

Extremity Adjusting Techniques

PART I OF III: EXCESSIVE FOOT PRONATION

Mark Charrette, DC

What It Is

One of the most common conditions of the human frame is excessive foot pronation. This is a condition where the foot rolls inward, creating a longer, wider, and flatter foot. A very predictable subluxation pattern occurs.

Indicators include:

1. posterior/lateral heel wear;
2. foot flare/external foot rotation
3. patellar rotation;
4. Achilles tendon bending;
5. dropped medial longitudinal arch/dropped navicular;
6. callous pattern - 2nd, 3rd, 4th metatarsal heads; and
7. positive navicular drop test.

Excessive foot pronation causes the tibia to rotate internally, the femur to rotate internally, and the pelvis to anteriorly translate. A variety of knee, hip, and spinal complaints are caused or aggravated by this condition that affects four out of five adults age forty or older. Custom-made, flexible orthotics play a critical role in properly supporting the pedal foundation after the adjustments have been given.

How To Adjust

I adjust in the following order:

#1. Navicular - Inferior and Medial Subluxation: The doctor will find point tenderness near the height of the medial longitudinal arch (plantar surface). This is the contact point. The medial longitudinal arch is related to the navicular and psoas muscle.

Adjustment: The doctor stabilizes with "outside" hand on lateral malleolus; doctor contacts the contact point with thenar of "inside" hand; the foot is brought to its inversion tension; the doctor then thrusts in a superior and lateral direction (toward lateral malleolus) with thenar of "inside" hand.

Psoas Muscle Test: This is done with the patient supine and the doctor standing on opposite side of leg tested (Fig. 3). The headward hand of the doctor contacts ASIS, while footward hand contacts medial aspect of ankle as shown. Patient initiates muscle test, i.e., "OK, Mrs. Jones, push up and against my hand when I say 'push.'"

#2. Cuboid - Inferior and Lateral Subluxation: The doctor will find point tenderness posterior to the 5th metatarsal base on the plantar/lateral surface. This is the contact point. The lateral longitudinal arch is related to the cuboid and the hip abductors (*gluteus medius* and *gluteus minimus*).

Adjustment: The doctor will contact the contact point with the thenar of the "outside" hand and

stabilize along the medial malleolus with the "inside" hand. The foot is brought to its eversion tension. Doctor then thrusts in a superior medial direction (toward medial malleolus) with thenar of "outside" hand.

Hip Abductor Muscle Test: Done with patient supine, the doctor stands at the feet of the patient with the "outside" hand contracting lateral aspect of abducted hand contacting lateral aspect of abducted leg as shown. The patient initiates the muscle test, i.e., "OK, Mrs. Jones, push out against my hand when I say 'push.'"

#3. Cuneiforms 1-2-3 - Inferior Subluxation: Think of cuneiforms misaligning/subluxating as a unit.

Adjustment: The doctor stands on the involved foot side facing the opposite leg; the headward hand makes a "U" pattern and stabilizes hind foot with the doctor's finger pads contacting the medial aspect of the calcaneus. The medial/anterior border of the footward hand contacts the plantar surface of the foot under cuneiforms.

It is important to keep both forearms parallel to the patient's tibia. The doctor tractions inferior with the headward hand, as the footward hand thrusts superior. A characteristic "sloppy/squishy" audible.

#4. Metatarsals 1-5 - 2-3-4 Inferior Subluxation, 1 and 5 Superior and Lateral.

Adjustment: The doctor contacts the plantar surface of the foot with the thumb pads under the 2nd, 3rd, and 4th metatarsal heads. Finger pads contact the dorsum of foot over the metatarsal shafts. Thumb pads push superior as finger pads pull lateral and inferior. This "squeeze" is repeated 4-5 times.

(Part II of III will look at adjusting the *talus*, *calcaneus*, *fibula*, and superior lateral cuboid.)

Mark Charrette, DC
Waukon, Iowa

DECEMBER 2000