

6.2 Injury Management + Wrist

Treatment for an Acute Sprain

R -

Rest allows time for healing and repair. The patient should only move joint within a pain-free range of motion.

I -

As long as distal circulation is adequate, ice should be applied to slow down the blood flow and reduce swelling. Ice should not be directly on skin (use a thin cloth between) and should be applied for 20 minutes once an hour.

C -

Use compression (tensor bandage) to prevent swelling. This is more important than ice. Don't wrap so tight that circulation is impaired.

E -

Elevate the injury above the heart. This helps to reduce swelling

Wrapping Tips

- It is much easier to apply a wrap that has been firmly rolled
- Roll off the bottom of the wrap. This is much easier.
- The wrap should be started distally and progress proximally to force swelling away from the injury.
- Increase tension slightly away from the injury to better support the joint
- Do not apply too much overall tension. Re-check distal circulation often.
- Wrap can be made wet to conduct cold
- Wrap can be re-used (hand wash and hang to dry)

Example

Compression wrap for an ankle sprain caused by an inversion motion.



Injury Management Stages

1) Inflammatory Phase (3-5 days)

Symptoms are SHARP

S -

H -

A -

R -

P -

Wrapping

- To secure dressings in place
- To minimize the chance of further damage
- To maintain the position of splints
- To provide compression to control swelling

2) Repair and Regeneration Phase (~3 weeks)

Elimination of damaged tissue, regeneration of cells, and production of scar tissue.

Wrapping or Taping

- To provide some soft-tissue support by placing injury in a position of minimal stress.
- To gradually increase range of motion
- To enable the injured athlete to resume activity as soon as possible

3) Remodeling Phase (1 Year)

Scar tissue initially may only have 60% of its former strength, but will gradually increase to 100% over the year. Risk of re-injury

Wrapping or Taping (if necessary)

- To support areas subject to excessive or repeated stresses, therefore, decreasing the frequency or severity of injury.
- To support joints that have a history of injury, thus reducing the risk of re-injury.

Taping Principles

There are many different ways to wrap or tape an injury, and so it is important to have a basic understanding of the principles involved. Then you can adapt the techniques to address the specific athlete and injury.

1) The purpose of taping is to limit the _____ in order to prevent _____

2) Prior to taping you must ask yourself:

“Is taping practical for this injury and situation, or am I setting them up for further injury or re-injury?”

3) Taping or bracing should never replace the proper _____ of an injured joint or muscle.

4) Taping is a skill which requires PRACTICE AND EXPERIENCE

Before taping:

Are you familiar with?

- athlete’s condition?
- severity of the injury?
- stage of healing?
- physical requirements of the sport
- if taping is appropriate?
- which structures to tape?
- the normal movement pattern of structure being taped?
- have you protected other areas that may be irritated by the tape?
- do you have the appropriate materials to use?
- do you know how to perform the necessary taping procedure?

Prior to taping you must ask yourself:

“Is taping practical for this injury and situation, or am I setting them up for further injury or re-injury?”

Skin Preparation

- Hair can be _____ to improve adhesion and allow easier removal
- Skin should be _____ and dried. Oil, sweat, or lotion can prevent adhesion.
- Check the skin for _____, _____, or irritations, and cover with a bandage prior to taping
- Spray with _____ to improve adhesion if desired
- Apply _____ only if necessary (allergy, etc.)

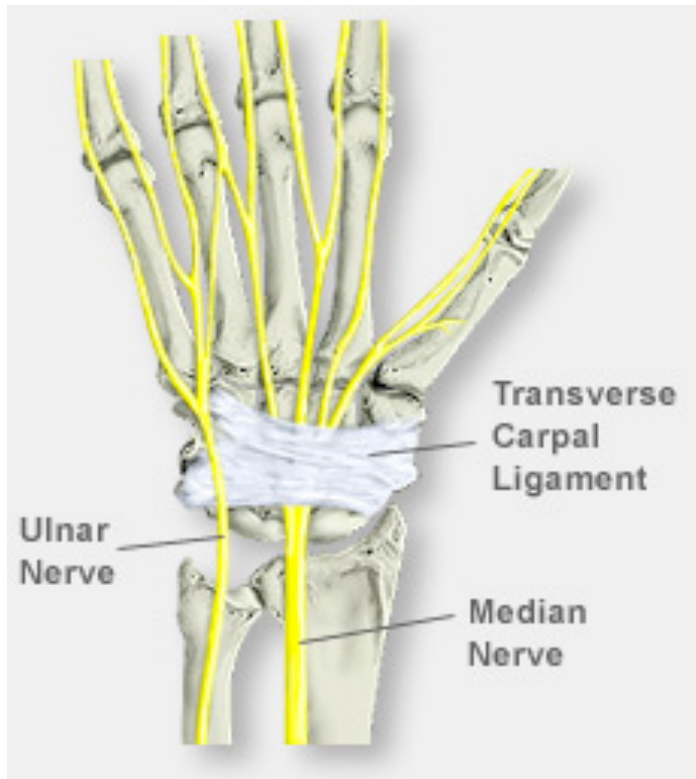
Taping Principles

- overlap tape (at least half the width of the tape) or it will separate, exposing the underlying skin
- keep the roll of tape in hand whenever possible. This will ensure taping speed and accuracy.
- avoid continuous taping as it will cause constriction (few exceptions – ex. The heel lock and figure 8 pattern with ankle taping)
- the athlete should NOT move during taping as this will loosen the tape. Fresh tape needs time to adhere
- moving will cause wrinkles and take away from the tape effectiveness
- Smooth and mould the tape to the body part as it is laid on the skin. This is done by stroking the tape with your fingers, palm or heel of the hand

POST TAPING

- check for wrinkles, windows (skin showing)
- check for peripheral circulation (cap refill)
- check for function and effectiveness of tape
- put athlete through a functional test for specific sport they are playing and make sure the tape job is effective
- Use shark or scissors to remove tape (keep tension on tape to make this go more smoothly)

The Wrist Anatomy



Wrist Injury Examples

| | |
|----------------------|-----------------------------|
| Wrist Sprain (Acute) | Wrapping |
| Wrist Sprain (Rehab) | Taping |
| Wrist RSI | Working Splint |
| Wrist Fracture | Full Splint and Sling |
| Amputated Hand | Pressure Dressing and Sling |

Repetitive Strain Injury (RSI) includes:

1)

2)

3)

Treatment for RSI

6.2 Injury Management + Wrist (Teacher Key)

Acute Injury Management: (R.I.C.E.)

R - Rest

Rest allows time for healing and repair. The patient should only move joint within a pain-free range of motion.

I - Ice

As long as distal circulation is adequate, ice should be applied to slow down the blood flow and reduce swelling. Ice should not be directly on skin (use a thin cloth between) and should be applied for 20 minutes once an hour.

C – Compression

Use compression (tensor bandage) to prevent swelling. This is more important than ice. Don't wrap so tight that circulation is impaired.

E - Elevation

Elevate the injury above the heart. This helps to reduce swelling

Wrapping Tips

- It is much easier to apply a wrap that has been firmly rolled
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- The wrap should be started distally and progress proximally to force swelling away from the injury.
- Increase tension slightly away from the injury to better support the joint
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- Wrap can be made wet to conduct cold
- Wrap can be re-used (hand wash and hang to dry)

Example

Compression wrap for an ankle sprain caused by an inversion motion.

Injury Management Stages

1) Inflammatory Phase (3-5 days)

Symptoms are SHARP (**S**welling, **H**eat, **A**ltered function, **R**edness, **P**ain)

Wrapping

- To secure dressings in place
- To minimize the chance of further damage
- To maintain the position of splints
- To provide compression to control swelling

2) Repair and Regeneration Phase (~3 weeks)

Elimination of damaged tissue, regeneration of cells, and production of scar tissue.

Wrapping or Taping

- To provide some soft-tissue support by placing injury in a position of minimal stress.
- To gradually increase range of motion
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3) Remodeling Phase (1 Year)

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Wrapping or Taping (if necessary)

- To support areas subject to excessive or repeated stresses, therefore, decreasing the frequency or severity of injury.
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Taping Principles

There are many different ways to wrap or tape an injury, and so it is important to have a basic understanding of the principles involved. Then you can adapt the techniques to address the specific athlete and injury.

- Taping and wrapping are used for strains, sprains, contusions as well as a variety of other injuries and conditions
- Taping is a skill which requires **PRACTICE AND EXPERIENCE**

| To Tape <i>Both conditions must be met:</i> | Not to Tape <i>If any of these are the case:</i> |
|---|--|
| <p>1) Assessment has been done: The Athlete has been to a doctor, has had a full assessment, and knows the specific injury involved</p> <p>2) Return to activity: The athlete is ready to return to activity, but support is required to prevent re-injury.</p> | <p>1) More assessment required: the severity of the injury is unknown</p> <p>2) The injury is still acute: severe swelling, pain, or instability are present</p> <p>3) Functional disability: there are obvious limitations to the athlete's required abilities for the activity involved</p> |

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- have you protected other areas that may be irritated by the tape?
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Prior to taping you must ask yourself:

"Is taping practical for this injury and situation, or am I setting them up for further injury or re-injury?"

Taping or bracing should never replace the proper rehabilitation of an injured joint or muscle.

Skin Preparation

- Hair should be shaved to improve adhesion and allow easier removal
- Skin should be washed and dried. Oil, sweat, or lotion can prevent adhesion.
- Check the skin for cuts, blisters, or irritations, and cover with a bandage prior to taping
- Spray with tape adherent to improve adhesion
- Apply underwrap only if necessary (allergy, etc.)

Taping Principles

-overlap tape (at least half the width of the tape) or it will separate, exposing the underlying skin

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