

### QUAD A

Features:

- Neutral Cushion Shoe
- Lateral Heel Stabilizer
- Consider Stability models for heavier individuals

**Shoe Recommendations:**

- Asics Gel-Pursue, Gel-Nimbus 16
- Brooks Ghost, Glycerin
- New Balance 1080, 840, 880, 847, 990, 928
- Saucony ProGrid Ride

### QUAD C

Features:

- Neutral Cushion Shoe
- Consider Stability models for heavier individuals

**Shoe Recommendations:**

- Asics GT 2000 2.0, Gel Nimbus 16, Kayano 20
- Brooks Defyance, Ghost, Addiction Walkers
- New Balance 1080, 990, 1865, 847, 880, 1210 (Offroad), 928(Walking)
- Saucony ProGrid Echelon or Ride
- Keen Koven or Merrell Moab (Hiker)

### QUAD E

Features:

- Stability Shoe
- Straight Last

**Shoe Recommendations:**

- Asics GT 2000 2.0, Gel Nimbus 16, Kayano 20
- Brooks Adreneline GTS (heavier wt. E quads), or Defyance or Ravenna (lighter wt. E quads)
- New Balance 1260, 1865, 840, 847, 860, 928, 990, 1765 (Petite), 940 (Heavy)
- Saucony ProGrid Echelon or Ride
- Keen Koven or Merrell Moab (Hiker)

### QUAD B

Features:

- Stability
- Straight Last

**Shoe Recommendations:**

- Asics Gel-DS Trainer (narrow), Kayano 20
- Brooks Adreneline GTS or Connect (narrow)
- New Balance 1260, 940
- Saucony ProGrid Ride

### QUAD D

Features:

- Stability Shoe
- Straight last
- May need Motion Control for heavier individuals

**Shoe Recommendations:**

- Brooks Dyad (wider), Addiction Walkers
- Asics Gel Kayano 20, Fortitude (more cushion)
- Saucony ProGrid Omni
- New Balance 1260, 990, 860, 928, 1340, 1540
- Keen Koven or Merrell Moab (Hiker)

### QUAD F

Features:

- Motion Control Shoe
- Posted heel
- Straight Last

**Shoe Recommendations:**

- Asics GT 3000, Gel-Fortitude or Gel-Foundation
- Brooks Beast for Men, Ariel for Women, Addiction Runners, Dyad
- New Balance 1540, 1340, 1260, 940, 990, 860, 928
- Saucony Progrid Stabil

**Please note** that not everyone understands the medical interpretation of “motion control/stability/neutral cushion” shoes. When you encounter this while shopping, it is best to lean more towards the model numbers given. However, model numbers change frequently. The most important piece of information to have is that the shoe should not bend at the arch but should bend at the toe-box when you try the bending test. If the shoe bends at the arch, look for another one.

ASSOCIATIONS

# Little Feet Need Support Too

Podiatrists assert that potential problems with children's feet should be checked for and corrected early on to minimize possible issues later in life

Every runner's worst nightmare is an injury. But what many runners do not know is that foot issues can be prevented at an early age by evaluating and treating (if necessary) feet at their developmental stages.

The American Podiatric Medical Association (APMA), an affiliation comprised of licensed doctors of podiatric medicine, hosts foot health awareness on a different foot related topic every month. The association launched the educational campaign "First Steps: Keeping Kids' Feet Happy and Healthy" last month in honor of National Foot Health Awareness Month.

The campaign was aimed to educate those who are involved in maintaining children's foot health, including podiatrists, pedorthists, specialty retailers and parents. It also provided information on how to properly fit children's shoes.

It is commonly misconceived that kids who have foot pain will eventually outgrow it. In reality, kids who suffer from foot pain early on have a high probability of experiencing foot problems throughout adulthood. These problems may negatively effect performance in running and sports, and eventually require medical attention and correction.

Any adult who has ever suffered from a foot problem is well aware that the correctional process can be expensive, lengthy and uncomfortable. Foot surgery, for example, places a considerable amount of stress on the body. However, parents can take preventative action to reduce the chance of their child developing foot problems later in life.

### PREVENTION

"Prevention is better than correction," said podopediatrician Dr. Louis DeCaro, the incoming president of the American College of Foot and Ankle Pediatrics, the APMA group who specializes in children's foot health. "My main mission is to make sure that my colleagues and the public know that much of the correction that they are doing in their adult population is preventable."

The first step of prevention is to start evaluating the condition of a child's foot as early as age four.

According to DeCaro, the most common condition that afflicts children is flexible flat foot, a disorder caused by a foot that does not become rigid with age coupled with an increased eversion of the arch. Most children younger than

four typically have a flat foot, but develop an arch later in childhood. Some key indicators a child zero to four years of age may develop flexible flat foot are poor coordination, balance, posture, and strength.

"Flexible flat foot is something that kids of the age of four do not outgrow," said DeCaro. Yet problems that stem from the disorder do not always emerge right away or appear in the foot.

Foot pain is a clear indicator that a child is experiencing foot troubles, but other symptoms should raise a red flag. Pain in the ankles, hips, and back are symptoms that indicate a potential foot problem.

Another area to keep an eye on is a child's core strength, since it directly affects the strength of a foot. Poor core strength can hinder a child's ability to run, to play sports and engage in other forms of physical activity.

If a child does not run as fast as their peers, has issues with their balance and posture, has underdeveloped motor skills or is overweight, there could be a problem hindering their foot strength.

### GENETICS

Foot problems are also hereditary; parents with feet problems have a 50 percent chance of passing along similar conditions to their children.

"Just like hair color, eye color — the way that your foot is screwed together is highly genetic," said DeCaro. "The apples don't fall far from the podiatric tree either."

According to DeCaro, medical issues stemming from poor foot strength and a history of hereditary foot problems are both signs a parent should take their child in for a podopediatric consultation, or have their child's feet assessed by a pedorthist. DeCaro notes that pedorthists and podiatrist should work together to educate parents that foot problems are often passed on from generation to generation.

A properly fitted running shoe or potential orthotic can help prevent and correct foot problems in children early on.

A child should spend as much time being barefoot as possible from the ages zero to four to allow their foot muscles to develop, unless the child has an issue that needs to be addressed such as poor balance, coordination, or posture. Children at such a young age should simply wear shoes that protect, but don't necessarily support, their feet.

Once a child turns seven or eight, parents should begin to concentrate

**DO YOUR CHILD'S SHOES "MAKE THE GRADE?"**  
TAKE THE 1 • 2 • 3 TEST

- LOOK FOR A STIFF HEEL**  
Press on both sides of the heel counter. It shouldn't collapse. 
- CHECK TOE FLEXIBILITY**  
The shoe should bend with your child's toes. It shouldn't be too stiff or bend too much in the toe box area. 
- SELECT A SHOE WITH A RIGID MIDDLE**  
Does your shoe twist? Your shoes should never twist in the middle. 

on the model of the shoe that they purchase for their kid. Parents should pay special attention to the type of shoe purchased, especially if their child uses orthotics.

"An orthotic is only as good as the shoe that holds it," said Dr. DeCaro.

Although it may not be immedi-

ately apparent that a child has a foot problem, it is worth taking the time to evaluate the condition of their feet and to address any potential concerns early on. Being proactive could save children and their families the time, money, and the burden of foot pain, injuries and surgery in their future. ■

## Every Foot Has a Type

In 2006, podiatrist Dr. Louis DeCaro and pedorthist Roberta Nole attained a patent on 24 foot types which stemmed from an algorithm they had formulated. After examining thousands of patients, they noticed certain foot patterns emerged from the relationship between how the heel bone and the metatarsals are screwed together onto a foot.

The duo started an orthotic company, Nolaro24, after simplifying the 24 different foot types into seven general categories. Nolaro24 sells over the counter orthotics designed to fit these seven different foot types. Quadrasteps, the adult foot line, offers orthotics for the six adult foot types, and littleSTEPS offers one type of orthotic for the general structure of a child's foot. It is important to note that in terms of foot type, a child's foot has developed enough at seven to eight years old to be classified as one of the six adult foot types.

The average podiatrist practitioner charges \$350 to \$600 to make a custom orthotic for a patient.

"Many people are deprived of better foot care because of the prohibitive cost. Orthotics in general is something that can be very expensive when you go to a foot doctor or a pedorthist," said Dr. Louis DeCaro.

DeCaro himself charges his patients \$450 to make a custom orthotic. "With Quadrasteps and littleSTEPS we wanted to create a more affordable, alternative option," said DeCaro.

Nolaro24 sells littleSteps and Quadrasteps via an indirect channel to ensure only trained individuals are assessing and classifying foot types for customers. Quadrastep is typically retailed at \$125 to \$175 and littleSTEPS at \$75 to \$125.

Nolaro24 offers training that allows any specialty retailer to get certified in order to classify a customer's foot type and sell Quadrasteps and littleSteps orthotics. The company is also working on a mobile application aimed to help individuals who are certified, to plug in observations about a patient and help define the foot type.