

Down Syndrome and the Effects on the Feet

Dr. Lorri Riley

Lorri A. Riley, DPM

- ▶ Podiatrist with over 32 years of experience
- ▶ Became a podiatrist due to her flat feet
- ▶ Invented and patented ThinNail and j1 insoles (OTC insoles for flat feet)
- ▶ Manufacture and Market j1 insoles - booth at convention
- ▶ Surgically trained
- ▶ Nephew with Down syndrome - Micah Albonico



Nail and Skin Issues

Ingrown and/or Thick Nails

Sweaty Feet

Athletes Foot

Callouses

Warts



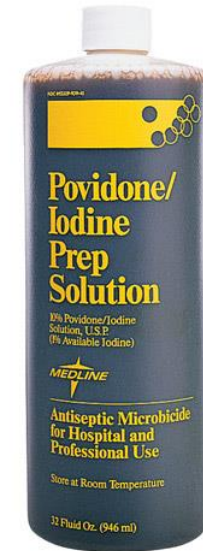
Nail Problems



Thick Nails



Sweaty Feet/Athletes Foot



LISTERINE FOOT SOAK

1 cup vinegar
1 cup original Listerine (Thymol)
Warm water to fill basin over feet

Anti-perspirants with aluminum

Ingredients

1 cup White plain vinegar
1 gallon of warm water
2 tablespoon of Epsom salt
Few drops of essential oil
Foot basin
Pumice stone



Callous
Porokeratosis
Warts



Corns

Effects on the Feet

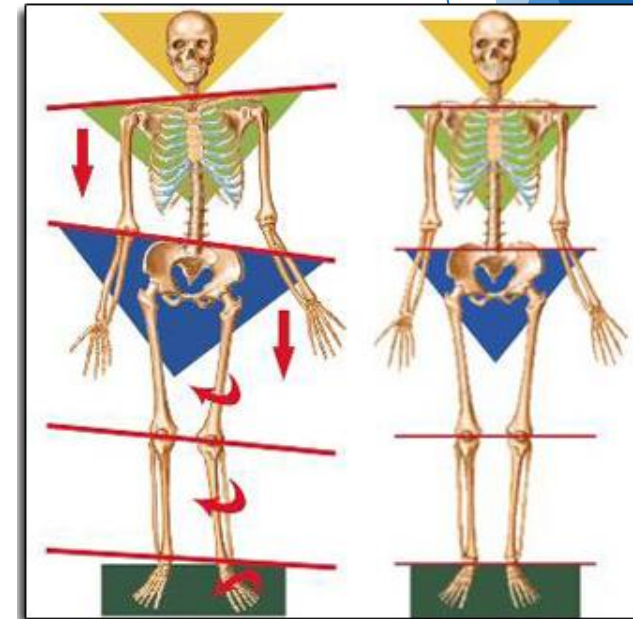
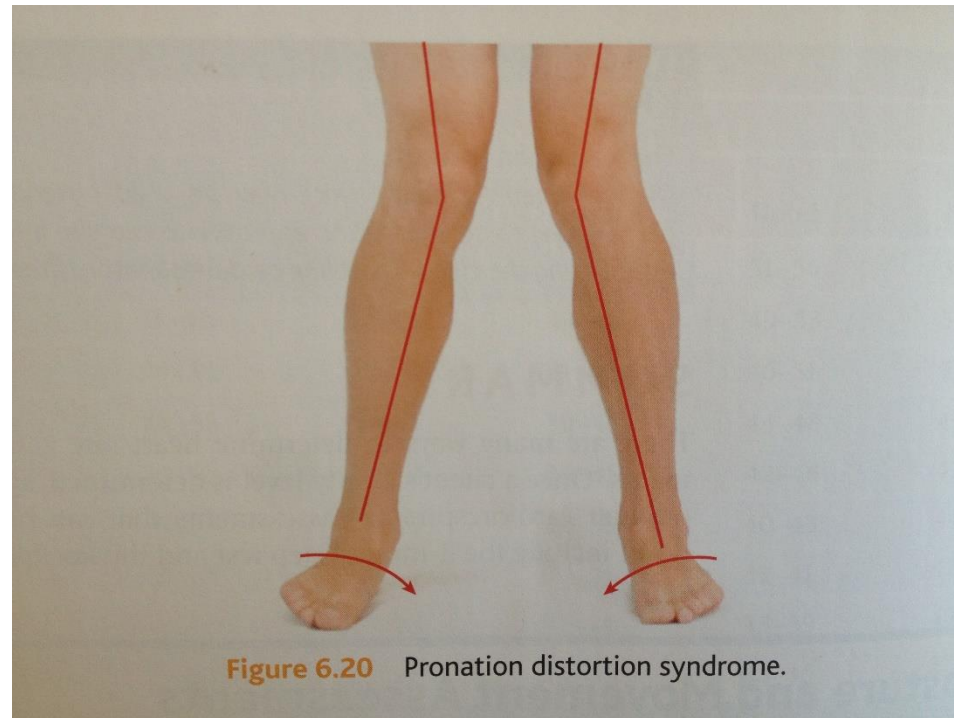
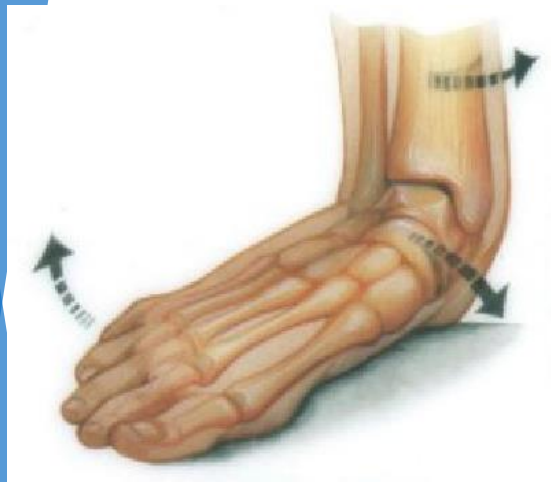
- ▶ Chromosome 21
- ▶ Hyper-flexibility
- ▶ Flat Feet/Pronation
- ▶ Plantar Fasciitis
- ▶ Hammer Toes
- ▶ Neuromas
- ▶ Bunionette/Tailor's Bunion
- ▶ Bunions
- ▶ Ankle/Knee/Hip Problems

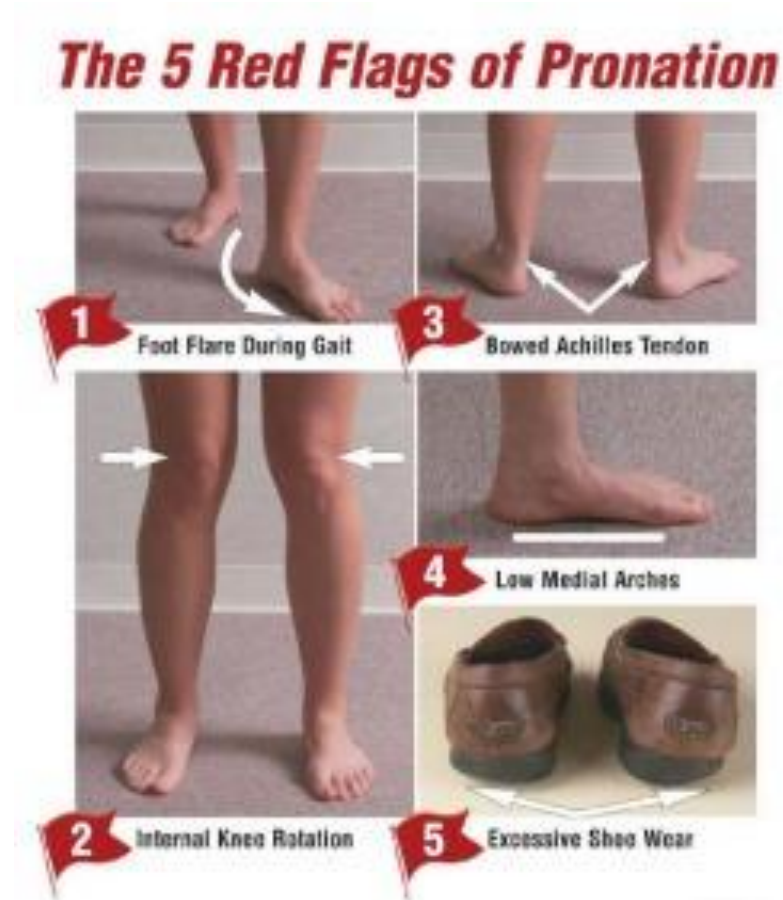
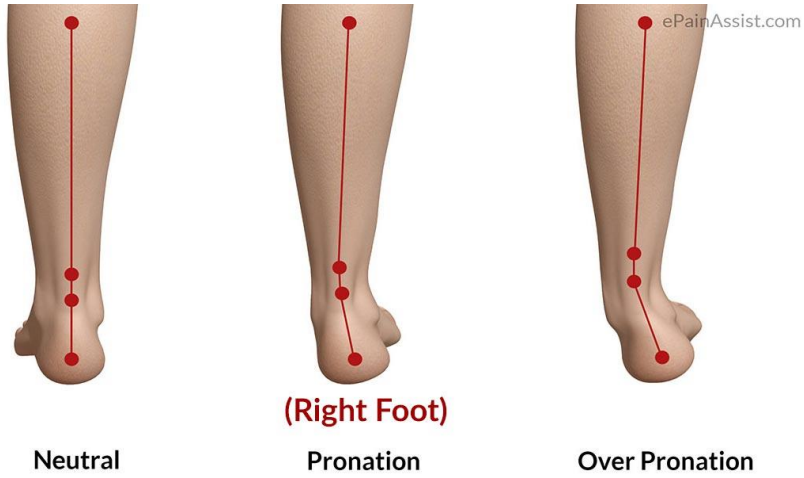
CHROMOSOME 21

- ▶ Chromosome 21 is the gene associated with Down syndrome and the gene that makes collagen.
- ▶ Collagen is the major protein that makes up ligaments, tendons, cartilage, bone and the support structure of the skin. The resulting effect in people with DS is increased laxity or looseness of the ligaments.
- ▶ Ligamentous laxity is hyper-flexibility.

Hyper-flexibility

Ligamentous laxity causes pronation/flat feet. When the feet flatten out, the leg internally rotates causing shin splints. This rotation also occurs at the knees and hips causing knee, hip and back problems.





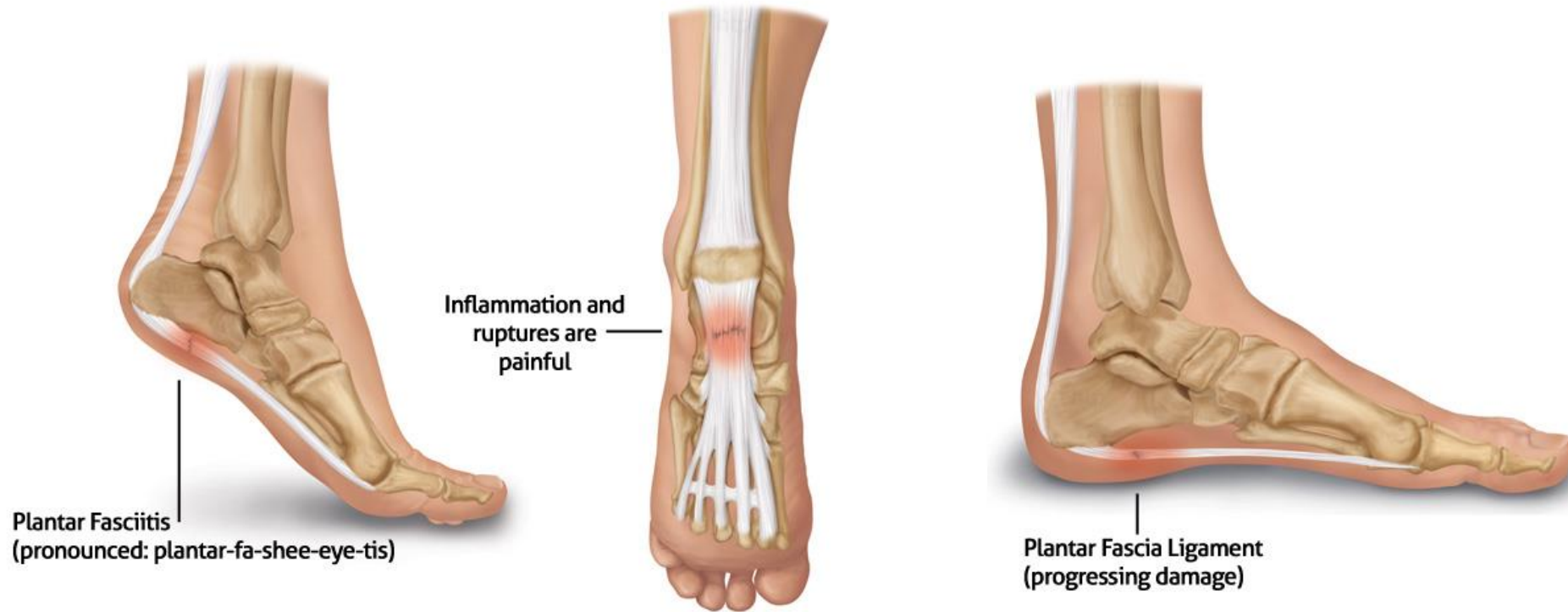
Flat Feet/Pronation

Flat Feet/Pronation



Flat feet 3rd degree, total collapse of the arch

Plantar Fasciitis



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- ▶ Plantar Fasciitis is an inflammation of the tendon on the bottom of the foot.



Hammer toes

Crest pad

Toe Straightener



Neuromas

When the nerve is pinched it causes inflammation and sometimes scarring of the nerve. This can cause a “tumor” or “oma” of the nerve but this is actually scar tissue. This causes a numbness, shooting pains into the toes, achiness and/or zingers.



***MORTON'S
NEUROMA
PAIN!***



Bunionettes/Tailor's Bunion



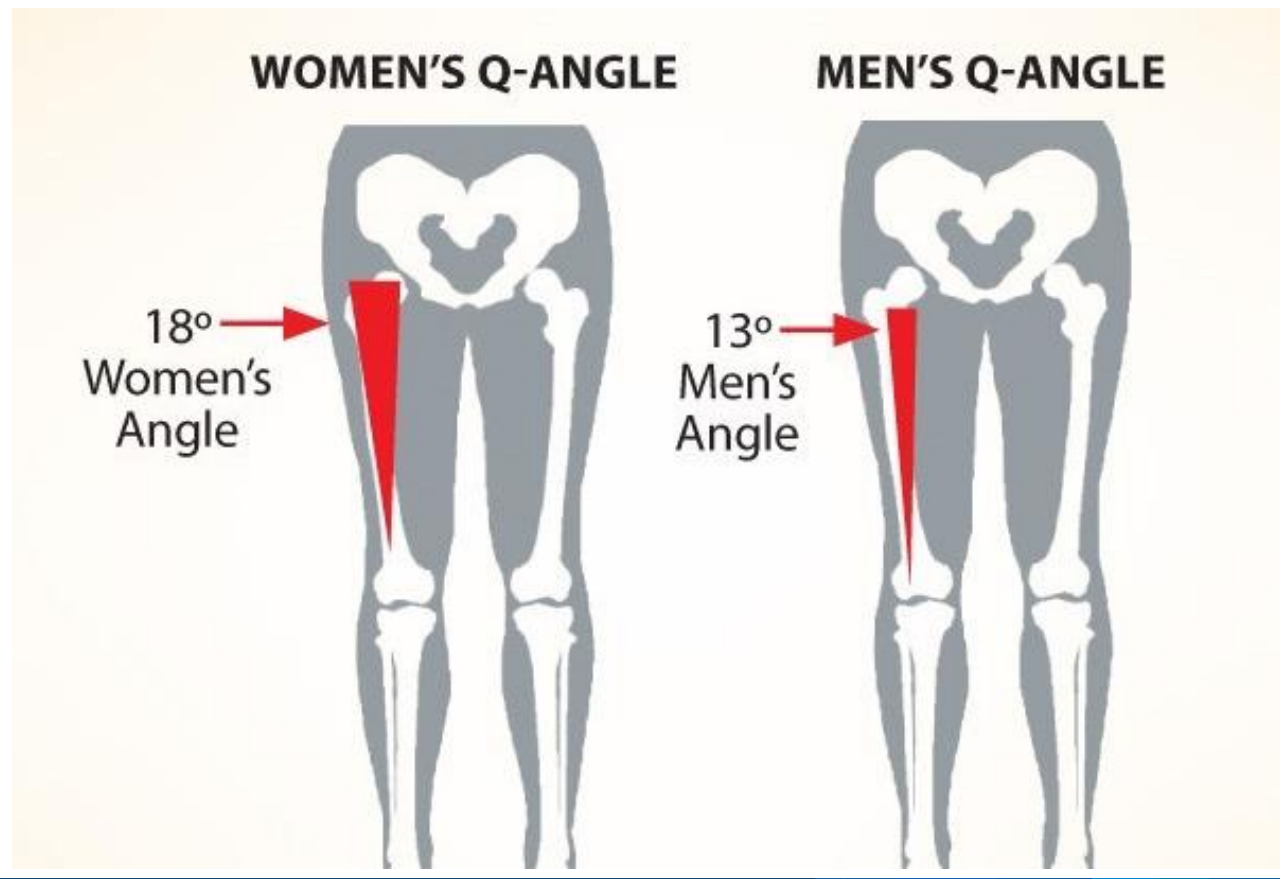
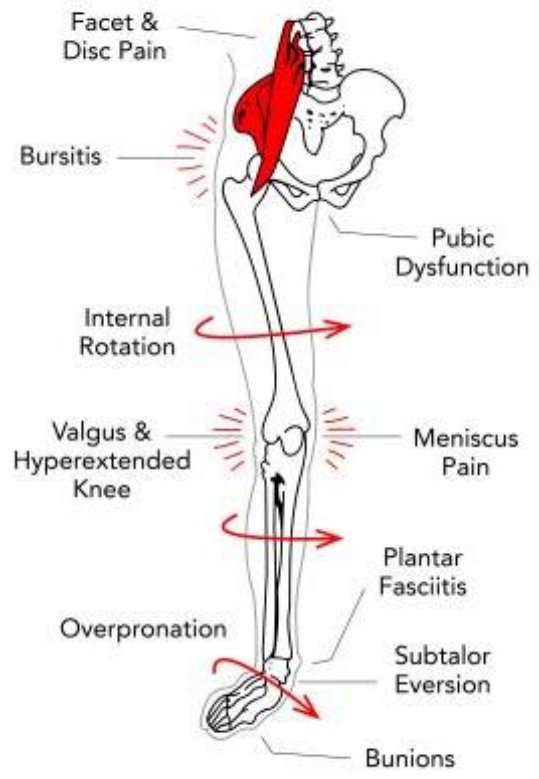


Bunion



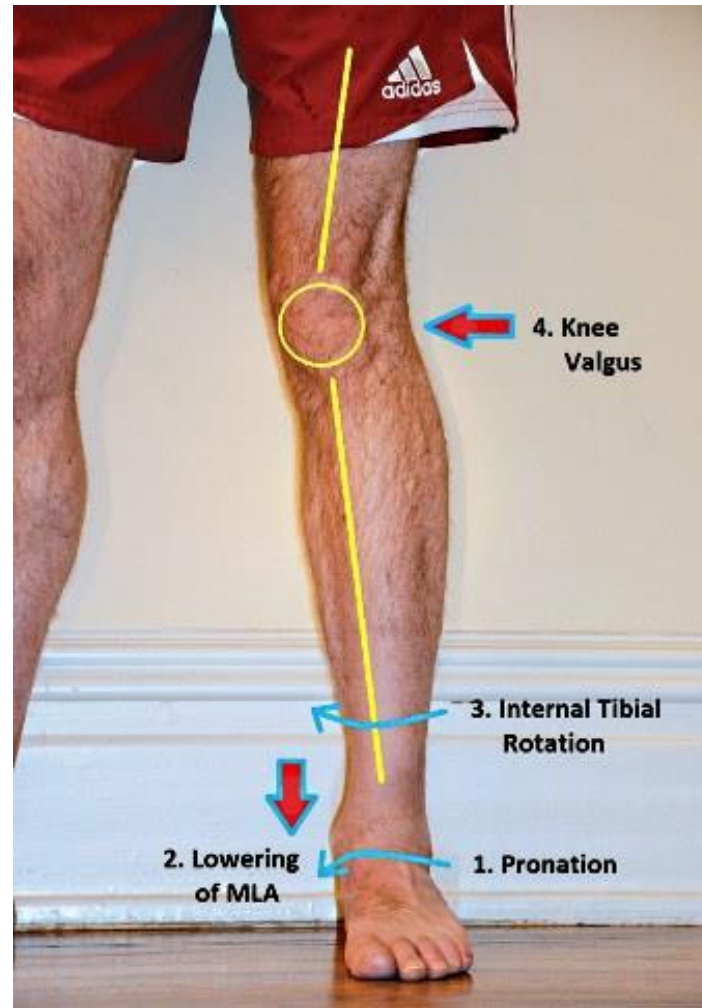


Bunion Surgery



Ankle/Knee/Hip/Back Pain

Shin Splints/Knee Issues



Treatment Options

Shoes

Braces

OTC (Over the Counter) Arch
Supports

Prescription Orthotics

Surgery

SHOES



Braces for Ankle Instability





Before | After

Qualities of Corrective Arch Support

1. Entire length of arch
2. Supportive Material
3. Correction at forefoot-varus for flat feet/pronation
4. Deep heel cup



Patented 3 Point Correction for FLAT FEET

(Moderate to Severe Pronation)



j1 insoles

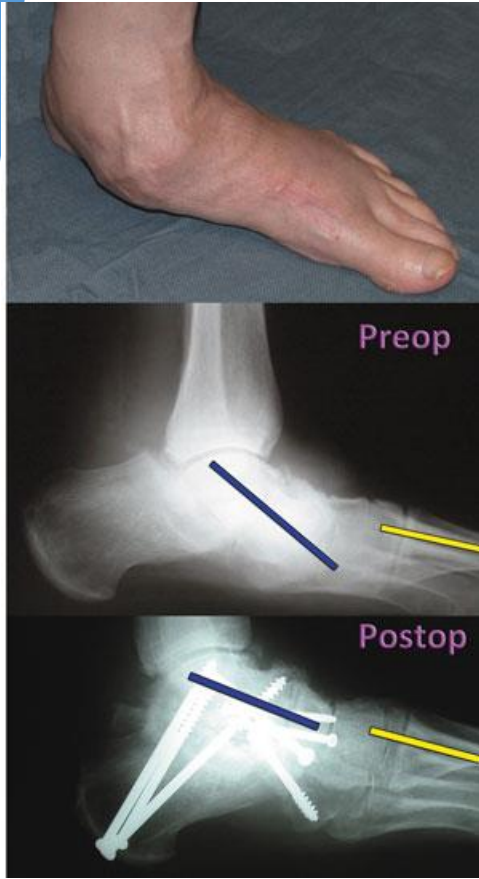




Prescription Orthotics

Surgery for Mild to Moderate Pronation-- Flexible Flat Foot





Surgery for moderate to severe pronation



Thank You!

Questions?

EXPLORE LIFE