. Another advantage of the screw-in calks is that they can be removed while trailering the horse from one location to another.

Many studs and calks are fashioned with a carbide tip that insures long wear. They often can be reused for two or three shoe resets.

Extra-Traction Nails

In the old days, horseshoe nails were used for one thing only, and that was to hold the shoe to the foot. Today, however, nails can also become traction devices.

A variety of nails are available to serve this purpose. Included are pointed nail heads, carbide head nails, nail heads with pins at the center, and nail heads with tube metal (such as Borium) on top. In addition to providing traction, carbide head nails won't wear down as fast as regular nails.

Nails with pins are fashioned by tapping a hole in the nail head and driving the pin flush with or just above the head surface. The nail head wears away with continued use, leaving the harder metal of the pin protruding.

While this might seem like a quick way to add just a little traction to a shoe, these high-traction nails can cause their own set of problems. For one thing, they are usually manufactured with extra-heavy shanks to withstand the stress of added traction without bending. This larger shank makes a larger hole in the hoof wall, which can be bad news for horses with thin, weak walls.

Preventing Snowballing

A problem that can occur when riding in snow is a buildup (or ice ball) in the bottom of the

foot. Before long the horse is tottering along like a little girl in her mother's high heels, and all the traction devices in the world can't help because they don't touch the ground.

Certain devices can prevent this buildup and, at the same time, help increase traction. One of them is a polyurethane rim pad that fits between shoe and hoof.

A full 'snowball' pad covers the entire surface between the shoe and the bottom of the foot. It sports a partial ball worked into the ground surface of the pad, so it flexes both inward as the foot strikes the snow surface and outward as the foot is lifted, effectively clearing the bottom of the foot from snow with each step. | Photo: Erica Larson

Mustad, one manufacturer of rim pads, describes the pad's action this way: "A unique air cushion compresses, then expands to push snow out of the hoof, preventing dangerous snowball buildup and improving winter traction."

Another form of pad, one that Clark favors, is a full "snowball" pad that covers the entire surface between the shoe and the bottom of the foot. It sports a partial ball worked into the ground surface of the pad, so it flexes both inward as the foot strikes the snow surface and outward as the foot is lifted, effectively clearing the bottom of the foot from snow with each step. The pads can be used with a normal plate or with a shoe equipped with a traction device.

Managing Sharp-Footed Horses

Care must be taken when using horses with traction devices, Clark warns. Sudden spins or turns can produce tremendous torque as the traction device anchors the foot to the ground. Thus, if your horse has additional traction on his shoes, avoid making very tight turns with him either under saddle or in hand.

Keep in mind that a horse with additional traction on his shoes can do things he couldn't beforehand, but the rest of him might not be up to it. Even if your horse now has enough traction to climb the Empire State Building, he might not be in shape for it. Nor does additional traction mean that it's okay to ride him for hours along a road or other hard, icy ground just because he won't slip as easily. This invites a whole new set of problems.

Aside from exercise choices, you can minimize your horse's joint and tendon stress by keeping his stall deeply bedded to help his "grabby" shoes turn easily when he moves around. An additional consideration is making sure his lower legs and coronary bands are well wrapped for any transportation–his rough shoes can do quite a bit of damage to the opposite

leg in the close confines of a moving trailer.

Discuss your traction device needs with your farrier. He will need to know what types of activities you will be doing with your horse, how often, and in what conditions. Since there are advantages and disadvantages to each type of traction device, your farrier will be able to give you the best advice on what you should use–and how long you should use it–to keep you safe and your horse healthy.