# BANDAGING 101 FOR THE DOG AND CAT: MODIFIED ROBERT JONES BANDAGES



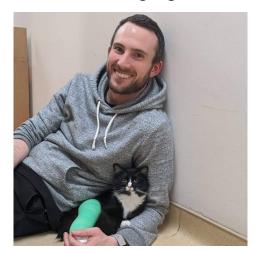
SPONSORED BY BRIAN'S BANDAGES

PRESENTATION BY KRISTIN LAKE B.Sc.

## ABOUT BRIAN GOLEMAN OF BRIAN'S BANDAGES

Brian Goleman, RVT started as an Emergency Veterinary Technician at Friendship Hospital for Animals in 2017 and began working in Specialty Surgery in 2019. He became credentialed as an RVT in 2020. Brian has taught Veterinary Technician's in the DC Metro Area how to bandage for 4 years. He founded Brian's Bandages in 2021 after discovering the lack of quality continuing education resources for bandaging in the veterinary field.





#### WWW.BRIANSBANDAGES.COM



#### What Humans Are Saying

Brian is a superstar! War Paws is a UK charity that operates a shelter and clinic in Iraq, veterinary care is of a poor standard in Iraq so we were thrilled to find Brian's Bandages online a couple of years ago. We see dozens of injuries in not so easy to dress/bandage places every single day so our vets have spent hours studying Brian's videos and Brian even did a Zoom tuturial with them in 2022 where they were able to ask questions and learn even more. We cannot thanks Brian enough for all of his assistance and would highly recommend Brian's Bandages to any practice in the world who wants to learn more about wound management/dressing techniques.

- Louise Hastie War Paws Operation Manager

"Brian's website which displays his stellar bandaging techniques is my go-to website for everything I need to know about bandage placements for patients that I have some questions about. Whether it be for wet-to-dry bandages, using hypertonic saline, reminding me of the positional components of the Ehmer sling, or a SPICA Splint refresher, Brian's Bandages has it all and I never need to turn elsewhere."

Kristin Lake B.Sc. Emergency and Critical Care
 Veterinary Technician

#### **OVERVIEW**

- Why Are Bandages So Important?
- Components of a Bandage
- MRJ Bandaging Technique Step-by-Step
- Application of Limb Bandages
  - Modified Robert Jones (forelimb or hindlimb)
    - Open Toed Bandage
    - Closed Toe Bandage
- Pitfalls of Bandaging
- Specialized Bandages
  - SAM Splints
  - SPICA Splints
  - Babushka Head Wraps
  - Tie Over Bandages

#### WHY ARE BANDAGES SO IMPORTANT?

- Protect wounds from contamination
- Help with tissue debridement
- Minimize swelling or dead space
- Attenuate bleeding
- Immobilize limb
- Fractures
- Soft tissue Injuries
- Luxations

## CONSIDERATIONS TO TAKE INTO ACCOUNT BEFORE YOU BEGIN

- Extent of bandage
- Wound?
- Fracture?
- Amount of intermediate layer
- Open toe vs. closed toe
- Presence of splint
- Type of splint or casting material
- Contraindications

#### COMPONENTS OF A BANDAGE

#### **Inside to Outside**

- Contact layer (primary layer)
- Intermediate layer (absorbent layer)
- Outer layer (protective layer)

#### CONTACT LAYER

- Direct contact with the wound
- Debride tissue (adherent dressings)
- Gauze (wet to dry/dry to dry)
- Deliver/retain medication
- Telfa with antimicrobials
- Manuka Honey/Sugar
- Remove wound secretions
- Protect the wound
- Telfa

#### INTERMEDIATE LAYER

#### Performs several functions:

- Safely applies compression to the wound/limb
- Hemostasis
- Eliminates motion
- Protects the wound/limb (padding)
- Absorbs wound fluid
- Use judiciously
- Casts vs. Protective bandage
- Prevents bandage sores

#### WALKING ANGLE

If it's a hindlimb bandage, the bandage needs to be applied with an appropriate walking angle to avoid sores and keep the patient comfortable



#### INTERMEDIATE LAYER

#### **Stockinette - Patient Appropriate Size**

#### +/- Stockinette Donuts

 Rolled stockinette to prevent sores on boney prominences and pads (accessory carpal/calcaneous)

#### **Cotton Cast Padding**

Patient Appropriate Size: 2", 3", or 4"

#### **Roll Gauze**

Patient Appropriate Size that Correlates with Cotton Cast Padding: 2", 3", or 4"

**Splint - Spoon Splint or SAM Splint** 



#### OUTER LAYER

#### **Functions**

- Holds other layers in place
- Protects from the environment
- Provides stability to the limb

+/- Fiberglass Cast Material

**VetWrap** 

**Elastikon or Waterproof Tape** 

#### BEFORE THE BANDAGE GOES ON...

**SHAVE** between toes and paw pads if a frontlimb or hindlimb bandage to enable easier cleaning and drying during subsequent changes as well as better adhesion of stirrups

**CLIP NAILS** to prevent sores caused by nails on dewclaws and lateral toes

#### TO SHAVE OR NOT TO SHAVE

Maintaining Stability and Preventing Slippage of the Bandage

- Shave the limb if mobility of the bandage is a concern
- Allows stirrup tape to adhere better than just on the fur to prevent slippage
- Allows for compression

#### Tape Stirrups

 Ample 0.5" (cat) - 1" (dog) strips of POROUS cotton tape placed on opposing sides of the limb where there is not skin breakdown or a wound already present

#### CONTACT LAYER APPLICATIONS

First, slip patient appropriate stockinette over limb where the top of the bandage will terminate proximally

Second, if using Manuka Honey apply Manuka Honey impregnated Telfa Pad or liquid Manuka Honey to a Telfa pad and place over cleansed wound then proceed with the following steps at the bottom.

If doing a wet to dry bandage, ask your doctor what fluid they would like for their wet layer (Example: 7.2% Hypertonic Saline) then proceed with the following steps at the bottom.

If doing dry to dry bandage, proceed with the following steps:

- Place donuts over boney prominences if necessary to give cushion and provide comfort
- Apply stirrups, utilizing tongue depressor as shown in demonstration video for open-toed bandages
- Continue onto intermediate layer

#### INTERMEDIATE LAYER

#### **Cotton Cast Padding**

#### **Shape Altering**

Place limb in desired degree of flexion or extension to address Walking Angle for hindlimb bandages

Smooth application – No Creases

Tight application – No Dimples

"Candycane" Application Technique - Overlapping each roll around the limb by 50% in a candycane fashion

Figure 8 Application Technique has fallen out of favor - do not perform unless it is what is best for that patient and location - (Example: Tail bandages)

The bandage should terminate one joint ABOVE the injury. (Example: Tibial Fracture, terminate top of bandage above-the-knee halfway the distance to the next joint, so half of the femur should be in the bandage too. You can cause bandage injuries by the terminating too close to a mobile area like a joint!)

#### INTERMEDIATE LAYER APPLICATION

#### **Cotton Cast Padding**

- Apply distal to proximal
- If open-toe: Start with a nice 0.5" free edge distally
- If closed-toe: Follow the demonstrated Technique to place cotton cast padding layer

Apply smoothly (no creases)

Apply with tension but be judicious about how tight you are wrapping!

50% overlap from previous pass

Concentrate on thinner areas

You can break the cast padding as demonstrated to go around curvatures of the limb to make it more comfortable to the patient and allow some give

Prevent bunching of the cast padding

Toes should not be seen from the sides in both open toe or closed toe

 Palpable or visible from distal opening

Wrap TWO layers, distal to proximal then proximal to distal

#### Tape stirrups over this layer

Place splint over top of second layer and tape in place and complete a third pass with cotton cast padding

#### INTERMEDIATE LAYER APPLICATION

#### **Roll Gauze**

- Apply force judiciously
- Ample cast padding --> increased force
- Less cast padding (splint) --> less force

Apply evenly without creases

50% overlap from previous pass

No bunching

Roll down Stockinette over this layer

#### **OUTER/TERTIARY LAYER**

#### **Vet Wrap**

DO NOT UNROLL FIRST for forelimb and hindlimb bandages. Only unroll first if bandaging the head, thorax or abdomen to increase the amount of give of the VetWrap.

Do not apply with tension - Unless applying over 360 degree fiberglass cast

50% overlap with previous pass

One layer only

Smooth Application – THIS IS WHAT THE CLIENT SEES

#### OPEN TOED BANDAGING TECHNIQUE



#### OPEN-TOE BANDAGING TECHNIQUE

Utilize the demonstrated technique in the video for a nice, rounded, comfortable toe and then apply waterproof tape as shown.

#### Waterproof Tape

- Open toe Distal edges Follow demonstrated technique in previous video
- Closed toe The entire bottom of the bandage Follow demonstrated techniques in the next video for cotton cast padding layer, roll gauze layer and VetWrap layer

Date and Initial Bandage on Waterproof Tape with Sharpie, make it legible

#### CLOSED TOED BANDAGING TECHNIQUE



NOTICE HOW HE HIS BREAKING THE CAST PADDING IN HALF TO GO AROUND CURVATURES

#### BANDAGE PROTECTION

Utilize old IV fluid bags as bandage protectors

Specifically instruct the owners that this bag is only to protect the bandage when outside. If it stays on while inside then it will create condensation and thus moisture which we are trying to avoid at all costs.

MediPaw makes a commercial bandage protector that can be bought online.

#### **BANDAGING PITFALLS**







WHAT'S WRONG WITH THESE BANDAGES?

#### BANDAGING PITFALLS







WHAT'S WRONG WITH THESE BANDAGES?

#### **BANDAGING PITFALLS**



THIS IS WHAT HAPPENS WHEN WE POORLY PLACE A BANDAGE... OUCH!!!

#### BANDAGING EXCELLENCE







THIS IS WHAT HAPPENS WHEN WE EXCEL AT PLACING A BANDAGE

#### BANDAGING EXCELLENCE





THIS DOG NEEDED BILATERAL MODIFIED ROBERT JONES BANDAGES WITH SAM SPLINTS PLACED FOR A BILATERAL COMPOUND FRACTURE OF THE RADIUS AND ULNA

#### WHAT IS A SAM SPLINT?



SAM SPLINTS ARE HUMAN MEDICINE SPLINTS USED IN VETERINARY MEDICINE TO CUT TO A SMALL PATIENTS SIZE WHEN A SPOON SPLINT DOESN'T FIT PROPERLY, OR FOR A VERY LARGE DOG WHEN WE DON'T HAVE A SPOON SPLINT IN THEIR SIZE. CREATING A C- OR U-SHAPE WITH THE BENDABLE ALUMINUM MATERIAL CREATES A STRONG SPLINT! IT SHOULD BE CUT TO SIZE IF NEEDED AND SHAPED AROUND THE PATIENT'S LIMB AND IS PLACED ONTO THE LIMB LIKE A SPOON SPLINT.

### SAM SPLINTS CAN BE CUT TO \*ANY\* SIZE TO FIT EVEN THE SMALLEST OF PATIENTS





BOTH OF THESE PATIENTS ARE WEARING SAM SPLINTS

#### SPECIALIZED BANDAGES: SPICA SPLINT



A SPICA SPLINT IS SPECIFICALLY USED TO IMMOBILIZE HUMERAL FRACTURES.
IT CONSISTS OF INCORPORATING THE BODY AS WELL AS UTILIZING
FIBERGLASS CAST MATERIAL. PLEASE SEE KRISTIN IF YOU WOULD LIKE TO
LEARN HOW TO PROPERLY PLACE ONE OF THESE BANDAGES

#### SPECIALIZED BANDAGES: BABUSHKA HEAD WRAP

A BABUSHKA HEAD WRAP BANDAGE IS NECESSARY TO PLACE WHEN THERE ARE INJURIES TO THE HEAD, EAR, OR FOR AURAL HEMATOMAS POST-OP TO ALLOW THE EAR TO CONTINUE TO DRAIN. PLEASE SEE KRISTIN IF YOU WOULD LIKE TO LEARN HOW TO PLACE ONE PROPERLY.



#### SPECIALIZED BANDAGES: TIE OVER BANDAGES



TIE OVER BANDAGES ARE UTILIZED WHEN A WOUND NEEDS TO HEAL BY SECONDARY INTENTION OVER TIME. IF YOU WOULD LIKE A DEMONSTRATION IN HOW TO PLACE TIE OVER BANDAGES, PLEASE SEE KRISTIN FOR A DEMONSTRATION. **MUST HAVE SUTURING SKILLS**.

#### **CLOSING SUGGESTIONS**

If you have concerns, WE have concerns.

If you think it is a poor bandaging job, it is.

If you think there will be a problem, there will be.

Sedation unless proven otherwise - Even just a 0.2 mg/kg dose of Butorphanol IV or IM can be adequate to take the edge off and facilitate bandaging. Pets with fractures or wounds should receive ADEQUATE pain control before bandaging is performed. 0.2 mg/kg of Methadone IV is a great place to start but follow your DVM's orders.

For behavioral issues that will affect bandage placement, Gabapentin provides some pain control while also helping behaviorally.

Need Help? **ASK!** WE ARE HERE TO SUPPORT EACHOTHER

#### **GREAT BANDAGES ARE CELEBRATED!**



GO FORTH AND MAKE BOND LOGAN CIRCLE PROUD WITH YOUR WORK!