

Basic Bandaging Techniques

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Bandages are applied to cover and treat wounds, to prevent swelling or to stabilize injuries temporarily. Splints are used to temporarily stabilize fractures for transport or for definitive treatment of some fractures or soft tissue injuries.

The primary goal of this lecture is to become familiar with bandaging and splinting techniques.

A typical bandage has 3 layers:

Primary or contact layer

Material in contact with a wound

Adherent

Wet to dry

Non-adherent

Semi-occlusive/occlusive dressings

Secondary or intermediate layer

Cast padding or roll cotton

Tertiary or outer layer

Roll gauze

Tapes

Bandage application is an art form. The only way to become proficient is to practice. Loose bandages as well as bandages placed too tight can result in significant patient morbidity.

Always wrap bandaging material from distal to proximal.

The bandage should stabilize the joint above and the joint below an injury.

A limb bandage should always extend to cover the toes.

The more padding the tighter the bandage can be made.

When applying splints or casts pad around bony prominences instead of over

Avoid placing splint material over bony prominences.

Bandage Types

Robert Jones Bandage

Indications: Used for temporary limb stabilization and to control swelling below the elbow and stifle. Allows support without compromising blood flow to soft tissues.

Supplies: Adhesive tape, roll cotton or cast padding, roll gauze, elastic or conforming tape

Application: Tape stirrups, 4-6 inches of cotton padding overlapping by 50% with each wrap, tighten with roll gauze, cover with elastic or conforming tape.

Modified Robert Jones Bandage

Indications: Mainly used to control swelling after trauma or surgery. Provides less support than above unless splint material is added.

Supplies: Same as above usually substituting cast padding for roll cotton.

Application: Tape stirrups, about 1-2 inches of cotton padding overlapping by 50% with each wrap, tighten with roll gauze, cover with elastic or conforming tape.

Lateral Splints and Casts

Indications: Used for fracture stabilization below the elbow and stifle. Indicated for inherently stable fractures.

Supplies: Adhesive tape, cast padding, roll gauze, elastic or conforming tape, stockinet, premade splints or fiberglass cast tape.

Application: Tape stirrups, stockinet, no more than 2 layers of cast padding overlapping by 50% with each wrap, add padding AROUND not over bony prominences, tighten with roll gauze, add splint or cast material (stabilize splint material with conforming gauze), cover with elastic or conforming tape.

Spika Splint

Indications: Used for temporary stabilization of femoral or humeral fractures.

Supplies: Adhesive tape, roll cotton or cast padding, roll gauze, elastic or conforming tape, aluminum rod or fiberglass cast tape.

Application: Apply Robert Jones bandage as above but continue the bandage to incorporate the thorax or pelvis. Additional support from casting tape or aluminum rod placed over the thorax or pelvis to the opposite shoulder or hip joint. When finished the limb and thorax or pelvis should move as one.

Thoracic/Lumbar Spinal Splint

Indications: Used for stabilization of lumbar or thoracic spinal fractures. Used with inherently stable fractures in patients with stable neurologic status.

Supplies: Cast padding, roll gauze, elastic or conforming tape, aluminum rod and fiberglass cast tape.

Application: Apply cast padding over the spine about 2 layers thick. Tape two to three aluminum rods together and conform them to the shape of the spine. Lay and "pinch" cast padding over the aluminum rod. Bandage this splint to the pelvis and the thorax, cranial to the fracture. Cover with conforming or elastic tape.

Ehmer Sling

Indications: Prevents weight bearing of the pelvic limb. Helps maintain reduction of dorsolateral coxofemoral luxations.

Supplies: Cast padding, elastic tape

Application: Wrap a thin layer of cast padding around the metatarsal region. Wrap elastic tape in a figure of eight pattern around the stifle, hock and metatarsal region. The goal is to internally rotate the coxofemoral joint. The tape is then carried over and around the abdomen in order to abduct the limb.

Postoperative Instructions to Owners:

BANDAGE CARE:

- The bandage should be kept clean and dry at all times.
- If it is raining or the ground is wet, place a plastic bag over the bandage during the short time your pet is outdoors. Do not leave the bandage covered while indoors.
- At least twice daily check for:
 - Toes for swelling or discoloration
 - Any foul odor or discharge
 - Slippage or a change in position of the bandage
 - Sores at the top or bottom of the bandage
 - Licking or chewing at the bandage
 - Signs of discomfort with the bandage
 - If the bandage is wet or soiled

If any of these signs are noted it may indicate a serious problem and you should be seen by a doctor immediately.