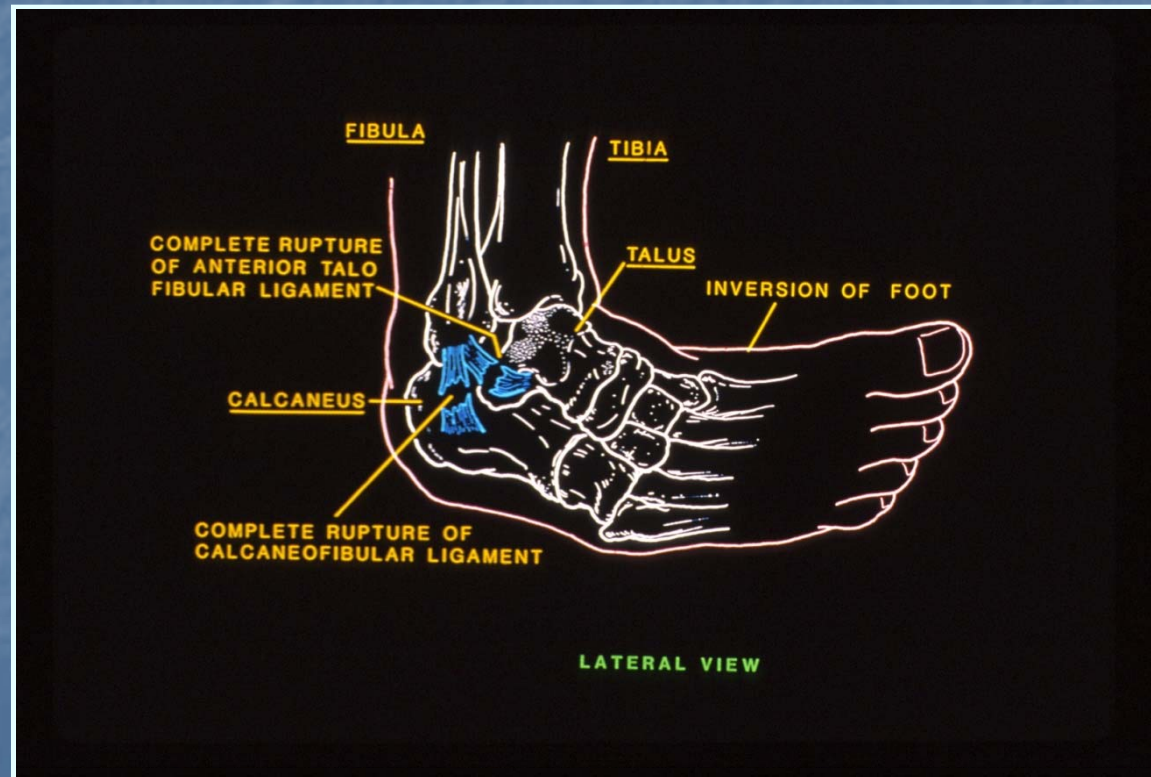


Anterior Talofibular Ligament Sprain of the Ankle

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Lateral Ankle Sprain

- Inversion is most common mechanism
- Talofibular ligament often involved
- Potential for avulsion fractures of the lateral or medial malleolus



Prophylactic Taping for the Lateral Ankle Sprain

Closed Basket Weave Ankle Taping



Note the foot at 90°



heel and lace pads



Angle tape to avoid wrinkles



medial to lateral direction



First horseshoe



Figure of eight



First step of lateral heel lock



Second step of lateral heel lock



Final step of lateral heel lock



Completed tape job

Prophylactic Taping for the Lateral Ankle Sprain

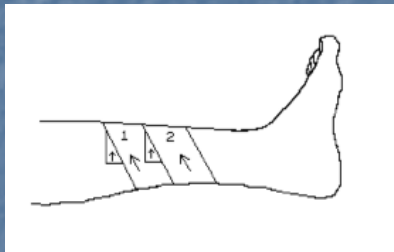


Figure 1

- (1) Anchor strip just below the belly of the calf.
- (2) Anchor strip overlapping step 1 by half.

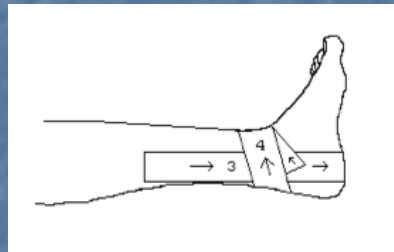


Figure 1

- (3) Stirrup strip starting on medial side of the ankle.
- (4) Tie-down to secure the stirrup.

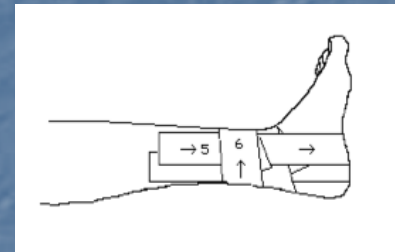


Figure 1

- (5) Second stirrup just above step 3 by half.
- (6) Tie-down to secure stirrup.

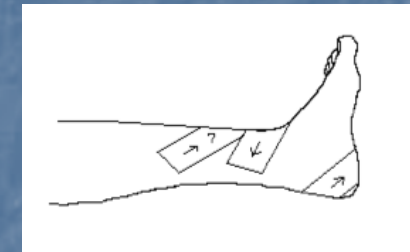


Figure 1

- (7) Heel lock starting on the medial side of the leg, Looping the heel and back up where it started.

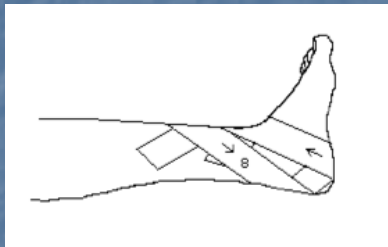


Figure 1

- (8) Opposite of step 7

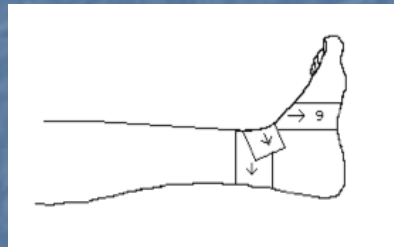


Figure 1

- (9) Figure of eight starts on the lateral malleolus, goes through the arch, back across the instep, and around the top of the ankle.



Figure 1

- (10) Tie-down around instep of the foot

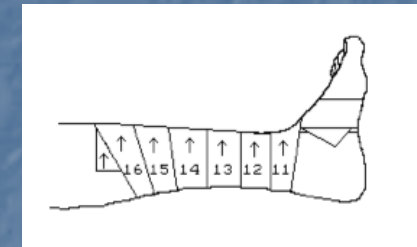


Figure 1

- (11-15) Tie-down covering the remainder of the tape job.

Prophylactic Bracing for the Lateral Ankle Sprain



lace-up ankle support



Example of a brace for immobilization or functional purposes



secured with Velcro straps



lace-up ankle support brace with figure-8 straps

Ankle Evaluation

1. CHECK LIFE THREATENING SITUATIONS

- _____ABC'S (airway, breathing, circulation)
- _____Traumatic shock

2. HISTORY OF THE INJURY

- _____where does it hurt
- _____when did it happened
- _____how did it happen
- _____position of foot before the injury
- _____position of foot after the injury

3. HISTORY OF THE INDIVIDUAL

- _____have you had a previous injure to this area
- _____ -did you see physician
- _____ -what was your rehabilitation

Ankle Evaluation

4. OBSERVATION

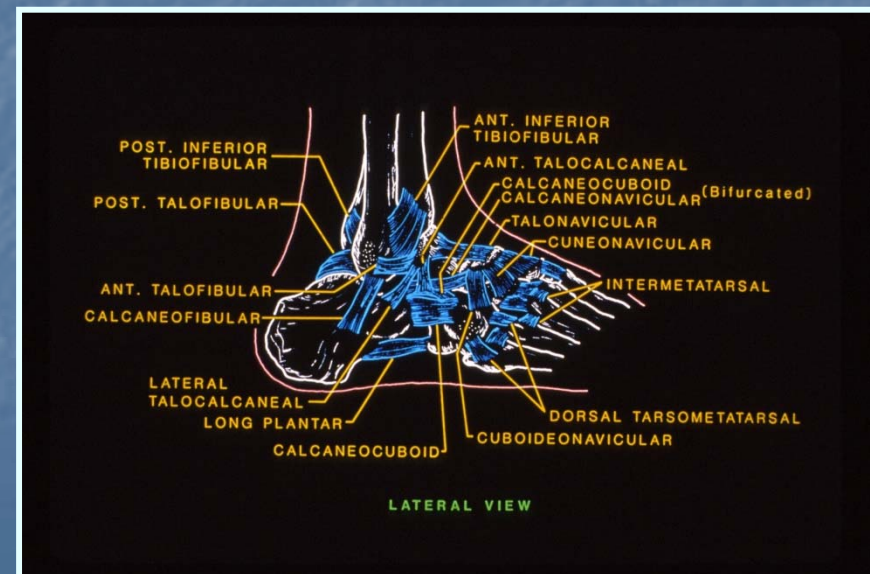
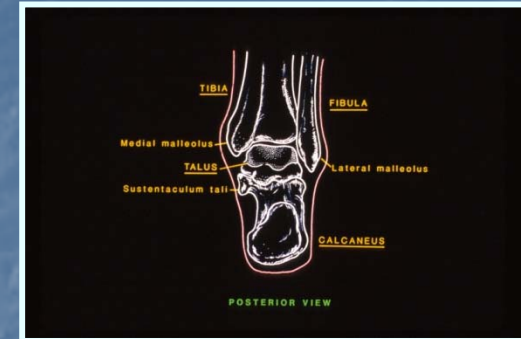
- _____compare opposite sides of body
- _____look for swelling
- _____look for deformity
- _____look for ecchymosis (discoloration)



Ankle Evaluation

5. PALPATE

- _____ tell the athlete it will hurt and why
- _____ palpate for pain or point tenderness
- _____ palpate for bumps or deformities
- _____ start away from the suspected injury
- _____ bones (Tibia, Fibula, Tarsals, Metatarsals, Phalanges)
- _____ squeeze the malleoli
- _____ muscles/tendons
- _____ palpate deltoid ligaments
- _____ palpate lateral ligaments (all 3)



Ankle Evaluation

6. TEST STRUCTURAL INTEGRITY

_____ sensory nerves

_____ motor nerves

_____ circulation

_____ **-Active ROM**

_____ - dorsi, plantar flexion

_____ - inversion, eversion

_____ **-Passive ROM**

_____ - dorsi flexion

_____ - inversion, eversion

_____ - planter flexion

_____ - inversion with plantar flexion

_____ **-Resistive ROM**

_____ - dorsi flexion

_____ - inversion, eversion

_____ - planter flexion

_____ - inversion with plantar flexion

_____ **Special tests**

_____ - anterior drawer test with rational

_____ - talar inversion stress test with rational

_____ - Thompson test with rational

_____ - Kleiger test with rational



Anterior drawer



Talar (inversion stress)



Thompson



Kleiger

Ankle Evaluation

7. TEST FUNCTIONAL ACTIVITY

_____**only if you suspect a mild injury**

_____walk

_____hop 10 times on injured leg (if walking is pain free)

_____jog (if hopping is pain free)

_____run and cut (if jogging is pain free)

Ankle Evaluation

8. DECISION AND ACTION

_____ if it is a mild injury--tape & play

_____ if it is a moderate injury--ICE & rest

_____ if it is a severe--refer to a physician

9. RE-EVALUATE

_____ after ICE, if used

_____ throughout rehabilitation

10. RECORD RESULTS

_____ enter injury report in records

Classification

O'Donohue's Classification of Ligamentous Injury	
Leach's Classification of Ankle Ligament Injury	
Grade I First degree sprain Partial tear of the ligament	<ul style="list-style-type: none"> ■ Mild tenderness ■ Rupture of the anterior talofibular ligament ■ Mild swelling ■ Slight or no functional loss
Grade II Second degree sprain Incomplete tear of the ligament with moderate functional impairment	<ul style="list-style-type: none"> ■ No mechanical instability ■ Rupture of the anterior talofibular and the calcaneofibular ligaments ■ Moderate pain ■ Moderate swelling ■ Mild to moderate ecchymosis
Grade III Third degree sprain Complete tear with loss of integrity of the ligament	<ul style="list-style-type: none"> ■ Rupture of the anterior talofibular and the calcaneofibular and the posterior talofibular ligaments ■ Some loss of motion/function ■ Mild to moderate instability ■ Severe swelling ■ Severe ecchymosis ■ Loss of function/motion ■ Mechanical instability

The 10 Phase Approach To Rehabilitation

Structural Integrity

- anatomical structures are intact
 - surgery
 - immobilization
 - rest

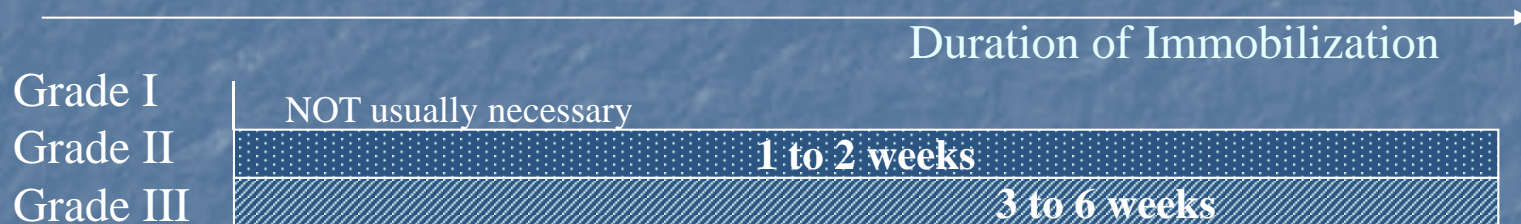


Acute Lateral Ankle Sprain Treatment

R.I.C.E.



Immobilization



Splinting/Bracing



Physical Therapy



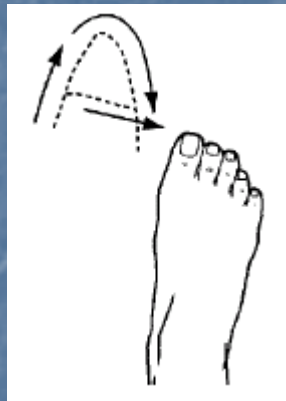
Acute Lateral Ankle Sprain Treatment

Total Duration of Management

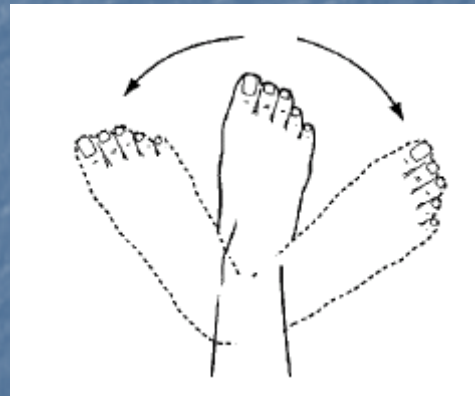


■ Joint Flexibility

- Decreased joint flexibility results from:
 - muscle spasm, pain (Therapeutic exercise with cold)
 - connective tissue adhesions (Therapeutic exercise with heat)
- When 80% of flexibility is restored rehabilitation emphasis moves to the development of muscular strength.



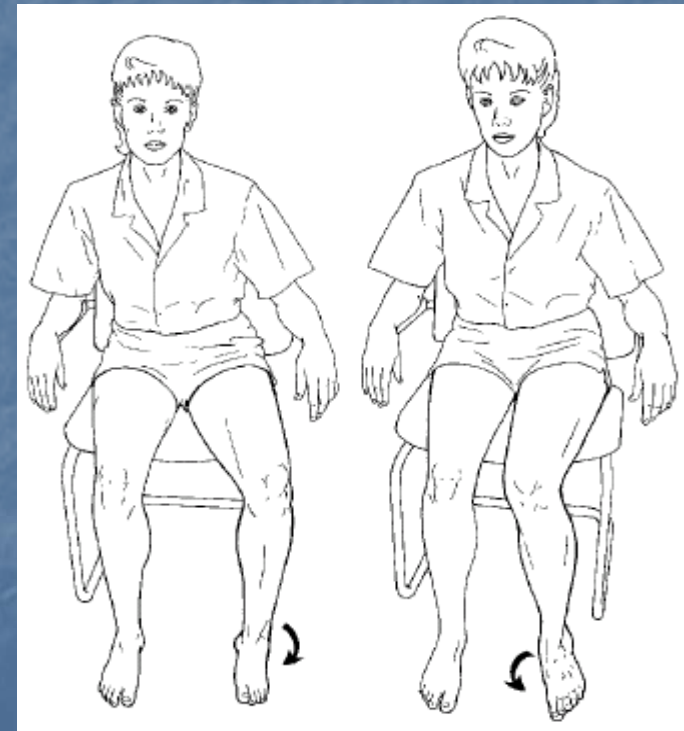
ABCs



Inversion / Eversion



Ankle Pump



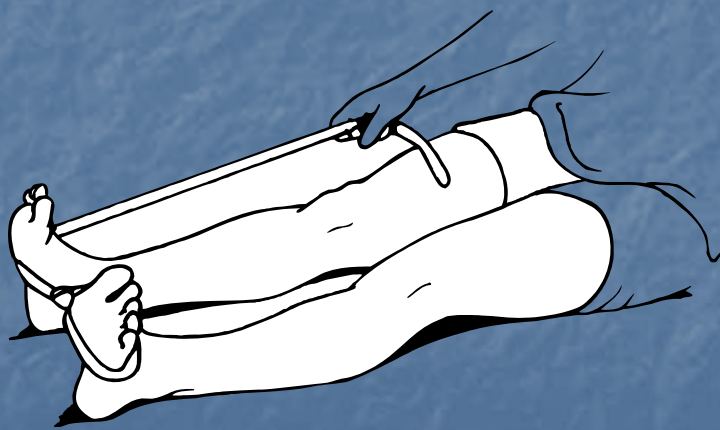
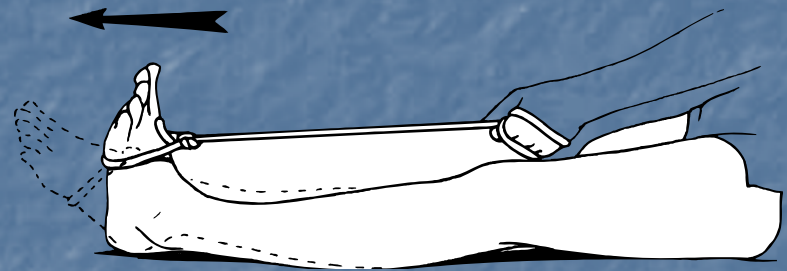
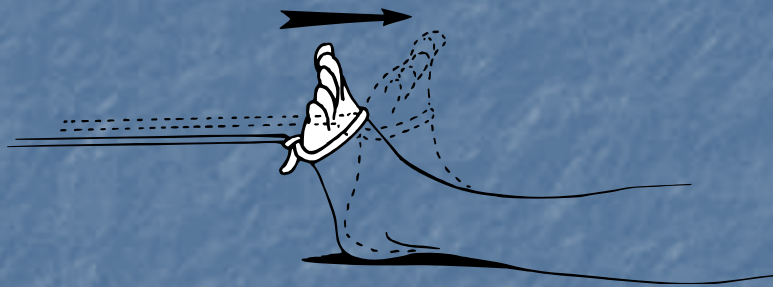
Ankle Circles

■ Muscular Strength

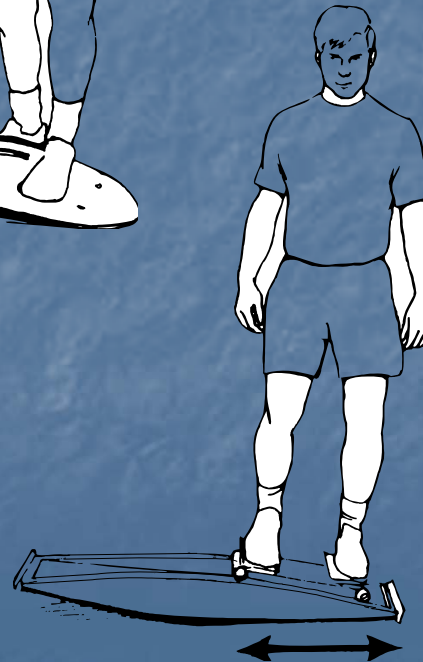
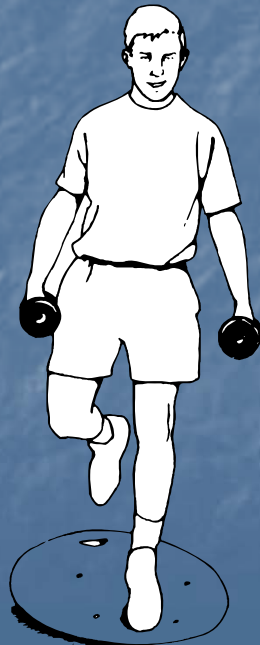
- Must perform a progressive resistive exercise on a regular basis. (DAPRE)
- Each side of the body should be worked independently.
- Once strength in the injured side is 90% of the non-injured side, emphasis moves to the development of muscular endurance.



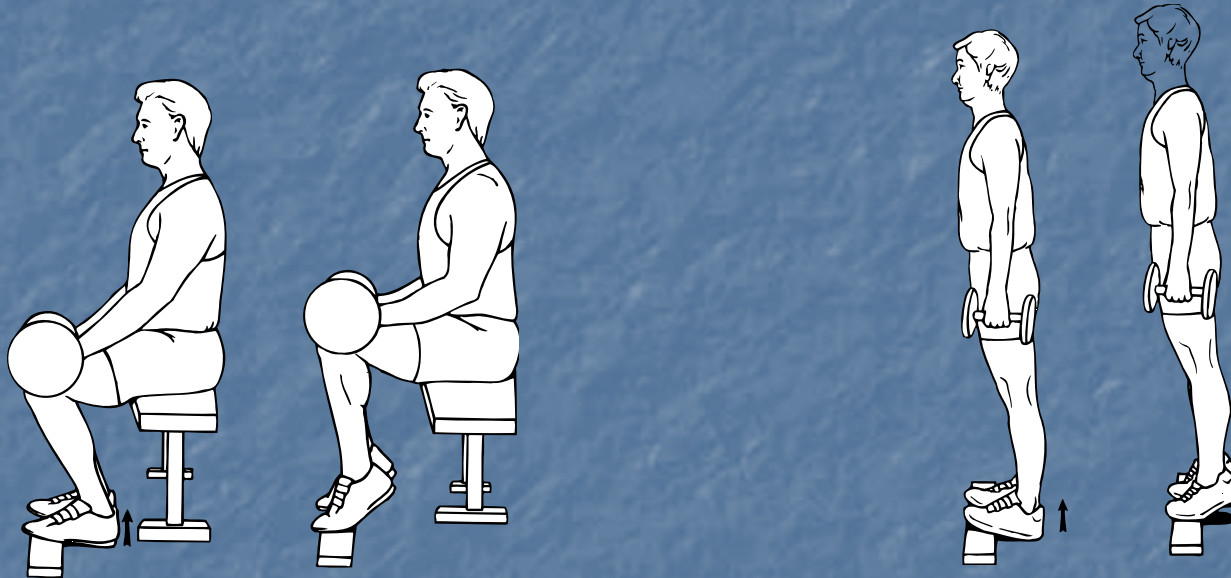
Ankle Strength Exercises



Closed Chain Ankle Strength Exercises

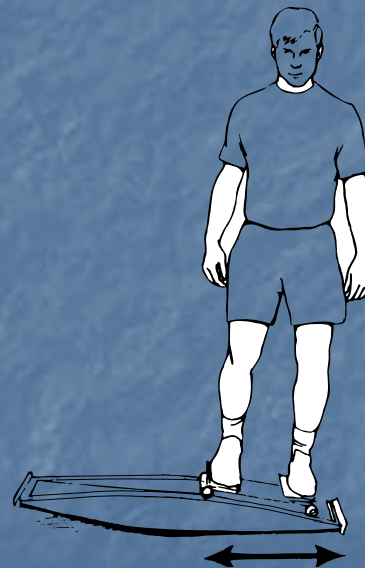


Advanced Ankle Strength Exercises



■ Muscular Endurance

- Stationary bike
- Running when tolerated (jog 400 meters first day and increase by 400 meters each 1 or 2 days)
- When athlete can run 1 mile emphasis should move to next phase



- Muscular Speed
 - high intense stationary bike
 - Cybex
- Muscular Power
 - Isokinetic devices
 - high- speed resistive work

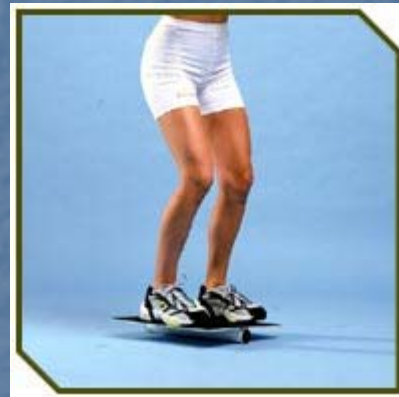
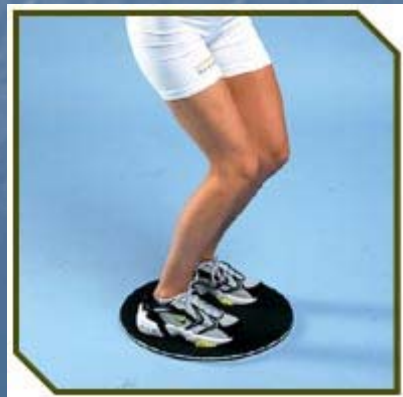


- Skill Patterns

- Participation in team drills at $\frac{1}{2}$ speed
- Sport-specific skill patterns

- Agility

- Participation in team drills at $\frac{3}{4}$ speed to full speed
- skill patterns are performed quickly and speedily



- Cardiovascular Endurance

- develop creative ways to maintain cardiovascular endurance throughout rehab.

