

# The Practitioner's Guide to Foot Types and Basic Orthotic Modifications



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## Severe 'Pes Cavus' "Rigid High Arch Feet"



### Characteristics

- Propels forcefully from 1<sup>st</sup> metatarsal
- Pressure/callus formation at heads of 1<sup>st</sup> and 5<sup>th</sup> metatarsal
- Very narrow or even cross-over gait
- Significant Supination
- Very poor shock attenuation



### Possible Clinical Indications

Peroneal Tendonitis	Base of the 5 <sup>th</sup> Metatarsal Pressure
Heel Pain	Back Pain
Sesamoiditis	Hammer Toes
Significant Supination	Narrow or crossover gait
Knee Recurvatum	Poor shock attenuation

### Orthotic Fabrication Elements

1 <sup>st</sup> Metatarsal Head Cutout	Lateral Rear Foot Posting
High Lateral Flange and/or heel cup	Heel posting based on degrees of equines

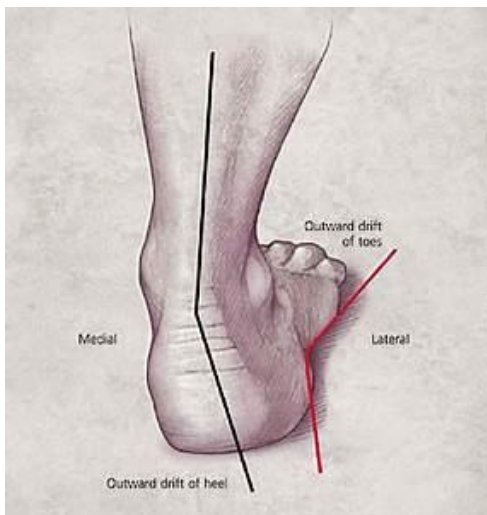


## Severe 'Pes Planus' "Flat Feet"



### Characteristics

- Lateral Column Instability
- Callus formation sub 2-4 Mets and Lateral 5<sup>th</sup>
- Rear foot valgus/forefoot varus (or supinatus)
- Hyper-flexible
- Internal knee rotation
- Wide Gait



### Possible Clinical Indications

Plantar Fasciitis	Splay Foot
Posterior Tibial Tendonitis	Subfibular impingement (Pain in outside ankle inferior to lateral malleolous)
Patellor femoral syndrome/general knee pain	Bunions/Hammer Toes, Claw toes
Significant Pronation	Tarsal Tunnel Syndrome

### Orthotic Fabrication Elements

Deep Heel Cup (shoe recommendations)	Forefoot and Rearfoot Medial Posting
1 <sup>st</sup> Metatarsal Head cutout (this may activate Peroneal Function)	Medial Skive

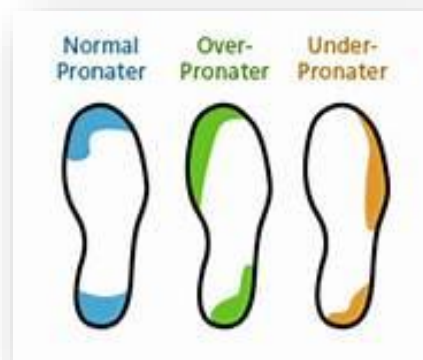


## Subtle Cavus Foot “The Under-Pronator”



### Characteristics

- Toe Out Gait
- Ambulate on lateral border of foot
- Toes of Medial Hallux
- Moderate Rear foot inversion/Peekaboo heel
- Lack of ROM at subtalar joint
- Medium Arch



### Possible Clinical Indications

Lateral Hip Pain	Discomfort of Straightening feet (causing hip pain)
Retrocalcaneal Bursitis	Illiotalibial Band Syndrome/Pain
Lower Back Pain	Possible Haglund’s Deformity

### Orthotic Fabrication Elements

Medium Arch	Medium to Deep Heel Cupping
Neutral Posting	Medial Skive

*\*The Coleman Block Test is an excellent method to test subtalar joint ROM*



## Abductovarus Forefoot “The Reverse Lasted Foot”



### Characteristics

- Toe-Out Gait
- Crossover Gait
- Moderately low arch
- 5<sup>th</sup> MTH pivot like movement
- Pivot like motion of medial heel
- Rigid varus rearfoot and forefoot
- Pressure and callusing and 1<sup>st</sup> and 5<sup>th</sup> MTH



### Possible Clinical Indications

Shin Splints	Osgood Schlatter Disease in children
Plantar Fasciitis	Knee Pain
Bunionette (Tailor’s Bunion”)	Sever’s Disease
Forefoot Aquinus	Cuboid Sndrome
Plantar Keratosis	Morton’s Neuroma

### Orthotic Fabrication Elements

Medial rear-foot Flare	1 <sup>st</sup> MTJ relieve (depression not cut-out)
5 <sup>th</sup> MTJ cut-out	Medial rear-fore foot posting



## Traditional Pedorthic Modifications



	<p><b>1st Ray Cutout</b>            Angled grind of distal medial shell from lateral 1st met head to distal edge of navicular. Indicated for plantar flexed 1st ray, supinators and hallux limitus.</p>		<p><b>1st Met Cutout</b>            A 45° angle to distal medial edge under 1st met head. Indicated for functional hallux limitus and supinators.</p>
	<p><b>Medial Flange</b>            Raised medial trim line of orthotic shell to support MLA. Indicated for severe pronation, and strong midfoot evertors.</p>		<p><b>Lateral Flange</b>            Raised lateral trim line of orthotic shell to support LLA. Indicated for supinators and limits inversion sprains.</p>
	<p><b>Heel Hole</b>            Standard 1" hole centrally located in heel cup with poron plug. Indicated to accommodate heel spurs and plantar fasciitis where spur padding would be too thick.</p>		<p><b>Arch Fill</b>            Soft 35 durometer or firm 55 durometer padding laminated to plantar aspect of shell. Indicated to add rigidity to MLA of shell and/or add shock absorption.</p>