


Implementation of a Foot Core Program



Lindsay Wasserman, DPT, FAAOMPT
Spaulding National Running Center



Weakness, poor motor control, and/or joint limitations may lead to many different foot/ankle pathologies





Focus of treatment is to initially reduce pain, promote foot/ankle strength and restore normal mobility


A strong, flexible foot is a healthy foot that can be resilient to foot related pathology

Foot Core


A series of exercises training the small intrinsic muscles of the foot to help support the arch and promote stability of the foot




Promote use of these muscles as often as possible and then progress the load to the foot as tolerated




Foot Core: Toe Yoga



1. Press the little toes down and lift the big toes up
2. Press the big toe down and lift the little toes up





3. Keep the big toe down and lift all little toes. Bring the small toe down




Foot Core: Toe Spreads

Spread the toes wide, then squeeze them back to together

Focus on the movement from the center of the foot





Consider recommending toe separators to begin working the mobility if challenging




Foot Core: Doming

Activating the muscles of the arch




Stiffen toes, press into the ground


Squeeze the arch, drawing the ball of the foot towards the heel, making the foot shorter, creating an arch




Hold for 10 seconds then relax





Doming Errors



Minimize toe flexion
Minimize over activity of tibialis anterior





Minimize excessive supination


Exercise Prescription


Perform all three foot core exercises together seated for about 3-5 minutes.
Repeat 3-5 times a day

Work to perform these exercises standing throughout the day.
Barefoot - as much as possible

Active Standing







Stand with toes pointing forward or slightly out and dome the feet.


Unlock the knees slightly then squeeze your buttocks. Note what happens at the knees.

Tip pelvis into a neutral position
Draw naval to spine
Pull shoulders down and back.
Draw the chin in

Practice this posture as often as possible


Single Leg Balance





From active standing, pick up one leg and balance. Continue to activate the arch and dome the foot.

Progressions


- Unlock knee, shift weight forward to front of foot and back while maintaining a good arch. Keep the heel on the ground.
- Progress by shifting weight forward to small heel raise (one inch). Control on the lowering down.




Single Leg Balance Variations

Hip Hinge/Single leg deadlift




Hinge at your hip and keep your pelvis parallel to the floor.


Add weight




Unstable surfaces
(airex, BOSU, wedges)




Cable Trunk Rotations





Reach in a circle





Jump rope

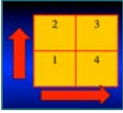
Perform all exercises barefoot

Doming and Hopping Drill


Perform a small hop & land back in your active standing position.


Minimize your knee bend
Maintain knee position
Land soft back in a dome position
Perform barefoot





Progressions:

- Hop forward/back
- Hop side to side
- Increase speed






Focus on well aligned, soft landings


Hopping Drill Continued

Box jumps




Start with small step (4 inches).
Focus on landing light using the feet.

Agility Ladder



Progress the height of boxes
Progress to a box jump down
Add in rebounds and speed


****Perform all exercises barefoot****



Single Leg Hopping Drill


Forward bounds: hop from one leg to the other leg

Progressions:
Travel forward
Travel side to side
Increase speed





Single leg hop in place

Progressions:
Increase speed
Forward/back, Side to side
Focus on height- box jump
Focus on distance




Calf Strength: Calf Raises

Calf raises: performed slow with full ROM


Soleus raises:
perform with knee bent



Use of a stadiometer as a target for full ROM


Goal: 30 full range single heel raises without pain or difficulties before running

Perform 3 sets to fatigue, every other day (depending on symptoms)




Calf Strength: Isometrics

Press up high on both legs, maintain height as you load one leg




Goal: 45 second holds without heel dropping
Progress with weight




Other Extrinsic Exercises

Posterior Tibialis Strength


Press the foot down and inward against resistance
Work eccentrically, slowly allowing the foot to move up and out



Ankle/Toe Strength Combo



Press the foot forward, then slowly press your toes forward, curling them
Slowly extend only the toes, then extend the ankle- all with control



Ankle Mobility: Joint Mobilization


Talocrural mobility: improve ankle dorsiflexion

Talus glides: posterior distraction (glide or manip)




Mobs w/ movement

Distal Fibula mobility



Subtalar joint mobility: improve all directions





Calcaneal distraction Lateral and medial calcaneal glides Post/sup fibula glides

Include midtarsals and metatarsals as needed





Ankle Mobility: Soft Tissue Mobilization

Deep soft tissue mobilization:
 Gastroc/soleus complex
 Posterior tibialis
 Peroneals
 Foot intrinsics and plantar fascia



Instrumented soft tissue mobilization:
 Gastroc/soleus complex to improve ankle DF
 Medial/ lateral lower leg
 Muscle insertions/tendons,
 Foot intrinsics

Ankle Mobility: Self Techniques

Standing calf stretch: toes forward
 Knee straight and bent



Use of lacrosse ball:
 calf, peroneals, post tib, plantar fascia/arch



Mobilization with movement into DF-
 with and without a band




Calcaneal glides




****Performed throughout the day to reduce pain and gain mobility****




Taping: Low Dye


Used for pain control



1. Pt sits with ankle held at 90 degrees DF
2. Anchor strips are placed across metatarsals and around the perimeter of the foot
3. Tear drop technique- from 1st MTP joint wrapping around the calcaneus going lateral to medial then reconnect again to 1st MTP. Repeat at each met moving from 1st to 5th met
4. Horizontal strips placed across the sole of the foot from the metatarsals to proximal calcaneus
5. Seal edges with another perimeter strip around the foot





Use leukotape for longer, lasting effects



Taping: Distal Fibula Head

Mulligan Technique: distal fibula glide posterior/ superior
Used commonly for ankle sprains. Assists in ankle stability. Helps to "re-position" the fibula



1. Patient's foot rests in loose packed position
2. Cover roll is placed from lateral malleolus, wrapping around lower leg landing anterior
3. Place leukotape on lateral malleolus and glide fibula posterior and superior
4. Keep tension in tape as it is wrapped around lower leg
5. Gently lay on top of anterior lower leg
6. Repeat leukotape piece a second time to reinforce


Proximal Considerations

Always consider the kinetic chain
Proximal control will effect foot position


Progress foot exercises to full body exercises with emphasis on stability at the foot and good alignment proximally

Triple flexion, Triple extension



Timing: foot and glut activating together



Thank You



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