# USPC BANDAGE REFERENCE INFORMATION
## FOR C-3, B, H/H-HM/H-A

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<table>
<thead>
<tr>
<th>C-3</th>
<th>B</th>
<th>H/H (HM/H-A)</th>
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</thead>
<tbody>
<tr>
<td>Independently apply a shipping bandage and a stable bandage. Discuss purposes and dangers involved with shipping and stable bandages.</td>
<td>Present shipping, stable, and tail bandages; discuss materials used, reasons for wrapping, potential dangers.</td>
<td>Discuss and demonstrate proper application of shipping and stable bandages. (Sheet cottons and flannels are recommended, and candidates may be asked to demonstrate with these as well as with other materials brought.) Demonstrate application and know how to maintain two of the following bandages: sweat, poultice, pressure, spider, figure eight, knee, hock, hoof abscess, heel grab, cold water, and ice. Discuss values and potential dangers when any of them are prescribed.</td>
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## BANDING

A bandage should be safe and effective, whether it is being applied by a C-3 or an H/H-HM/H-A.

It is highly recommended to read the USPC Manuals and reference material on the USPC website for detailed information on each wrap's materials, techniques, and functions. The information below is a reference guide.

### WHY BANDAGE?
- **Protection** - bandages may give some protection against minor cuts and bruises in a stall or horse trailer.
- **Securing a poultice/dressing** - stable bandages are often used to hold a poultice on the lower legs, or to hold on a wound dressing on an injury.
- **To keep an injury clean** - a stable bandage can protect a wound from stall bedding or dirt. However, it may slow the healing process.
- **Reduce or prevent "filling"** - after hard work, or if a horse is kept in a stall for long periods of time, the lower legs "fill" or "stock up". A stable bandage may help prevent this.
- **As a base** - stable bandages are used as a "base" for bandages higher up on the leg (such as a knee or hock bandage). This prevents the swelling of the injury higher up from traveling down the leg.
- **Traveling** - shipping bandages cover the leg from just below the knee to over the bulbs of the heels, protecting cannon bone, pastern, fetlock and bulbs of the heels. Stable wraps, in conjunction with bell boots may be used if one is not comfortable applying a shipping bandage. **Warmth:** stable bandages provide warmth to lower legs.
- **Support** - may be used to support tendons, ligaments and joints.
MATERIAL USED
Any bandage material may be used as long as they are thick enough, long enough, fit properly and are appropriate for the type of bandage you are applying.

Padding
- Purchased quilted or pillow type wraps (flannel, cotton, or a combination of materials) may be used. The fill can be foam or fiber/cotton batting. Home made/custom wraps, using sheet cotton and a gauze or “cheese cloth” type outer covering may be used, but are not required.
- The width of the padding depends on the length of the horse’s leg. (i.e. short cannon bones, long cannon bones, 14-hand pony, 16-hand Thoroughbred, 17-hand Warmblood). Most commercially sold padding comes in 10", 12", 14", 16" and 18" sizes.
- The length of the padding should be sufficient enough to go around the diameter of the horse’s leg 1 ½ - 2 times or more. Most high quality, commercially sold “pillow type” or quilted padding (flannel, cotton or combination) are 3’4” to 3’6” long.
- Padding thickness should be of sufficient density to provide protection and allow for uniform compression from the wrap without danger of being too tight constricting circulation. Most high quality commercially sold padding is approximately ½” thick before be compressed by the wrap.

Outer Wrap may be flannel or knit fiber
- Length varies depending on the size/diameter of the horse’s leg. A suggested length of - 9’ (pony) 12’ (average), 14’ (Thoroughbred) , 16’ - 18’ (Warmblood or Draft) will fit most horses.

APPLICATION
A poorly applied wrap or bandage, or material applied in the wrong situation, may do more harm than good.
- Adequate amount of padding under the bandage provides protection, distributes the forces applied by the outer bandage (wrap), and helps prevent localized constriction.
- Wrinkles or bunches may create pressure points.
- Wrap front to back. Start on the inside of the leg, wrapping over the cannon bone first. Firmly pull the wrap across the front of the cannon bone, laying the wrap across the tendons in the back of the leg. Spiral down the leg, exerting just enough pull to stretch the fabric to half its maximum extended length
- Overlap each preceding layer by 50 percent using smooth, uniform tension to compress the padding without forming lumps or ridges beneath the bandage.
- Should be snug enough to prevent slipping, which might just annoy the horse, or even bunch and create a pressure point on the back of the tendon, causing a "bandage bow" or tendon damage. A bandage bow can also be caused by a bandage that is too tight
- “Thumping” a properly applied leg bandage with a finger should sound similar to a ripe melon or pumpkin. The sound can differ depending on the material used, but the general idea is that the bandage should be uniformly firm.
- You should be able to place one to two fingers (depending on the bandage) comfortably under the top and the bottom of the bandage without it moving around.
- When a horse injures a leg, it often places more weight on the uninjured leg. To prevent the uninjured leg from swelling, it should also be bandaged.
- Bandages should finish on the outside of the leg, not on the back over the tendons.
- Shipping bandages should only extend low enough to cover the bulbs of the heels without the horse standing on the bandage. Never wrap over the heel of the shoe.

POLO WRAPS
Polo wraps can be used for many tasks and disciplines: they protect against minor scrapes and bruises and help prevent irritation from sand or arena footing. Boots provide better impact protection. Usually, polos are used without any padding underneath. Some common activities polo wraps are used in include:
- Riding – playing polo or polocross, schooling dressage or hunters. Jumpers and equitation divisions permit in competition.
- Longeing – may be used during longeing, but boots provide more protection.
- Turnout - horse should not be turned out in a wet pasture and the polos must be well secured.
- Shipping - shipping bandages or shipping boots provide much better protection.

While the amount of support to tendons and ligaments is debatable, they do provide a limited amount of protection from scrapes, bruises, and overreaching.
STABLE WRAP

Used to secure wound dressings, or poultice, to keep an injury clean, to reduce or prevent “filling” or swelling, as a base for bandages higher up the leg, or to provide warmth to lower legs.

- **Width of padding** - varies depending on the size of the horse’s leg. Padding begins below the accessory carpel bone at the back of the knee or below the hock, ending at the ergot or slightly below. If the joint is “cupped”, the padding should extend slightly lower, allowing for support of the fetlock and suspensory ligaments. Most commercially sold padding comes in 10”, 12”, 14”, 16” and 18” sizes.
- **Length of padding** - should be sufficient enough to go around the diameter of the horse’s leg 1 ½ - 2 times or more.
- **Padding thickness** - should be of sufficient density to provide protection and allow for uniform compression from the wrap without danger of being too tight constricting circulation. Most higher-quality commercially sold padding is approximately ½” thick before being compressed by the wrap.
- **Outside wrap’s length** - varies depending on the size/diameter of the horse’s leg. A suggested length of - 9’ (pony) 12’ (average), 14’ (Thoroughbred), 16’ - 18’ (Warmblood or Draft) will fit most horses.

If the bandage is down on the pastern, then you might consider cupping the fetlock (supports the joint).

- Form a “V” in the front of the fetlock.
- Use sufficient padding without excess bulk, and smooth against the horse’s leg with no wrinkles.
- Avoid bulky or inconsistent padding.
- Start the padding on the inside of the Cannon bone rolling toward the front of the leg, covering the Cannon bone before the back of the tendon
- Use small, even, firm strokes with the wrap, to avoid a bandage that spins around the leg.
- Use firm, uniform tension to avoid a bandage that spins around the leg.
- Finish the bandage on the outside of the leg.
- Secure with Velcro, bandage pins, sewing and/or tape.

SHIPPING WRAP

Covers lower leg from just below the knee or hock to over the bulbs of the heels (protecting cannon bone, pastern, fetlock and bulbs of the heels).

**Material**: Home made/custom fit wraps, using sheet cotton or similar material (8 -12 or more sheets) and gauze or “cheese cloth” type outer covering. Purchased quilted or pillow type wraps – flannel, cotton, or combo. Fill can be foam or fiber/cotton batting. **Purchased wraps must be properly fit to fulfill the requirements of the wrap.**

- **Width of padding** – padding should go from the back of the knee to the ground. If you are making the padding out of sheet cotton, you might want to add at least 1” to the length due to padding pulling up when the outer wrap is put on.
- **Thickness of the wrap** - should be of sufficient density as to create a finished product that will appear as a uniform cylindrical column (almost stove pipe).
- **Outside wrap’s length** - varies depending on the size/diameter of the horse’s leg. A suggested length of 18’-24’ fits most horses. The length of the wrap should be sufficient enough to cover full width of padding and allow for 2 to 3 wraps around the heel area, providing extra protection and securing the wrap around the heel.

When applying a shipping wrap:

- Use thick enough padding to have no wrinkles.
- Wrap using firm and even tension
- Use small even strokes around the leg
- Cover the entire bulbs of the heels without going over the shoe
- Fitted securely, the bandage will not pull up over the heels.
- Finish the bandage on the outside of the leg.
- Secure with Velcro, bandage pins, sewing and/or tape.
TAIL WRAP

Material: may use stretchy polyester track bandage, vet wrap or ace bandage.
  • Length depends on which type of tail wrap is applied, i.e. grooming, shipping, butterfly, herringbone.
  • 3” - 4” width is best
  • Secure the wrap on the outside of the tail, not under the tail.

Shipping tail wrap
  • Protects the tail and should not slip or pull off easily, due to the upturned hairs.
  • End the bandage at the point of the buttock.

Grooming wrap
  • Smoothes tail hairs and should pull off, due to the tail hairs being down and smooth.
  • End the bandage at the point of the buttock, the end of the tailbone, or the length of braid, in order to produce desired grooming effect

Tail wraps should never be applied tightly or left on for an extended period of time (overnight or when shipping long distances) as they may permanently damage the tail.

JOINT WRAPS

Figure Eight, Spider, Stack or “Stovepipe” Wraps

If you want to immobilize the joint, put pressure on the joint.

CAUTION - Be careful not to bind or to apply excess pressure on the boney parts of the back of the knee, the point of the hock or over the Achilles’ tendon (a bandage that is too tight or incorrectly applied can cause sores to develop). Use rolled gauze or other similar material on either side of the accessory carpal bone and in the hollow below the Achilles’ tendon, and/or cut a hole in the padding where it covers the area in order to reduce pressure.

FIGURE EIGHT WRAP

Material:
  Padding - towel, sheet cotton, leg padding, etc.
  Outer wraps - track bandages or knit fiber bandage

Knee
  • Figure 8 pattern is used to reduce pressure on the accessory carpal bone at the back of the knee
  • Apply a stable bandage to the lower leg.
  • Use sufficient padding to protect the soft tissue.
  • Padding should start half way up the forearm and may overlap the stable bandage on the cannon bone by one third to one half. The upper padding may also be “stacked” directly above the stable wrap for greater mobility.
  • Use an outer wrap that is long enough to keep the bandage secure.
  • Use 24’ of outer wrap to fit most horse’s knees.
  • Finish the wrap on the outside of the leg.
  • Secure wrap with bandage Velcro, pins, and/or tape.

Hock
  • Figure 8 pattern is used to relieve pressure on the point of the hock and over the Achilles’ tendon.
  • Apply a stable bandage to the lower leg.
  • Use sufficient padding.
  • Use two gauze rolls (or other materials) in hollows on each side of the hock below the Achilles’ tendon.
  • Secure padding over hock.
  • Leave the point of the hock open, leaving it uncovered by the outer wrap.
  • Finish the wrap on the outside of the leg.
  • Secure wrap with bandage Velcro, pins and/or tape.
**SPIDER WRAP**

Allows somewhat less movement than a Figure Eight, but does NOT completely immobilize the joint.

**Material:** medium weight stretchy material, light weight stretchy denim, kitchen towel, flannel sheet fabric or heavy t-shirt.

- Apply a stable bandage to the lower leg.
- Use sufficient padding to compress into the hollows of the joint.
- Cut the padding or fold it to fit the horse’s legs.
- Use two gauze rolls (or other materials) in hollows on each side of the hock below the Achilles’ tendon, or either side of the accessory carpal bone.
- Padding should start half way up the forearm and may overlap the stable bandage on the cannon bone by one third to one half, The upper padding may also be “stacked” directly above the stable wrap for greater mobility.
- Techniques:
  - French Braid (has more give, allowing for slightly more mobility) - tie the top, and French braid down to the bottom of the wrap,
  - Knoting (gives slightly less mobility) - tie the top, middle and bottom to secure the wrap, then continue with a hospital knots (square knots).
- Avoid pressure points due to tying knots too tightly.

**STACK or “STOVEPIPE” WRAP**

Generally consist of two standing/stable bandages “stacked” on top of each other, but may also consist of a stable bandage stacked on top of a shipping-type bandage.

May be applied over a joint to create some degree of immobility in order to:

- Prevent or reduce swelling and edema
- Provide support for a weak or injured joint
- Reduce motion in the joint (can prevent stitches from being ripped out)
- Protect a wound or surgical site from contamination or trauma
- Absorb fluids (drainage from wound)
- Serve as padding for a splint

Apply a lower standing or shipping wrap and then apply the second wrap on top, over the knee.

**CAUTION –** Be careful not to bind or to apply excess pressure on the boney parts of the back of the knee (a bandage that is too tight or incorrectly applied can cause sores to develop).

- The upper padding may overlap the lower bandage 2-3 inches or not overlap at all and should extend at least 4 – 6 inches above the knee.
- Begin wrapping 4 – 6 inches below the knee, working up the leg, covering the upper padding to within a half-inch of the edge.
- Apply the wrap over the knee using a Figure 8 or modified Figure 8 pattern or add rolled gauze to either side of the accessory carpal bone in order to reduce pressure on the bone,
- Use enough pressure to minimize swelling and keep the bandage in place, but never wrap so tightly that you cannot easily slip a finger between the bandage and the leg.
- Do not wrap too loosely as the bandage may slip or fail to do its job.
- The bandage may be secured and sealed at the top and bottom of the bandage using a veterinary stretch adhesive tape (e.g. Elastikon®) at the top and bottom. When using Elastikon®, the entire bandage, or at minimum the specific length required to wrap, should be unrolled and re-rolled prior to application then lightly applied with no tension so that it just lays on the skin/hair.
- Additional layers can be added on top, using the same methods, in order to increase the thickness of the wrap and increase immobility of the joint. Pins should NOT be used to secure a bandage with multiple layers. Tape, such as white bandage tape, masking tape, or duct tape, should be used to secure bandages underneath additional layers.
PRESSURE WRAP TO STOP BLEEDING

Various materials may be used such as Vetrap®, Elastikon®, track (knit) or Ace® bandage.

Wrap securely so wrap does not slip or rotate. You should be able to place one finger comfortably under the top and the bottom of the bandage without it moving around. This ensures it's tight enough to protect the wound and reduce bleeding, but not so tight as to cut off circulation to the limb or damage the extensor or flexor tendons.

- Apply an appropriate absorbent padding as dressing/pressure pads: sanitary napkins, or baby diapers, folded sheet cotton or gamgee padding.
- Apply rolled gauze over padding with moderate tension.
- Apply bandaging material to secure rolled gauze and padding. Provide even tension all the way up, compressing the padding to control bleeding.
- Secure wrap with bandage Velcro, pins, and/or masking tape for knit or Ace® bandages. Vetrap® or Elastikon® are self-securing.
- Do not remove, but keep adding layers if needed to control continued bleeding.
- A stable bandage can be applied over top of the bandage to reduce or prevent swelling in the leg.

WRAP TO PROTECT A SMALL WOUND

Various materials may be used such as Vetrap® or Elastikon®.

Wrap securely so wrap does not slip or rotate. You should be able to place one finger comfortably under the top and the bottom of the bandage without it moving around. This ensures it's tight enough to protect the wound and reduce bleeding, but not so tight as to cut off circulation to the limb or damage the extensor or flexor tendons.

- Apply sterile not-stick gauze pads over the wound.
- Apply rolled gauze lightly to secure the gauze pad.
- Apply bandaging material to secure rolled gauze and padding. Provide even tension all the way up, without applying excessive tension. For Vetrap®, there should be partial dimples left in the bandage because it is not fully stretched. For Elastikon®, the entire bandage should be unrolled and re-rolled prior to application then lightly applied with no tension so that it just lays on the skin/hair. Vetrap® or Elastikon® are self-securing.
- A stable bandage can be applied over top of the bandage to reduce or prevent swelling in the leg.

POULTICE AND SWEAT WRAPS - Cooling or Heating

The poultice or sweat wrap is placed under a standing wrap. Used to draw heat, inflammation or infection out of leg.

- Apply poultice/sweat to affected area.
- Place one of the following on top of poultice/sweat to secure mixture:
  - Plastic wrap (i.e. cling or Saranwrap), disposable diaper with plastic liner left on – used with medicated ointment (may heat up and “sweat” the leg)
  - Brown paper bag/newspaper (first crumple up, then dunk In water, then place on leg) - for non-medicated poultice (less likely to heat up, cooling poultice).
- Apply sheet cotton or other appropriate padding.
- Apply standing bandage.
- Secure wrap with bandage pins and/or masking tape.
HOOF ABCESS WRAP

Used to draw an abcess or infection out of hoof.

- Apply poultice or dressing to the foot.
- Wrap the hoof using a diaper or sheet cotton. Secure it lightly with Vetrap® (never wrapping the any higher than the diaper!).
- Place duct tape “mat” (see page 4) on the bottom of the foot. Let horse stand on the foot. Firmly fold the “mat” up and around the hoof. NEVER apply duct tape or Vetrap® directly over the coronet band. Depending on thickness of your duct tape you may need to reinforce toe or bottom of wrap. You can also place an appropriately sized hoof boot over the entire wrap.
- Use Elastikon® around the top of the wrap at the pastern (may be used slightly above the bandage to secure it to the hair as described above – don’t pull too tight!) to prevent bedding and debris from getting down into the bandage. May apply a stable bandage that overlaps the hoof bandage, securing Elastikon® to secure the two.

HEEL GRAB BANDAGE

A heel grab is an injury to the bulbs of the heels, usually from the horse overreaching.

- Cover the clean and dried wound with a nonstick dressing (with or without medication). Cover the dressing with self-adhesive veterinary wrap (Vetrap® or or Elastikon®).
- For Vetrap®, there should be partial dimples left in the bandage because it is not fully stretched. For Elastikon®, the entire bandage should be unrolled and re-rolled prior to application then lightly applied with minimal tension so that it just lays on the skin/hair. Wind the wrap in a figure eight, covering the bottom of the hoof. Bring the wrap down over one heel, around the front of the toe and then up and over the opposite heel. Continue until nearly all the wrap has been used, then make two final passes around the edge of the hoof wall. There will be a small gap in the bandage near the toe. It will allow moisture to drain.
- For added durability, cover the bearing surface of the hoof with duct tape “mat” (bottom of this page). You can also place an appropriately sized hoof boot over the entire wrap.
- Apply a stable bandage that overlaps the hoof bandage and use Elastikon® to secure the two if necessary.

COLD THERAPY - Cold Water Bandages and Ice Wraps

The use of ice or cold water on an injured or inflamed leg is known as cold therapy. Cold therapy is most effective during the first 48 hours after an injury or inflammation, the sooner you start, the better.

Cold Water Bandage

Cold water bandages are bandages that are soaked in ice water and applied like a standard leg bandage. It is important to re-soak the bandage with cool or cold water in order to prevent the bandage from drying out while it is on the horse. The bandage will shrink if it is left to dry on the horse causing pressure on the leg.

Ice Wrap

An ice wrap is a bandage used to secure ice packs or cold gel packs over an injury.

The general rule is to apply cold therapy for 15-20 minutes. Repeat this every 2-4 hours for up to 48 hours after the injury occurred. Consult with your veterinarian for other methods of applying cold therapy.
- Use a damp cloth as a buffer between the ice pack and your horse's skin - more layers may be needed when using chemically activated cold packs
- Do not place ice packs directly onto open wounds. First use several layers of cotton gauze
- Apply a standing/stable wrap or ‘figure 8’ bandage (hock or knee) over ice pack to secure it in place.

CAUTION - Ice applied for too long a duration can damage your horse’s skin and underlying tissue. Never leave ice on an area longer than 20 minutes.
How to Make a Duct Tape “Mat”

Make a duct tap “mat” by tearing approximately 8-10 inch strips and overlapping them vertically, then horizontally in at least 2-3 layers. This creates a durable, waterproof outer layer for your bandage. Cut the duct tape mat at the corners to make it easier to fold the sides up to the hoof wall.

References


Davie County Large Animal Hospital, *Applying a Hoof and Lower Leg Bandage*, http://www.dclahdvm.com/Articles/hoofbandage.htm

Auer and Stick, Equine Surgery, Chapter 103

