The Right Shaffle Bit

Which one should you choose for your horse?

Experts help you sort the options

BY PATTISCHOFLER

WHICH ONE? This is merely a sampling of the many types of snaffle bits on the market today



erived from the German word *schnabel* and the Dutch *snavel*, meaning beak, the snaffle is a bit with two rings connected on either side of the mouthpiece, which may be unjointed, single-jointed, or double-jointed.

Modern snaffle bits come in a wide variety of styles, shapes, sizes, and material. Choosing the one that's both comfortable for your horse and legal for use in United States Equestrian Federation (USEF)-licensed/USDF-recognized dressage competition—did you know that plenty of snaffles aren't permitted in dressage?—can be daunting. In all likelihood, someone in your barn owns a bucketful of bits from horses past and present, representing successes and failures, changed philosophies and experimentations.

In this article, we'll help you sort the options and find the best USEF-legal snaffle bit for use at the lower levels (Intro through Fourth) of dressage competition.

Let Your Horse Be Your Guide

In most cases, you don't need x-rays of your horse's mouth to know if a bit is not right. If your horse is not comfortable or in pain, he will let you know. He might draw his neck down to his chest, open his mouth, grasp the bit between the premolar teeth, grind his teeth, pull his tongue over the bit, stick his tongue out, toss his head, tilt his poll, avoid contact with the bit, flex or bend only in one direction, or lean on the bit hard enough to dull the pain. (See "Step 1, Always: Dental Care" on the next page.)

"If I see any of these problems, I need to consider if the horse is trained correctly," says Heidi Chote, of Wilton, CA, a USDF Instructor/Trainer Program faculty member; USDF-certified instructor through Fourth Level; "L" program graduate; and USDF gold, silver, and bronze medalist. "A horse that is not working over his topline properly can appear to have a bitting issue when they are actually training issues."

Let's assume you've ruled out physical or training issues as the source of your horse's apparent dislike for his bit. You've looked at his bridle, and it's comfortable and adjusted correctly (you've consulted your instructor or another reputable professional if you don't know how to check these things). You're left suspecting that the bit itself is to blame. So now it's time to find one that's more to his liking.

Sorting out Snaffles

For starters, know that the bit you choose has to be a snaffle, which is required in USEF/USDF dressage competitions through Fourth Level and permitted in most (but not all) FEI tests at national competitions. (For the purposes of this article,

Step 1, Always: Dental Care

f your horse has always gone well in his bit but suddenly gets fussy in the mouth or exhibits other unexplained resistance, call your veterinarian before you start playing the bit-switch game.

I had a horse that, for no apparent reason, one day began refusing to pick up a canter lead. He wasn't lame. The veterinarian determined that my horse had developed sharp edges on a tooth. One visit from the dentist, and the problem disappeared and never returned.

Always rule out potential mouth issues first. I've known horses whose "bitting issues" were actually pain from cracked molars, dental abscesses, tongue injuries, sinus-cavity infections, and broken jawbones.

-Jennifer Bryant, editor, USDF Connection

we're discussing what the USEF calls "plain snaffle bridles" only, not the bridoons [smaller-ringed snaffle bits] used in the double bridle.) See "Know the Bit Rules" on page 40 for more.

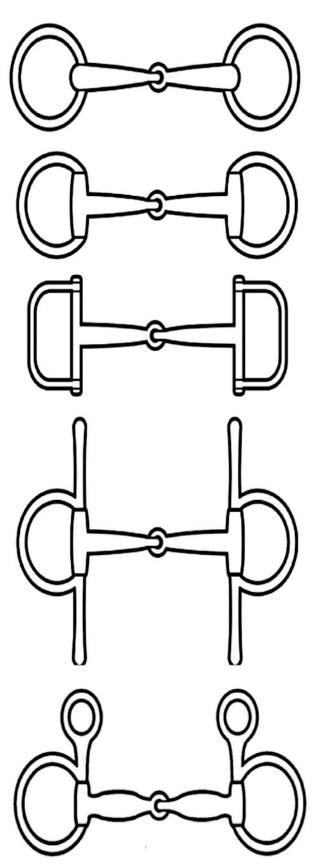
Step 1: Choose a ring style. The rings attach to the reins and the bridle cheekpieces, and their design and action affect the way that the mouthpiece acts on the horse's mouth and (sometimes) his poll. The snaffle-bit rings most commonly used with dressage horses are loose rings and fixed cheeks (eggbutt, D-ring, full cheek, Baucher). (See illustrations at right for depictions of these ring styles.)

The mouthpiece of a loose-ring snaffle encircles, but is not attached to, the bit rings. Likewise, the cheekpieces and reins can rotate freely around the rings. This design, which is the most common in snaffles designed for dressage, allows the bit to move in the horse's mouth and thereby encourages him to mouth the bit while discouraging leaning or locking against the mouthpiece.

The ring diameter itself does not play a major role in the bit's function. Typically any given style of loose-ring snaffle will come in a larger and a smaller ring size. The larger ring is usually used with a snaffle bridle, while the smaller ring often is purchased as a bridoon for use in a double bridle, as the smaller ring won't get in the way of the curb bit. However, a pony or a horse with a small and delicate head sometimes looks better in a smaller ring.

A fixed-cheek bit, as you might expect, moves less in the horse's mouth.

"The fixed ring transfers less vibration than the loose ring," explains Mette Larsen, owner of Metlar LLC, Riverhead, NY, the US distributor of the British-made Neue Schule line of bits. "If you have a young horse that needs

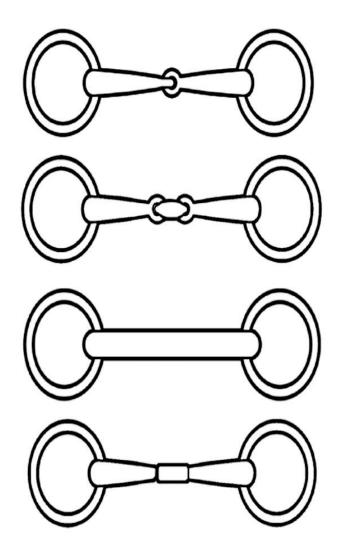


COMMON SNAFFLE RING STYLES: (from top) loose ring, eggbutt, D-ring, full cheek, Baucher (aka hanging cheek or drop cheek)

lateral stability or is fussy or green, or a rider who doesn't know yet how to sit well, the fixed cheek is a better idea."

Step 2: Choose a mouthpiece style. Snaffle mouthpieces come in an array of shapes, configurations, and sizes, all which relate to the anatomy of the equine mouth: the position of the lips relative to the interdental space; the width and height of the lower jaw bone or mandible; the shape of the palate; and the size of the tongue.

In dressage, the most common mouthpiece styles are single-jointed and double-jointed. The single-jointed snaffle, which is the traditional snaffle design, has two arms or "cannons" that can be worked independently. When pressure is applied to the reins, the single-jointed snaffle operates like a nutcracker, with the mouthpiece assuming a V shape and exerting direct pressure on the horse's lips, tongue, and bars (the toothless spaces on the mandible, or lower jaw). One drawback of this design is that, depending



MOUTHPIECE STYLES: (from top) Single-jointed, double-jointed (KK style), unjointed (mullen mouth), Happy Mouth with roller

on how the reins are used, the central mouthpiece link can contact the horse's sensitive palate.

A double-jointed snaffle bit, in comparison, has two mouthpiece joints connected by a shorter middle piece. Under rein tension, the two joints turn the V-shaped mouthpiece into a U shape, which tends to push the central piece toward the palate while putting pressure on the corners of the mouth instead of on the bars. The central piece, often referred to as a lozenge, comes in varied sizes, shapes (from the flat French link to bean- or football-shaped, as in the KK bit), mobility, and angles relative to the cannons.

"The [central] link has a little more movement in the mouth," explains Larsen. "It's often at a 20-degree angle [to the two cannons] and helps distribution of weight on the tongue." The well-known German manufacturer HS Sprenger has recently come out with a bit whose middle link is positioned at a 45-degree angle, said to slide more easily over the tongue. Still other double-jointed models have a small, rotating middle piece.

"I'll use the simplest equipment and only complicate the issue if simple doesn't work," says Chote.

Some horses, particularly those with sensitive bars or low palates, prefer an unjointed snaffle, which has a straight or bowed (mullen) mouthpiece. However, because of the tongue pressure exerted by this style of mouthpiece, some horses find a mullen-mouth snaffle annoying. Riders also need to understand that the unjointed mouthpiece bar makes it impossible to act on one side of the horse's mouth independently.

Snaffle mouthpieces also vary in curvature to accommodate the shape of the horse's palate and to provide tongue relief. Some horses that dislike tongue pressure go better in a mouthpiece with more extreme curvature.

"A horse that gets heavy and needs more freedom in the shoulders or is fussy with the tongue needs a channel for the tongue to lie in and help create relaxation in the jaw. Other horses work better with tongue pressure," Larsen says.

Step 3: Choose a mouthpiece material. This one used to be easy: Bits were made of stainless steel, plastic, or rubber; and USEF rules forbade the use of bits made of more than one type of metal.

Today, in addition to the above materials, snaffles come in a variety of metals and metal alloys, including copper, German silver (not silver at all, but an alloy of copper with zinc and nickel), and Aurigan.

At one time, horsemen thought that copper would shock a horse. Not only did that belief prove to be untrue, but copper was found to have the advantage of encouraging salivation and chewing as it oxidizes in the mouth. Copper's

Know the Bit Rules

ection 121 of the United States Equestrian Federation's dressage rules (DR 121, Saddlery and Equipment) describes in detail, including illustrations, the bits permitted in USEF-licensed/USDF-recognized dressage competition. Read or download the rules at usef.org/documents/ruleBook/2014/08-DR.pdf.

If you have questions about the legality of a bit, contact the USEF (usef.org) or, if you're at a USEF/USDF dressage competition, visit the show office and request to speak with the technical delegate, who's the designated USEF rules guru for that competition.

LEGAL EAGLE: As you exit the arena at a USEF/USEF dressage competition, you'll be met by a bit-checker, whose job it is to verify that your bit(s) and other equipment are permissible

drawback as a bit material, however, is its softness. So HS Sprenger worked with the University of Hanover in Germany to develop a new alloy that they called Aurigan. Consisting of 85 percent copper, 4 percent silicon, and 11 percent zinc, and recognizable by its golden color, Aurigan warms to body temperature quickly and is a favorite of many dressage riders and trainers today.

"When the [Aurigan] bit reaches the temperature of the mouth, it doesn't feel like a foreign object in the mouth. Then the horse isn't distracted by the bit," Larsen explains.

Manufacturers continue to develop new mouthpiece materials. Some have varying amounts of copper and different additional metals, such as manganese (to regulate the copper oxidation) or nickel (for a high polish). HS Sprenger's own newest material, Sensogan, is a copper-manganese-zinc alloy with a "noble white-gold color" that the manufacturer calls "an improvement of our original material, Aurigan." The John Dewsbury company offers bits made of "Kangaroo" copper, a copper-nickel blend. And an Italian manufacturer, Lorenzini, has introduced a line of bits made

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of titanium, a metal it touts as hypoallergenic, antibacterial, biocompatible with the horse's body, lightweight, and strong, among other attributes.

Non-metallic mouthpieces are still alive and well, too. The USEF permits "bits...with a rubber or plastic covering", as in the Nathe or Happy Mouth lines of stainless-steel bits encased in synthetic material—although wrapping a mouthpiece with Latex is illegal for dressage. "Flexible rubber or synthetic mouthpieces" also are permitted, according to the USEF rule book.

Dressage riders seem to gravitate away from the traditional rubber mouthpieces, though, as many are quite thick and horses tend to find them less comfortable. According to Chote, a rubber bit is usually not the best choice for a horse with a dry mouth because rubber does not stimulate salivation. If Chote wants a non-metal snaffle mouthpiece, she's more apt to turn to a Nathe or a Happy Mouth type because the mouthpieces come in a variety of sizes, she says.

Bit Fit

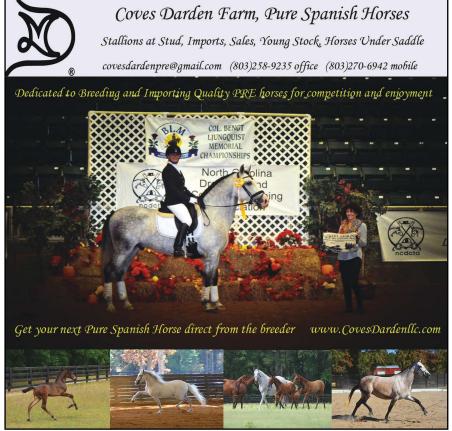
Snaffle bits come in varying widths and mouthpiece thicknesses. For some reason, widths are usually stated in inches while thicknesses are expressed in millimeters.

What size does your horse need? "You need to understand mouth conformation to know what works," says Chote. "Get help from someone who has looked in a lot of mouths, or ask barn mates if you can look in their horses' mouths and compare." Does your horse have a narrow jaw? A low palate? A thick tongue? All of these conformational differences will help determine what mouthpiece width and thickness is most appropriate, Chote says.

During her tenure at the Mary Anne McPhail Equine Performance Center at Michigan State University's College of Veterinary Medicine, equine-biomechanics expert and *USDF Connection* contributing editor Dr. Hilary Clayton conducted fluoroscopic studies to determine how the shape and size of a bit's mouthpiece applies pressure on different parts of the horse's mouth. Her findings debunked several common pieces of horsemen's conventional wisdom regarding bit fit.

For instance, it was for many years a common belief that a thick mouthpiece is milder than a thin one. Dr. Clayton's research found, however, that a thick bit in a small oral cavity can actually cause greater discomfort. She concluded: "The mouthpiece should be equal in width to the distance between the left and right commissures of the lips, and it should be adjusted to fit into the corners of the lips without wrinkling











FIT COMPARISON: The loose-ring snaffle on the horse at left is correctly sized a little wider so that the bit-ring holes won't pinch the lips. The Dring snaffle on the pony at right can fit somewhat closer to the lips because there's nothing on the bit that can pinch.

them. The study showed that if the bit was either too wide or fitted too low in the mouth it would be easy for the horse to displace its tongue over the bit, which could result in a potentially dangerous loss of control for the rider. Also, the range of movement of the bit within the oral cavity was increased when the mouthpiece was too wide or too low, so facilitating the raising of the mouthpiece between the cheek teeth."

Specialty equestrian retailers sell inexpensive bit sizers that you can use to determine the width of your horse's mouth. Or in a pinch, use a wooden dowel or a piece of sturdy string.

Generally, to prevent your horse's lips from being pinched by the bit-ring holes in a too-narrow mouthpiece, a loose-ring snaffle should be at least one-eighth of an inch wider than the lips on each side—even a quarter of an inch extra on each side, if he has meatier lips. Measure from the inside of the beveled hole to the inside of the beveled hole.

A fixed-ring snaffle can fit a bit closer. "As long as you buy good-quality tack, it can fit more snugly," says Chote. But she cautions: "If you have a poorly made bit, the place where the ring and the branch come together can pinch."



An average snaffle-mouthpiece thickness is 16 mm; see "A Note About Bit Thickness" at right for USEF rules guidance. Larsen suggests putting two fingers sideways, like a gun, on the bars of your horse's mouth. If it's a tight squeeze, a 14-mm or even a 12-mm mouthpiece may be a better choice, she says.

More Trial, Less Error

Testing bits can be pricey if you don't have a friend or an instructor who owns tons of them. For the more expensive bits, some online equestrian retailers offer rental programs. For example, for \$15 plus shipping you can try a bit for two weeks. If you like it, the \$15 goes toward your purchase. But be aware: Some retailers' return policies are unclear as to whether bits with teeth marks may be returned, so call first.

Even if you have access to lots of bits, you may need to resign yourself to the fact that the one bit you need may be the one you don't own. Says Chote: "I have 30 years of bits in a Rubbermaid tub, and I still don't have the right bit for my three-year-old I'm starting. He has a very little mouth, a low palate, and a baby mouth. I can't put in a big snaffle or he's going to try to spit the thing out for 20 minutes."

Our experts agree that bitting is not an exact science:

A Note About Bit Thickness

er USEF rules, a snaffle bit must be a minimum of 10 mm thick at the rings or cheeks, with two exceptions:

For ponies, the diameter may be less than 10 mm. Snaffles used in Young Horse classes must have a minimum thickness of 14 mm.

Besides the quantifiables, such as mouth width and palate height, a lot of the selection process comes down to finding the snaffle bit that produces the best feel at the other end of the reins.

"My 18-hand six-year-old has a 14-mm eggbutt bridoon. He doesn't need vibration, but he needs the lateral stability and he has a small mouth," says Larsen, who is also an amateur FEI-level competitor. In contrast, "My 17.3-hand horse needs something dynamic with 'feel' and 'conversation.' If I put him in a fixed-cheek, he's like riding a two-by-four."

Larsen concludes: "The bit that is right for your horse is the right bit for your horse. Find one that he or she likes."

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