

# QUADRASTEP SYSTEM®

The QUADRASTEP SYSTEM® is based on a clinical algorithm\* identifying 24 unique foot types. These 24 foot types are subdivided into 6 groupings of 4, known as "QUADS". Each QUAD has its own very specific foot and gait characteristics.

Why Treat all feet the same?

An individual's foot type (quad type) can influence not only how they walk, but the conditions and pathologies that may afflict them throughout their lives. Unlike other pre-fabricated orthoses that have a "one-shape-fits-all" limitation, the QUADRASTEP SYSTEM® offers a more tailored solution for each foot type.

24 FOOT-TYPE ASSESSMENT MODEL

REARFOOT VARUS DEFORMITIES

UNCOMPENSATED VARUS      COMPENSATED VARUS

LARGE      MEDIUM      SMALL

#1 #2 #3 #4

#5 #6 #7 #8

#9 #10 #11 #12

#13 #14 #15 #16

#17 #18 #19 #20

#21 #22 #23 #24

A B C D E F

LARGE      SMALL

SMALL      LARGE

SMALL      MEDIUM      LARGE

FOREFOOT VALGUS DEFORMITIES

NEUTRAL FOREFOOT

FOREFOOT VARUS DEFORMITIES

\*U.S. Patent No. 7,789,840

LEFT FEET SHOWN ABOVE

# THE QUADRASTEP SYSTEM®

## A

### SEVERE PES CAVUS

**GAIT**

Propels forcefully from 1<sup>st</sup> Metatarsal

LARGELY INVERTED HEEL ALIGNMENT

- Poor Shock Attenuation
- Excessive Supination
- Narrow or Cross Over Gait

LARGE EXTERNAL TIBIAL/FIBULAR ROTATION

CAVUS / HIGH ARCH

VALGUS FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## B

**KEY ORTHOTIC FEATURES**

- Lateral Forefoot Posting
- 1<sup>st</sup> MTH Cut-Out
- Deep Lateral Heel Cup
- Equinus Correction
- Great for Ankle Instability!**

**POSSIBLE CLINICAL SYMPTOMS**

- Lateral Ankle Instability
- Peroneal Tendonitis
- Heel Pain
- 5<sup>th</sup> Metatarsal Base Pressure
- Lower Back Pain
- Sesamoiditis, Claw Toes
- Knee Recurvatum

**KEY ORTHOTIC FEATURES**

- Medial RF Posting
- Intrinsic Lateral FF Posting
- Mild Medial Skive
- Great for In-Toeing!**

## B

### MILD PES PLANUS

**GAIT**

Toe In Gait

MILDLY INVERTED HEEL ALIGNMENT

- Pronates through Mid-Stance
- Re-supinates in Propulsion
- Propels off 1<sup>st</sup> and 2<sup>nd</sup> MTH's

MILD-MODERATE INTERNAL TIBIAL/FIBULAR ROTATION

LOW-MEDIUM ARCH

VALGUS FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## C

**KEY ORTHOTIC FEATURES**

- Toe-In Gait
- Neuromas
- Sesamoiditis
- 1<sup>st</sup> Ray Hypermobility
- Sacro-Iliac Pain
- Often Unilateral if Associated with Leg Length Inequality

**POSSIBLE CLINICAL SYMPTOMS**

**KEY ORTHOTIC FEATURES**

- Medial RF Posting
- Intrinsic Lateral FF Posting
- Mild Medial Skive
- Great for In-Toeing!**

## C

### NEUTRAL FOOT

**GAIT**

Toe Out Gait

MODERATELY INVERTED HEEL ALIGNMENT

- Poor Shock Attenuation
- Restricted STJ Pronation
- Propels off Medial Hallux

NORMAL EXTERNAL TIBIAL/FIBULAR ROTATION

MEDIUM ARCH

NORMAL FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## D

**KEY ORTHOTIC FEATURES**

- Neutral RF Posting
- Medium Arch
- Standard Depth
- Great for Hip and Back Pain!**

**POSSIBLE CLINICAL SYMPTOMS**

- Hip Pain
- Lower Back Pain
- Iliotibial Band Syndrome
- Retrocalcaneal Heel Pain
- Haglund's Deformity
- Medial Hallux Pinch Callus

**KEY ORTHOTIC FEATURES**

- Deep Heel Cup
- Medial RF Posting
- Moderate Medial Skive
- Medial Flare
- Great for Plantar Foot Pain!**

## D

### MODERATE PES PLANUS

**GAIT**

Propels off 2<sup>nd</sup> and 3<sup>rd</sup> Metatarsal (due to Transverse Metatarsal Arch Reversal)

VERTICAL HEEL ALIGNMENT

- Neutral Toe Out
- Pronation through Midstance
- Midtarsal Joint Instability

MODERATE INTERNAL TIBIAL/FIBULAR ROTATION

LOW ARCH

NEUTRAL FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## E

**POSSIBLE CLINICAL SYMPTOMS**

- Plantar Fasciitis
- Metatarsalgia
- Functional Hallux Limitus
- Patellofemoral Pain Syndrome
- Posterior Tibial Tendonitis
- Neuromas
- Dorsal Bunions

**KEY ORTHOTIC FEATURES**

- Deep Heel Cup
- Medial RF Posting
- Moderate Medial Skive
- Medial Flare
- Great for Plantar Foot Pain!**

## E

### ABDUCTOVARUS FOREFOOT

**GAIT**

5<sup>th</sup> MTH PIVOT

Medial Heel Whip

ABDUCTED FOREFOOT

MILDLY INVERTED HEEL ALIGNMENT

- Narrow Heel Base Gait
- Restricted Subtalar Pronation
- Pivots at 5<sup>th</sup> MTH in Propulsion

MILD INTERNAL TIBIAL/FIBULAR ROTATION

MEDIUM-LOW ARCH

VARUS FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## F

**KEY ORTHOTIC FEATURES**

- Medial RF & FF Posting
- 5<sup>th</sup> MTH Cut-Out
- 1<sup>st</sup> MTH Control
- Medial Flare/Flange
- Great for Heel, Shin & Knee pain!**

**POSSIBLE CLINICAL SYMPTOMS**

- Plantar Fasciitis / Heel Pain
- Shin Splints
- Knee Pain
- Tailor's Bunions
- Calcaneal Apophysitis (Sever's Disease)
- Osgood-Schlatter Disease

**KEY ORTHOTIC FEATURES**

- Depth Orthosis
- Large Medial Skive
- Medial RF & FF Posting
- 1<sup>st</sup> MTH Cut-Out to ↑ Peroneal Function
- Great for PTTD!**

## F

### SEVERE PES PLANOVALGUS

**GAIT**

Lateral Column Instability

LARGE TOE SIGN

EVERTED HEEL ALIGNMENT

- Pronates through Propulsion
- Severe MTJ Instability
- Propels from Central MTH's

LARGE INTERNAL TIBIAL/FIBULAR ROTATION

FLAT ARCH

VARUS FOREFOOT ALIGNMENT

CALLUSES

FOOT PROGRESSION ANGLE

## G

**POSSIBLE CLINICAL SYMPTOMS**

- Posterior Tibial Dysfunction
- Tarsal Tunnel Syndrome
- Plantar Fasciitis
- Knee Valgus/DJD
- Subfibular Impingement
- HAV/Bunions
- Splayfoot

**KEY ORTHOTIC FEATURES**

- Depth Orthosis
- Large Medial Skive
- Medial RF & FF Posting
- 1<sup>st</sup> MTH Cut-Out to ↑ Peroneal Function
- Great for PTTD!**

LEFT FEET SHOWN ABOVE  
 \*U.S. Patent No. 7,789,840  
**877.792.4669**

**Why Treat All Feet The Same?**  
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QUADRASTEP SYSTEM®  
 is a product of  
**NOLARO<sup>24</sup> LLC**  
 the alternative to custom orthotics