

Knots, Bends, and Hitches for Animal Handlers

Our topics for this week are:

- Knots: overhand, blood, figure 8, square, honda and bowline knots
- Sheet bend
- Hitches: quick release, highwayman's, clove, picket line, and half hitches

Definition of Terms

A **knot** is intertwining a rope to itself. A **bend** is intertwining a rope to another rope or two ends of the same rope. A **hitch** is intertwining a rope to another object, such as a hitching ring.

Splicing a rope is to unwind the strands of a twisted rope so that they can be interwoven with the strands of another rope or to create crown knots, halters, and other rope handling tools.

Tying knots, bends, and hitches is more difficult than they appear. Practice is required to acquire and to maintain the skills. If not used frequently, monthly practice of tying knots and hitches should be planned. Forming the knot, bend, or hitch is just the first part. For many knots, bends, and hitches, how they are pulled tight is just as important. A flip or twist in the pull down or a lack of proper pull down (tightening) can ruin a knot's or hitch's effectiveness.

Each knot has a different purpose. The selection of which knot to use is based on its ability to remain secure, the speed and ease of tying and untying, and its size. Learning how to tie knots, bends, and hitches is a visual exercise. Pictures of the knots, bends, and hitches for animal handlers we are discussing this week are provided in my book, *Animal Handling and Physical Restraint*.

Overhand Knot (Thumb Knot) and Other Stopper Knots

The **overhand knot** is the simplest knot. It is used as a stopper knot to keep the end of a rope from fraying or to put knobs in the length of a rope to add traction point and prevent the end of ropes from pulling through a handler's grip. The triple overhand knot was called the **blood knot** because it was used on the ends of the British cat o' nine tails, a whip used to flog sailors for punishment. It has also been used to tie the ends of waist cords of monks and nuns, in part to symbolize three sacred vows.

The **figure 8 knot** is another stopper knot and an extension of an overhand knot.

Square Knot

The **square knot** is popular for tying two ropes of equal diameter together. It will not slip or jam, but it should not be used in potentially dangerous situations because it creates sharp bends that weakens ropes. It may have caused more deaths and injuries than other knots because of its popularity and misuse.

The square knot is an overhand knot tied on an overhand knot. A double overhand knot (the working end goes around the rope twice) is the first half of a **surgeon's knot** and the first knot used in a gauze muzzle for dogs. A **reefer knot** (reef is a name for a type of sail) is a square knot with a bight in one of the short ends. This acts as a slip knot to quickly untie the square knot. Shoelaces are typically tied with double reefer knots.

The *granny knot* is similar to a square knot but will slip under tension or will jam. Pulling on the longer ends of a granny knot will make the short free ends go out of line with the long ends to form an “X” or cross and then untie. Granny knots have no useful purpose. They are improperly tied square knots.

Quick Release Hitch (Lead Rope Tie)

The most common *quick release hitch* is the standard lead rope tie. It is the most commonly used hitch for lead ropes in handling horses. This hitch allows the working end to be pulled to the side, which is the easiest direction to release a quick release hitch. This tie is performed after the end of the lead rope goes through a tie ring or around a stout horizontal post. The hitch is tightened around the lead and then slid up to the tie ring.

When horses that may untie hitches are tied, the working end of the lead rope should be dropped through the bight of the hitch to prevent pulling on the end from untying the hitch. Alternatively, a bowline should be used to tie horses that untie quick release hitches.

A variation of the quick release hitch is a shoe lace-like tie (a double reefer knot), called the halter hitch or manger tie. This variation requires pulling the working end toward the tie ring and is much more difficult to release the hitch in a hurry than the standard tie for lead ropes. It is not recommended as a substitute for the true quick release lead rope hitch.

The *highwayman’s hitch*, also called the “draw hitch,” is a quick release using a bight around the object. The highwayman’s hitch is performed by putting a bight through the tie ring. The advantage of this hitch is it permits a quick tie of a very long rope and a quick release. The highwayman’s (another term for bandit) hitch was reputedly used in the past by robbers to tie their horses for a quick getaway.

Honda Knot

A *honda knot* is recreated by making an overhand knot in the end of the rope as a stopper knot and then making another overhand knot a few inches up the rope. This produces a small fixed loop (honda), a channel for the other end of the rope at the end of lariats for livestock and horses and in creating slip leashes for dogs and cats.

Sheet Bend (Weaver’s Knot; Tail Tie)

A *sheet bend* is used to tie two ropes together. This simple bend is secure, even if the ropes are of different sizes. It is also used to tie cords to cattle or horse tails to restrain the tail. A double sheet bend can be used to tie a lead rope to a horse halter. It is lighter, softer, and stronger than a typical metal fastener for a lead rope.

Bowline (“King of Knots”)

The bowline (pronounced “BO-linn”) knot has many uses since it creates a loop that will not slip, bind, or risk choking an animal if around its neck. It is the preferred knot to tie the lead line of a horse that can untie hitches. Its name comes from being used to secure the edge of a square sail toward the bow of a ship, i.e., a bow line. It is probably the most versatile knot used in handling large animals.

The knot can be tied with one hand, but most people learn to tie the knot by memorizing “the rabbit comes out of the hole, goes around the tree, and back down the hole.” The bowline has also been recommended for tying lead ropes since it does not bind and horses cannot untie it.

Making two loops for the “rabbit’s hole” will create a double bowline that is even stronger than an ordinary bowline.

Bowline on the Bight

A ***bowline on the bight*** knot is useful for making a rope collar in the middle of a long rope with 2 trailing lines, as needed for breeding hobbles or creating a Scotch hobble. The knot will not slip and choke the animal. It is easily untied even after tension has been on the knot. It has been used for ***casting*** (laying down) sedated horses for surgical procedures, but less commonly since the advent of newer injectable anesthetics that produce relatively smooth inductions and recoveries.

Half Hitch

A ***half hitch*** is a quick means of tying to an object, but it is generally unreliable. It can be a reliable knot if tied repeatedly over itself as when tying legs on a recumbent animal or on a cattle chute cleat (then called the cleat hitch).

Clove Hitch

The ***clove hitch*** works by friction and is generally unreliable for tying animals with a rope. If an animal rocks the rope back and forth, it will loosen a clove hitch. It is most practical when used either for tying a flat leather lead for horses or as a tie to a second post after wrapping around a first post. This prevents a rocking effect on the hitch which could cause the hitch to untie.

Picket Line Hitch

Sometimes the most convenient place to tie an animal, particularly a horse, is to a rope tied horizontally between two secure objects such as trees. This is called a picket line. Picket lines may be chest height, but overhead picket lines will reduce the risk of pulling the line down or becoming entangled. A ***picket line hitch*** is similar to the clove hitch but is much more secure because the working end is trapped under itself.

Rope Horse Halter Ties

Rope halters for horses can apply more pressure to the poll and bridge of the nose than leather or nylon band halters. As a result, a clearer correction for misbehavior can be delivered, and horses will not pull or lean on the halter and lead rope. Rope halters also take less room to store and do not trap moisture that can promote bacterial or fungal infections compared to leather halters. The knot used to tie a horse’s rope halter is a sheet bend. A double sheet bend can be used to attach the lead line to the halter rather than a metal clip.

Now, let’s recap the key points to remember from today’s episode:

- **The quick release hitch is the standard lead tie for tying horses**
- **A sheet bend is used to tie tails of horses or cattle and rope halters for horses**
- **The bowline creates a loop for various horse restraints that will not slip and is easily tied and untied, even after it has been pulled tight.**

More information on animal handling is available in my book, *Animal Handling and Physical Restraint* published by CRC Press. It is also available on Amazon and from many other fine

book supply sources.

Additional information is available at www.betteranimalhandling.com

Don't forget serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.