## Bandaging and Taping

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## Bandaging

- Will contribute to recovery of injuries
- When applied incorrectly may cause discomfort, wound contamination, hamper healing
- Must be firmly applied while still allowing circulation

## Materials

- *Gauze* sterile pads for wounds, hold dressings in place (roller bandage) or padding for prevention of blisters
- *Cotton cloth* ankle wraps, triangular and cravat bandages
- *Elastic bandages-* extensible and very useful with sports; active bandages allowing for movement; can provide support and compression for wound healing
- *Cohesive elastic bandage-* exerts constant even pressure; 2 layer bandage that is self adhering;

#### Elastic Bandages

- Gauze, cotton cloth, elastic wrapping
- Length and width vary and are used according to body part and size
- Sizes ranges 2, 3, 4, 6 inch width and 6 or 10 yard lengths
- Should be stored rolled
- Bandage selected should be free from wrinkles, seams and imperfections that could cause irritation

#### Elastic Bandage Application

- Hold bandage in preferred hand with loose end extending from bottom of roll
- Back surface of loose end should lay on skin surface
- Pressure and tension should be standardized
- Anchor are created by overlapping wrap
  - Start anchor at smallest circumference of limb

- Body part should be wrapped in position of maximum contraction
- More turns with moderate tension vs. fewer turns with maximum tension
- Each turn should overlap by half to prevent separation
- Circulation should be monitored when limbs are wrapped

Elastic bandages can be used to provide support for a variety scenarios:

- Ankle and foot spica
- Spiral bandage (spica)
- Groin support
- Shoulder spica
- Elbow figure-eight
- Gauze hand and wrist figure-eight
- Cloth ankle wrap



#### **Triangle and Cravat Bandages**

- Cotton cloth that can be substituted if roller bandages not available
- First aid device, due to ease and speed of application
- Primarily used for arm slings
  - Cervical arm sling
  - Shoulder arm sling
  - Sling and swathe

#### Cervical Arm Sling

- Designed to support forearm, wrist and hand injuries
- Bandage placed around neck and under bent arm to be supported



#### Shoulder Arm Sling

- Forearm support when a shoulder girdle injury exists
- Also used when cervical sling is irritating



## Sling and Swathe

- Combination utilized to stabilize arm
- Used in instances of shoulder dislocations and fractures



# Taping

- Historically an important part of athletic training
- Becoming decreasingly important due to questions surfacing concerning effectiveness
- Utilized in areas of injury care and protection

## Tape- Injury Care

- Retention of wound dressing
- Stabilization of compression bandages controlling internal and external bleeding
- Support of recent injuries in an effort to prevent additional trauma
- Provide stabilization while athlete undergoes rehabilitation

# Tape- Injury Protection

- Used to protect against acute injuries
- Limits motion or secures special device

#### Non-elastic White Tape

- Great adaptability due to:
  - Uniform adhesive mass
  - Adhering qualities
  - Lightness
  - Relative strength
- Help to hold dressings and provide support and protection to injured areas
- Come in varied sizes (1", 1 1/2", 2")
- When purchasing the following should be considered:

- Tape Grade
  - Graded according to longitudinal and vertical fibers per inch
  - More costly (heavier) contains 85 horizontal and 65 vertical fibers
- Adhesive Mass
  - Should adhere regularly and maintain adhesion with perspiration
  - Contain few skin irritants
  - Be easily removable without leaving adhesive residue and removing superficial skin

- Winding Tension
  - Critically important
  - If applied for protection tension must be even



## Elastic Adhesive Tape

- Used in combination with non-elastic tape
- Good for small, angular parts due to elasticity.
- Comes in a variety of widths (1", 2", 3", 4")



## Preparation for Taping

- Skin surface should be clean of oil, perspiration and dirt
- Hair should be removed to prevent skin irritation with tape removal
- Tape adherent is optional
- Foam and skin lubricant should be used to minimize blisters

- Tape directly to skin
- Prewrap (roll of thin foam) can be used to protect skin in cases where tape is used daily
- Prewrap should only be applied one layer thick when taping and should be anchored proximally and distally

- Proper taping technique
  - Tape width used dependent on area
  - Acute angles = narrower tape
- Tearing tape
  - Various techniques can be used but should always allow athlete to hold on to roll of tape
  - Do not bend, twist or wrinkle tape
  - Tearing should result in straight edge with no loose strands
  - Some tapes may require cutting agents



## Rules for Tape Application

- Tape in the position in which joint must be stabilized
- Overlap the tape by half
- Avoid continuous taping
- Keep tape roll in hand whenever possible
- Smooth and mold tape as it is laid down on skin
- Allow tape to follow contours of the skin

#### Rules for Tape Application (cont.)

- Start taping with an anchor piece and finish by applying a locking strip
- Where maximum support is desired, tape directly to the skin
- Do not apply tape if skin is hot or cold from treatments

## Additional Taping Information

- Removing adhesive tape
  - Removable by hand
    - Always pull tape in direct line with body (one hand pulls tape while other hand presses skin in opposite direction
  - Aid of tape scissors and cutters may be required
    - Be sure not to aggravate injured area with cutting device
  - Also removable with chemical solvents

## **Taping Supplies**

- Razor (hair removal)
- Soap (skin cleaning)
- Alcohol (oil removal)
- Adhesive spray
- Prewrap material
- Heel and lace pads
- White non-elastic tape

- Elastic adhesive tape
- Felt and foam padding material
- Tape scissors
- Tape cutters
- Elastic bandages

## Common Foot Taping Procedures

#### Arch Technique 1 (to strengthen weakened arches)



## Arch Technique 2 (for longitudinal arch)



#### Arch Technique 3 (X teardrop arch and forefoot support)



#### Arch Technique 4 (fan arch support)



#### LowDye Technique (Management of fallen arch, pronation, arch strains and plantar fascitis)









#### Turf Toe

# (prevents excessive hyperextension of metatarsophalangeal joint)



#### Hammer or Clawed Toes





## Common Ankle Taping Procedures



- Routine Non-injury taping
- Closed Basket Weave
  - Used for newly sprained or chronically weak ankles
- Open Basket Weave
  - Allows more dorsiflexion and plantar flexion, provides medial and lateral stability and room for swelling
  - Used in acute sprain situations in conjunction with elastic bandage and cold application



## Open Basket Weave



## Continuous-Stretch Tape Technique



## Common Leg & Knee Taping Procedures

#### Achilles Tendon (prevent Achilles over-stretching)



# Collateral Ligament



## Rotary Taping for Knee Instability



Knee Hyperextension (Prevent knee hyperextension, provide support to injured hamstring or slackened cruciate ligament)



## Patellofemoral Taping (McConnell technique)

- Helps to manage glide, tilt, rotation and anteroposterior orientation of patella
- Accomplished by passively taping patella into biomechanically correct position
- Also provides prolonged stretch to softtissue structures associated with dysfunction

Patellofemoral Taping (McConnell technique)



Common Upper Extremity Taping Procedures

#### Elbow Restriction (Prevents elbow hyperextension)



#### Wrist Technique 1 (Mild wrist sprains and strains)



#### Wrist Technique 2 (Protects and stabilizes badly injured wrist)



## Bruised Hand



Sprained Thumb (Provide support to musculature and joint)



## Finger and Thumb Checkreins

