

Fashion Footwear Does Not Belong In Medicine Or Fitness



Presented by Dr. Ray McClanahan

DPM, Northwest Foot & Ankle; Creator, Correct Toes

*Webinars made possible by the
MedFit Education Foundation*



Webinar Details

- All listeners are muted to minimize background noise. Only the presenter and moderator will be audible.
- Questions will be addressed at the end of the webinar. Please enter your question(s) at anytime throughout the presentation by using the Go To Webinar “Question” feature in your control panel.
- A recording of the webinar will be made available for future viewing to all MFN members and webinar registrants.

About the Presenter

Dr. Ray McClanahan attended Pennsylvania College of Podiatric Medicine (now Temple University School of Podiatric Medicine). He completed a two-year podiatric, surgical residency in Portland, OR, at Legacy Health Systems and Kaiser Permanente as a Podiatric Physician and Surgeon.



His practice, Northwest Foot & Ankle in Portland, allows him to care for those who find their highest joy when in motion. In his 18 years as a podiatrist, he has learned that most foot problems can be corrected by restoring natural foot function. His professional goal is to provide quality natural foot health services with an emphasis on sports medicine, preventative and conservative options as well as education on proper footwear. He is also the inventor of Correct Toes, silicone toe spacers designed to help rehabilitate feet from the negative effects of conventionally shaped footwear.

Dr. McClanahan is an active runner and athlete. In 1999, he finished 14th in the U.S. National Men's Cross-Country Championships and had a near Olympic Trials qualifying 5,000 meter mark of 13:56 in 2000. He then qualified for the World Duathlon Championships in 2001.

Function Over Fashion:

Fashion Footwear Does Not
Belong in Medicine or Fitness

MedFit Webinar

April 21st 2020





You were born with perfect feet

- At birth, the widest part of the foot is at the ends of the toes
- The toes are spaced, independently strong, and flexible

Newborn Footshape & Sizing

Kaiya Lee
Date born: November 29, 2003
Time: 4:43 am
My last name: Lee
Age: 7 7
Length: 19 1/4
Height: 13 1/2
Shoesize: 14 1/4
Chest: 12 1/2
Mother's name: 568
Telephone: 413-8678

Left Foot Right Foot

Logan's Footwear Co. Inc.
1000 Main St. New Bedford, MA 01905
1-800-541-1111



measuring chart for
**PENNEY'S
SHOES**

8	B WIDTH	C WIDTH	D WIDTH	E WIDTH
7 1/2				
7				
6 1/2				
6				
5 1/2				
5				
4 1/2				
4				
3 1/2				
3				
2 1/2				
2				
1 1/2				
1				
0				

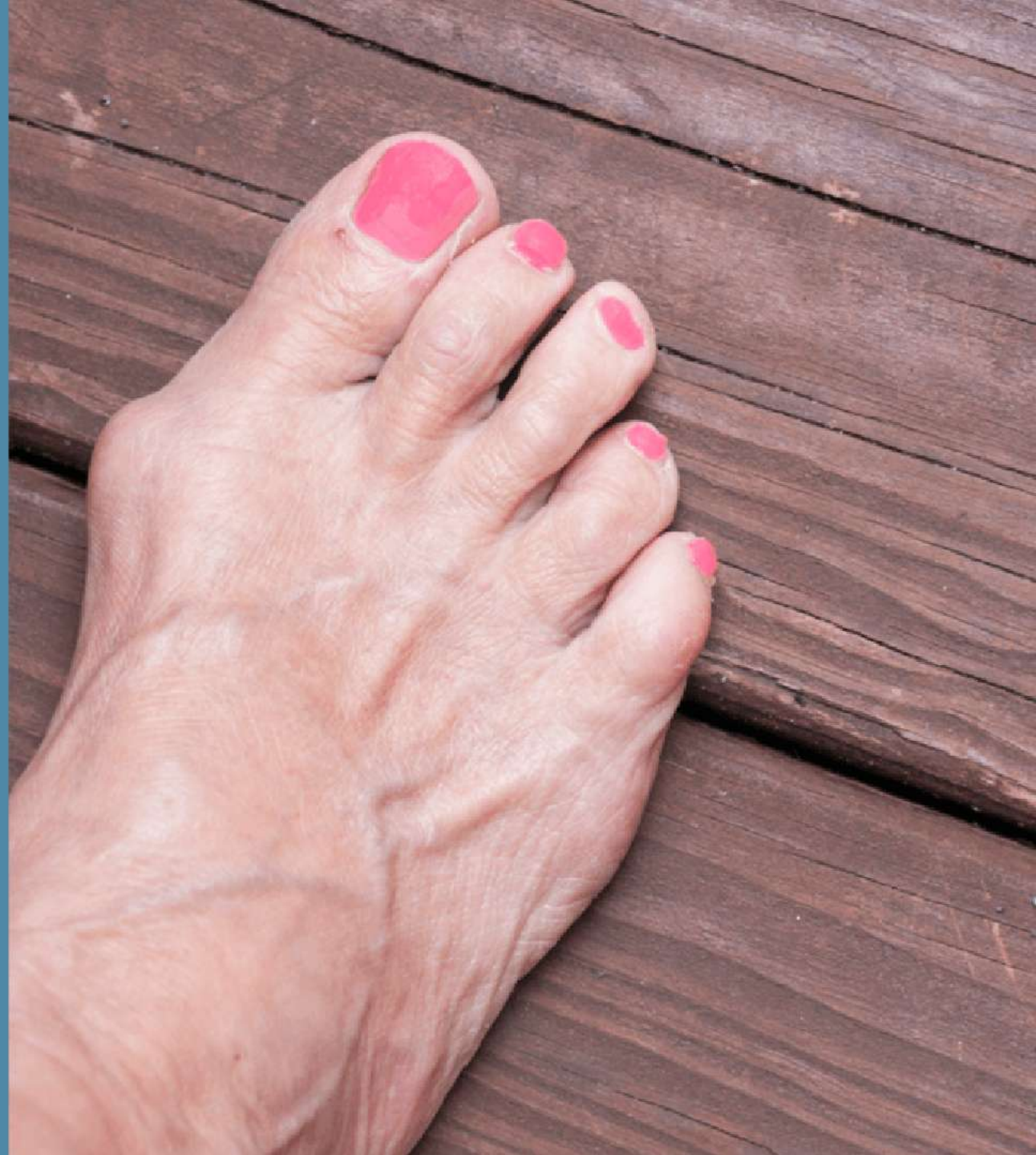
young feet grow rapidly—sometimes as much as a full size in 4 to 8 weeks. USE this chart frequently to be sure shoes are roomy enough for healthful foot development. PENNEY'S will be happy to fit your child accurately when a larger size is needed.

HOW TO MEASURE/place child's right foot on chart with heel and side of foot touching edge of box. The space in which the longest toe rests shows correct length. The space in which the widest part rests shows correct width. No need to add extra room for growth. Proper amount has already been allowed.

PLACE SIDE OF RIGHT FOOT
◀ HERE
PLACE RIGHT HEEL
HERE ▼

Adult Foot Shape

- The widest part of the adult foot shape in industrialized societies is at the ball
- The toes become chronically extended, and scrunched toward midline

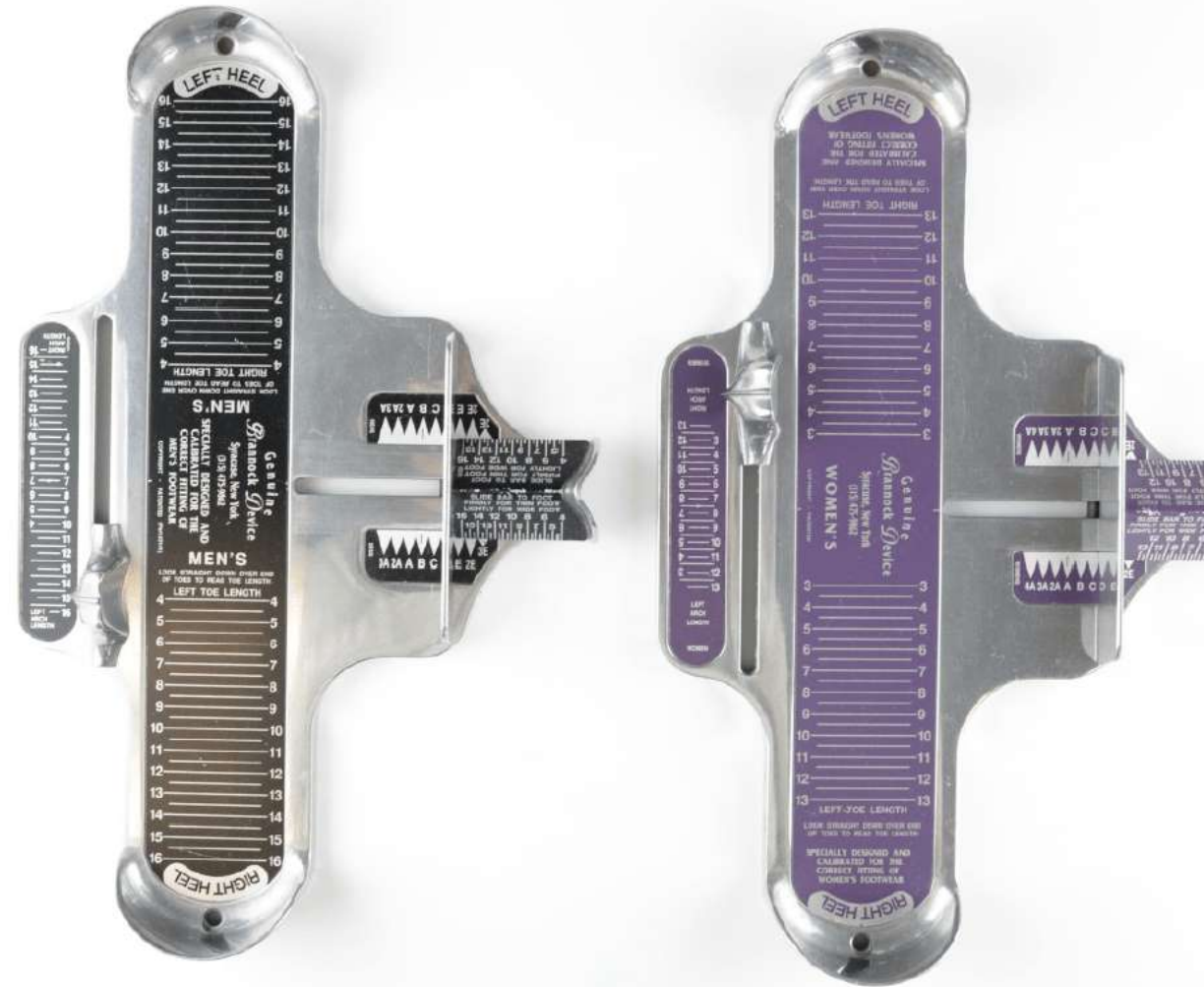


It's Not a Foot Problem It's a Shoe Problem[®]



Brannock Device

- Designed in 1927 and based on the current design of footwear
- Measures width at the ball of the foot
- Continues to be the go-to measuring tool in most footwear stores today



Volumental 3d Imaging



SIZE

MEN

US FOOT SIZE

10.5 2E

LEFT FOOT

10.5 2E

RIGHT FOOT

HEEL TO TOE LENGTH



BALL WIDTH



ARCH HEIGHT

RELATIVE TO MALE POPULATION



Volumental 3d Imaging



Brooks Adrenaline GTS 20
Sizing based on Volumental



Rockport Edge Hill 2
Sizing based on Volumental



Lems Primal 2
Sizing based on the shoe liner test™



Tapered Toe Box

TRADITIONAL
TOE BOX

ALTRA
FOOTSHAPE™ TOE BOX



This unnatural shape squeezes the toes into a point, not allowing for the foot to be positioned naturally.

Foot conditions associated with a tapered toe box:

- Bunions
- Hammertoes
- Neuromas
- Plantar fascia pain
- Overpronation

Rigid Sole

This feature acts like a cast, limiting range of motion in the feet.

Foot conditions associated with a rigid sole:

- Muscle atrophy
- Dependence on orthotics





Rigid Toe Spring

This design can weaken the feet by dorsiflexing the toes (extending the toes upward) and over-stretching the plantar fascia. This feature also over-stretches the intrinsic muscles of the arch.

Foot conditions associated with a rigid toe spring:

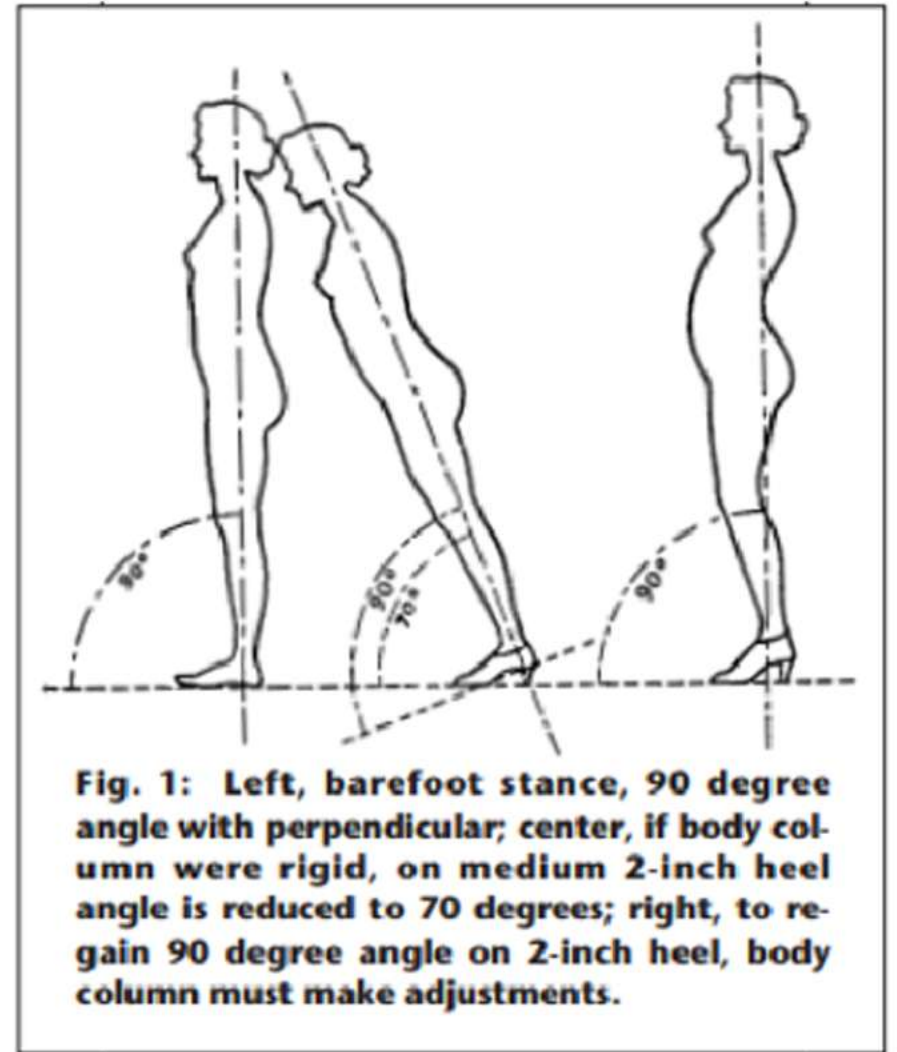
- Shin splints
- Capsulitis
- Sesamoiditis
- Neuroma
- Plantar fascia pain
- Weak arch muscles

Heel Elevation

This feature can change the body's overall alignment.

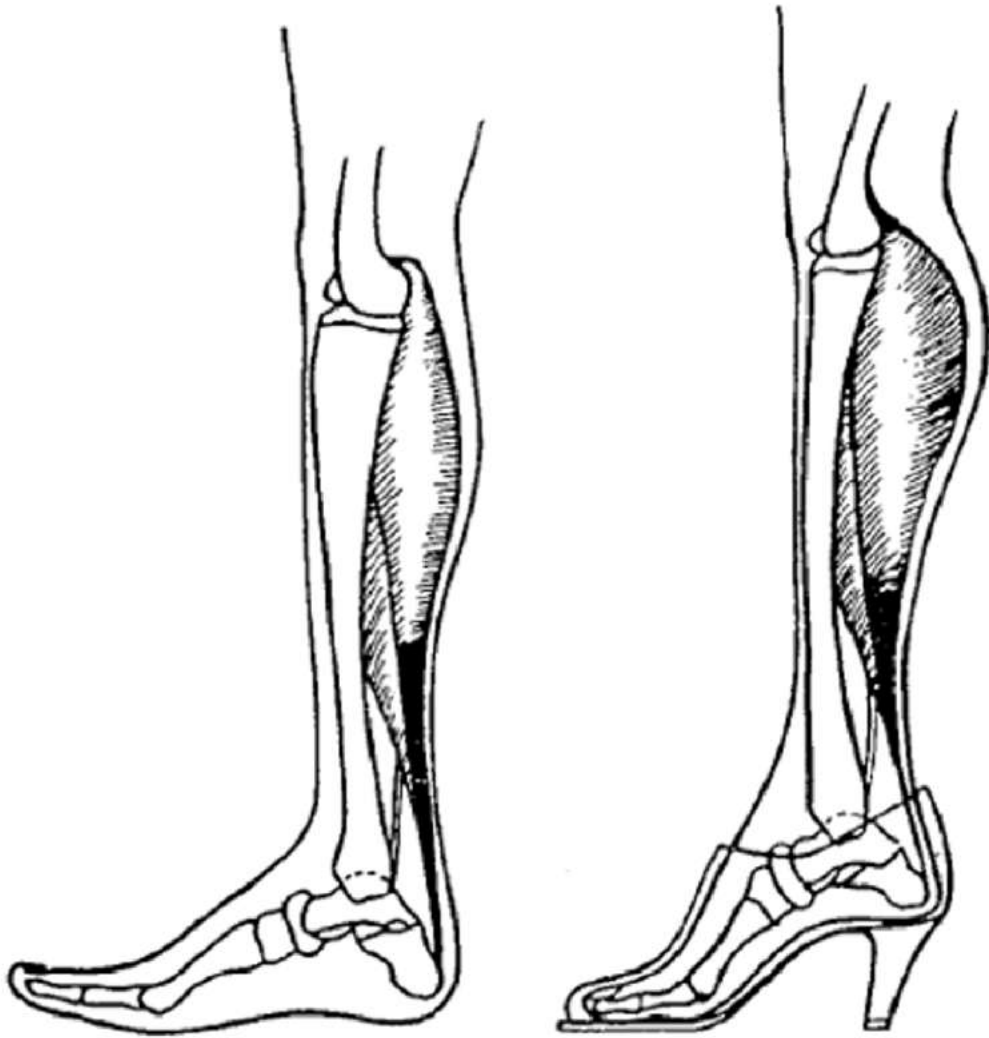
Foot conditions associated with heel elevation:

- Achilles tendonitis
- Achilles tendonosis
- Hammertoes
- Neuromas
- Capsulitis
- Back pain
- Ankle instability
- Decreased balance
- Sesamoiditis
- Increased tendency for inversion ankle sprains



Achilles and Calf Problems

- Elevated heels cause shortened calf muscles
- Retrocalcaneal exostosis (heel spur)
- Retrocalcaneal bursitis/neuralgia



What About Arch Support?

5 reasons to avoid arch supports:

- Artificial arch support weakens foot muscles.
- Weakened muscles leave you more prone to injury.
- Improper alignment and weight distribution.
- Negative affect on athletic performance and endurance.
- Increased weight causes increased oxygen consumption and a decrease in performance.



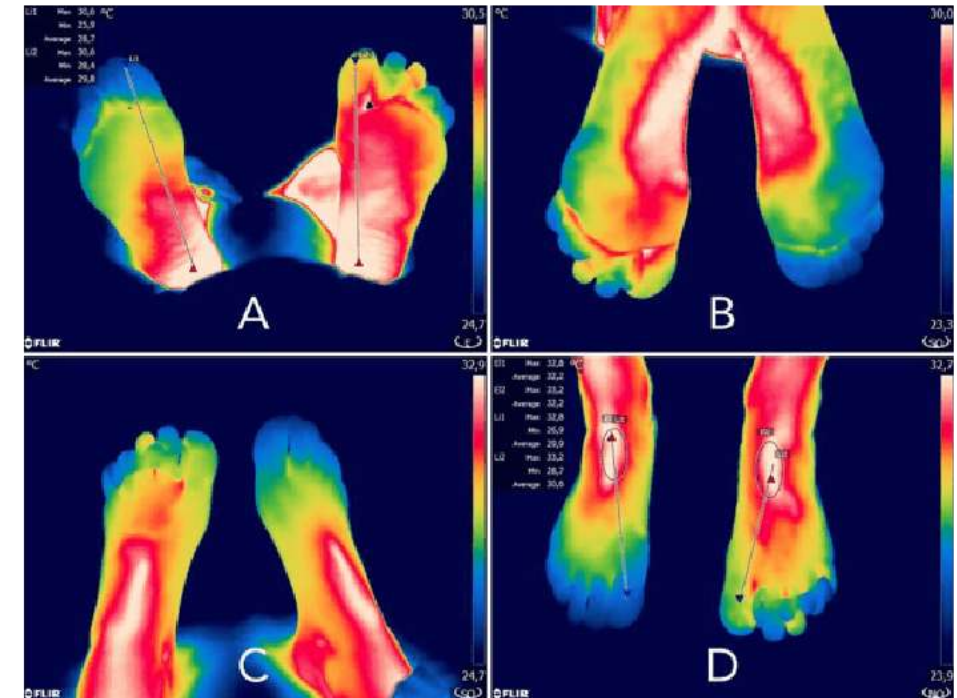
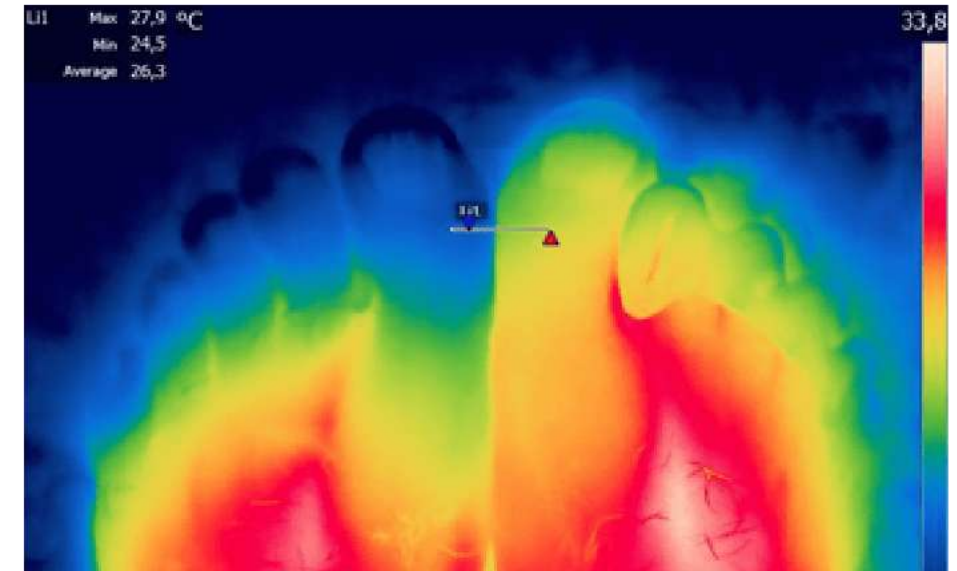
Correct Toes

- Designed to be worn barefoot, over toe socks, or inside of foot-shaped footwear
- Four distinct sizes
- Modifiable for unique feet
 - Shims
 - Removable pieces
- Designed to restore original toe splay and alignment
- Promotes balance and optimal foot and toe circulation



Correct Toes & Circulation

- Infrared images from certified energy auditor in Spain
- Darker/bluer regions represent cooler areas with less blood flow
- Brighter/redder regions represent warmer areas with more blood flow
- Oxygenated blood brings nutrients to the feet; deoxygenated blood carries away harmful metabolic byproducts
- The hallux wearing Correct Toes is 3° C (5° F) warmer
- Reduced plantar fascia circulation can result in plantar fasciosis





Metatarsal Pads

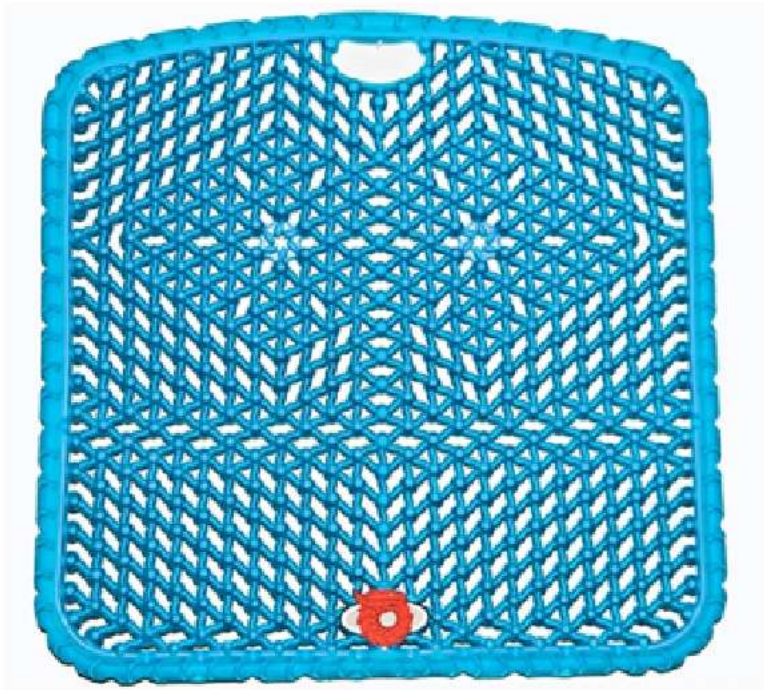
Metatarsal pads help a variety of foot conditions including capsulitis, neuromas, plantar fasciosis, and plantar-plate issues.

- Encourage proper weight distribution
- Help reverse damage from conventional footwear

MoBo Board

- Athletes don't train their feet like they do the rest of their body
- Helps counter rigid shoes with stability features like arch support and motion control that deactivate, weaken, and atrophy foot muscles
- Rocking feature improves dynamic balance and strengthens foot and lower leg muscles
- Activates big toe to generate power and find stability through your arch





Proprioception

Naboso Insoles

- Touch creates an access point between the environment and the brain to better control movement coordination and improve posture
- Improves dynamic stability by optimizing sensory stimulation of the feet leading to activation of the intrinsic muscles of the foot

Vigurus Sp1ke Mats

- Engages proprioception by dynamically reacting to your body's movements
- Promotes proper circulation through constant massage as you stand, eliminates nerve pinching, neutralizes your hips and spine

Foot Exercises

These exercises help strengthen the arch intrinsic muscles and facilitate the process of aligning and restoring your feet

Short Foot Stretch



Hacky Sack Curls



Toe Presses



Toe Extensor Stretch



Toe Spreading



Toe Lifts



Unnatural vs. Natural Footwear



Natural Footwear



Lightweight
without Support
Features



Flat &
Thin Sole



Completely
Flexible



Widest at Tips
of Toes



Shoe Liner
Test™

Lightweight without Support Features

Traditional Support = Immobilization = Atrophy

Campitelli, Nicholas, et al. (2015). Effect of Vibram Five Fingers Minimalist Shoes on the Abductor Hallucis Muscle. *Journal of the American Podiatric Medical Association*. 106, 344-351. doi:10.7547/14-084

Chen, Sze, Davis, & Cheung. (2016) Effect of training in minimalist shoes on the intrinsic and extrinsic foot muscle volume. *Clinical Biomechanics*. 36, 8-13.

Bruggemann, Gert-Peter, Potthast, Wolfgang, Braustein, Bjorn & Niehoff, Anja. (2005). Effect of Increased Mechanical Stimuli on Foot Muscle Function Capacity. *International Society of Biomechanics Conference Paper*.

Johnson, A., Myrer, J., Mitchell, U., Hunter, I., & Ridge, S. (2016). The Effects of a Transition to Minimalist Shoe Running on Intrinsic Foot Muscle Size. *International Journal of Sports Medicine*. 37(2), 154-8.



Length-Tension Relationship

Overly Flexed Joints



Mild Amount of Flexion



Too Much Straightening



Dicharry, J. (2012), *Anatomy for runners: Unlocking your athletic potential for health, speed, and injury prevention*. New York: Skyhorse Pub.

Flat with Thin Sole

A completely thin flat sole distributes body weight evenly, preserves the muscle length-to-tension relationship and promotes balance and stability.

Hoffman, Phil M.D. (1905). Conclusions Drawn from a Comparative Study of the Feet of Barefooted and Shoe Wearing Peoples. *The American Journal of Orthopedic Surgery*. 3(2), 105-135.

Cucuzzella, M., Kerrigan, C., Maffetone, P., McClanahan, R. (2013) How Healthy Are Your Feet? Conclusions Drawn from a Comparative Study of the Feet of Barefooted and Shoe Wearing People. Retrieved from <https://drive.google.com/file/d/0B97zEvxcXTnualloIU9XanE5N0E/edit>

Completely Flexible

A flexible sole enables feet to respond to the ground with a smooth and balanced gait. It encourages muscle contraction and activation, leading to muscular adaptations and strength gains.





Widest at Tips of Toes

A natural shaped toe box allows the toes to splay, which encourages vital blood flow, proper nerve function and a wide base for balance and strong arch muscles.

Shoe Liner Test™

Since shoes are made all over the world, sizes are not consistent across brands. The Shoe Liner Test is a helpful way to determine if a shoe will fit your foot.



1.) Remove Shoe Liner



2.) Stand on Liner



3.) Leave Some Space



4.) No Liner? Stand on Shoe



Basic Shoe Fitting Tips

Use the Shoe Liner Test™ to evaluate current footwear and when purchasing new footwear

Easy shoe modifications:

- Remove the shoe liner for more room.
- Re-lace shoes for better fit across the forefoot.

Recommendations:

- Fit feet at the end of the day or after exercise.
- Always should be standing when getting fitted.

Transitioning to Natural Footwear

A slow transition will be necessary to allow the foot muscles to strengthen.

- Remove the shoe liner for more room.
 - Little to no heel elevation or toe spring
 - More stack height than most natural footwear
 - A wide toe box that allows for natural toe splay
 - Typically less flexibility in the sole

Unnatural Shoe



Transition Shoe



Natural Shoe





Natural Footwear Examples

- Altra Solstice XT
- Ahinsa Bindu Comfort Ankle Boot
- Lems Primal 2
- Vivobarefoot Primus Knit Lux
- Softstar Hawthorne Chukka
- Xero Shoes TerraFlex



Correct Toes

Website: <https://www.correcttoes.com>

FaceBook: <https://www.facebook.com/correcttoes/>

Instagram: @correcttoes

YouTube: <https://www.youtube.com/correcttoes>



Northwest Foot & Ankle

Our progressive sports podiatry clinic located in Portland, OR.

Website: <https://www.nwfootankle.com/>

FaceBook: <https://www.facebook.com/nwfootankle>

Remote Consultations: <https://www.nwfootankle.com/remote-consultations/>

Healthy Feet Alliance

The Healthy Feet Alliance is uniting the doctors, health specialists, influencers, enthusiasts, and footwear companies who are leading the charge in changing how the world approaches foot health and footwear. Please join us on our mission to rid the world of foot pain through education and functionally designed foot products.

Website: <https://healthyfeetalliance.org/>

FaceBook: <https://www.facebook.com/healthyfeetalliance>

FaceBook Group: <https://www.facebook.com/groups/HealthyFeetCommunity/>

Instagram: @healthyfeetalliance



Upcoming Webinar

Your Lifespan vs. Your Diseasespan: Where Do You Fall?



Presented by Dr. Jim Herkimer

CEO and Executive Director at Sports Conditioning
and Rehabilitation (SCAR)

LIVE PRESENTATION: Tuesday, April 28, 10:00am PST

Registration will be available on medfitclassroom.org.

MedFit Network members: access **free** registration via your account dashboard

Upcoming Webinar

Eat Well, Live Well, Age Well: Living Life to the Fullest Everyday



**Presented by
Patricia Greenberg-Grunfeld**

Nutritionist, Chef, and Wellness Educator

LIVE PRESENTATION: Tuesday, May 5, 10:00am PST

Registration will be available on medfitclassroom.org.

MedFit Network members: access **free** registration via your account dashboard

The Exclusive CBD Partner & Provider for MedFit



- A physician-created and led company
- Premium 0.00% THC CBD products you can trust
- Lab tested and recommended by medical professionals
- Unmatched quality and pricing
- Become a Legacy Wholesale and Health Professional Affiliate today!
- Inquire by emailing:
wholesale@santetherapeutics.com
- Visit us @ santetherapeutics.com

For 30% OFF Use Code:
MedFit30



A close-up, vertical view of the red sole of an Altra running shoe. The sole features a series of deep, curved grooves that mimic the natural arch and shape of a human foot, designed for cushioning and support. The background is a blurred outdoor scene with green foliage.

EXPERIENCE THE ALTRA DIFFERENCE WITH SHOES SHAPED LIKE FEET

MEDFIT NETWORK MEMBERS RECEIVE
50% OFF ALTRA SHOES. LOG IN OR
JOIN TO CLAIM YOUR DISCOUNT!
[MEDFITNETWORK.ORG](https://medfitnetwork.org)

Access Past Webinars on MedFit TV

Find recordings of all past Foundation webinars on the MedFit TV. Monthly or annual subscriptions available.

MedFit Network (MFN) members receive a free annual subscription to MedFit TV! Find access instructions on your MFN account dashboard.

MedFitTV.org



MFTV
medfitTV.org

Thank you!

Question and Answer Segment

Please type your question in the questions box to be answered by the presenter.

For More Info or Questions
Email: ivy@medfited.org

