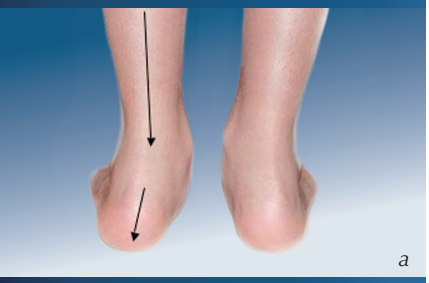
ProStop® and ProStop Plus®

For Correction of Posterior Tibial Tendon Dysfunction

Arthrex®



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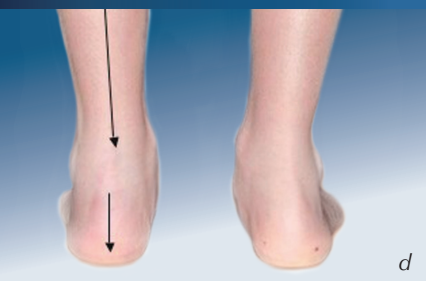

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a) Pre-op

b) ProStop and ProStop Plus

c) ProStop Technique

d) Post-op

Overview

The ProStop and ProStop Plus Arthroereisis Subtalar Implants are intended to assist in treating the hyperpronated foot by stabilizing the subtalar joint. The main goal is to block forward, downward, medial displacement of the talus, and help in reducing the talonavicular joint, thereby limiting excessive valgus of the hindfoot.

Examples include:

- Posterior tibial tendon dysfunction with flexible deformity
- Symptomatic acquired flatfoot treatment in children and adolescents
- Symptomatic congenital flexible flatfoot
- Tarsal coalitions with better implant-to-bone contact

The color-coded and laser-marked instrumentation is easy to use and comes with trial sizers on their own shaft. The concave back end offers the surgeon easier access with a Guidewire, in the event the implant requires removal.

ProStop and ProStop Plus Features & Benefits:

- **Better Fit** – Contour of the implants support the anatomy of the tarsal canal
- **Metal or Bioabsorbable** – Bioabsorbable option ideal for patients with metal allergies
- **Safer** – Soft threads are easier on bone
- **Concave Back** – Allows easy guide pin access
- **Straightforward Instrumentation** – One piece, color-coded trial implants support easy and accurate placement

Scientific Rationale

In recent years, numerous scientific investigations have shown promising results with arthroereisis. These include biomechanical and clinical studies from both orthopedic and podiatric literature. Biomechanically, sinus tarsi implants have been shown to improve arch mechanics and alignment, while clinically they have enhanced the results of flatfoot correction.

Biomechanical

1. Vora AM, MD, Tien TR, MD, Parks BG, MSc, Schon LC, MD, *Correction of Moderate and Severe Acquired Flexible Flatfoot with Medializing Calcaneal Osteotomy and Flexor Digitorum Longus Transfer,* JBJS, August 2006; 88:1726-1734.
2. Saxena A, DPM, FACFAS[1] and Nguyen A, DPM, AACRAS[2], *Preliminary Radiographic Findings and Sizing Implications on Patients Undergoing Bioabsorbable Subtalar Arthroereisis,* J Foot & Ankle Surg., June 2007; Vol. 46, Issue 3:175-180.
3. Boberg JS, DPM, FACFAS, Oldani T, DPM, Martin N, DPM, *Bioabsorbable Implants for Flatfoot: Can They Work?,* Podiatry Today, September 01, 2006; Vol. 19, Issue 9.

Clinical

4. Needleman RL, *A Surgical Approach for Flexible Flatfeet in Adults Including a Subtalar Arthroereisis with MBA Sinus Tarsi Implant,* Foot and Ankle Intl., January 2006; 27(1):9-18.
5. Cicchinelli LD, DPM[1], Huerta JP, DP[2], Garcia Carmona FJ, DP[3], Fernandez Morato D, DP[4], *Analysis of Fastrocnemius Recession and Medial Column Procedures as Adjuncts in Arthroereisis for the the Correction of Pediatric Pes Planovalgus: A Radiographic Retrospective Study,* Foot & Ankle Surg., Sep-Oct 2008; 47(5):385-91.
6. Adelman VR, DPM, AACFAS[1], Szczepanski JA, DPM, FACFAS[2], Adelman RP, DPM, AACFAS[3], *Radiographic Evaluation of Endoscopic Gastrocnemius Recession, Subtalar Joint Arthroereisis, and Flexor Tendon Transfer for Surgical Correction of Stage II Posterior Tibial Tendon Dysfunction: A Pilot Study,* J Foot & Ankle Surg., Sep-Oct 2008; 47(5):400-8.
7. Van Aman SE, MD, Schon LC, MD, *Subtalar Arthroereisis as Adjunct Treatment for Type II Posterior Tibial Tendon Deficiency,* Tech. Foot & Ankle Surg., June 2006; Vol. 5, Issue 2:117-125.

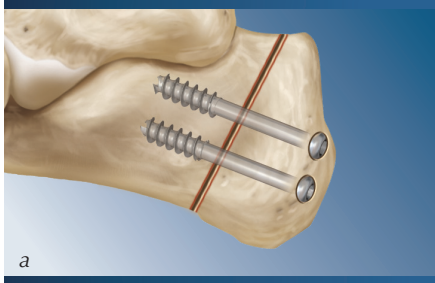
Adjunct Arthrex Surgical Solutions for Posterior Tibial Tendon Dysfunction

LPS 6.7 mm Cannulated Screw System for the calcaneal osteotomy (a)

Bio-Tenodesis™ Screw System for FDL tendon transfer (b)

Variety of Arthrex suture anchors for PTT repair (c)

LPS plate for Cotton osteotomy (d)



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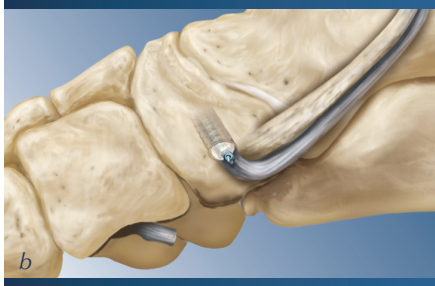

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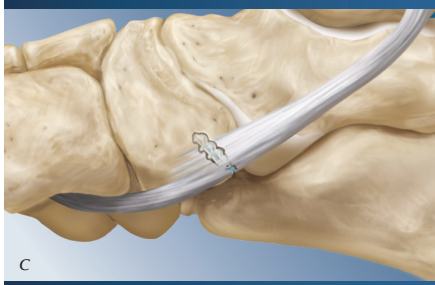

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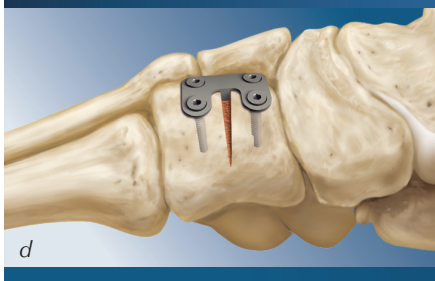

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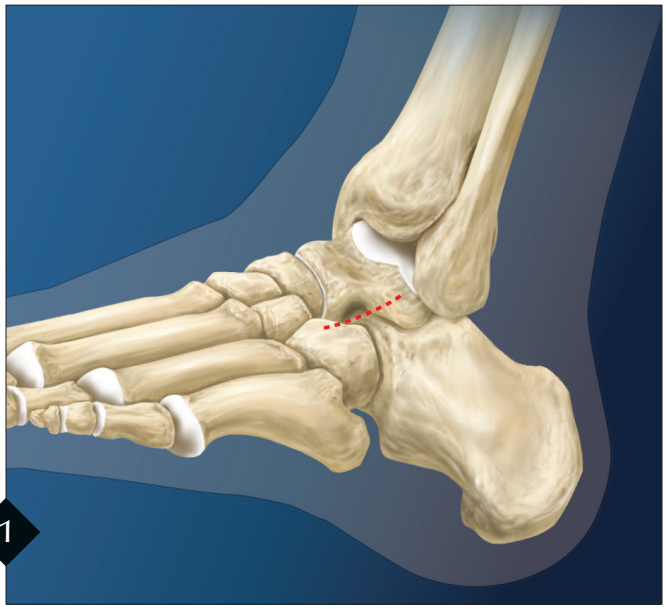
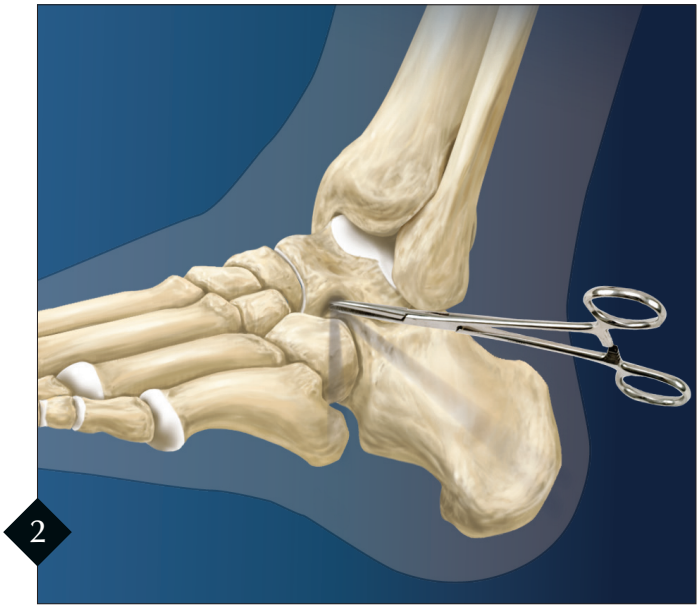
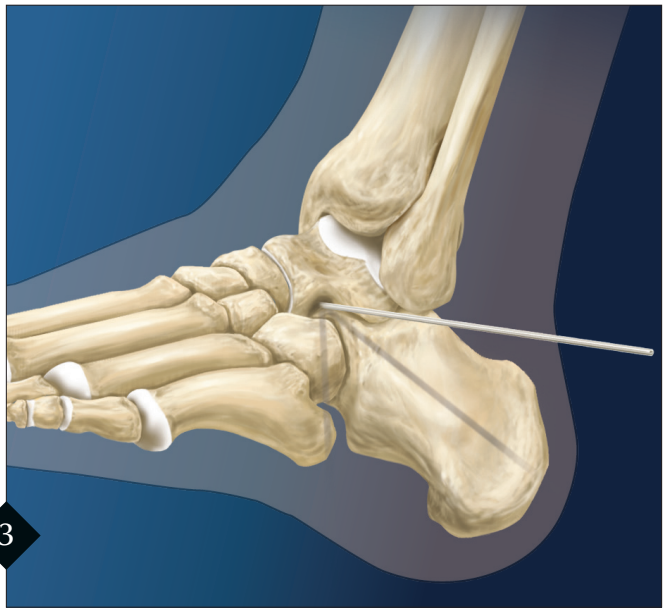


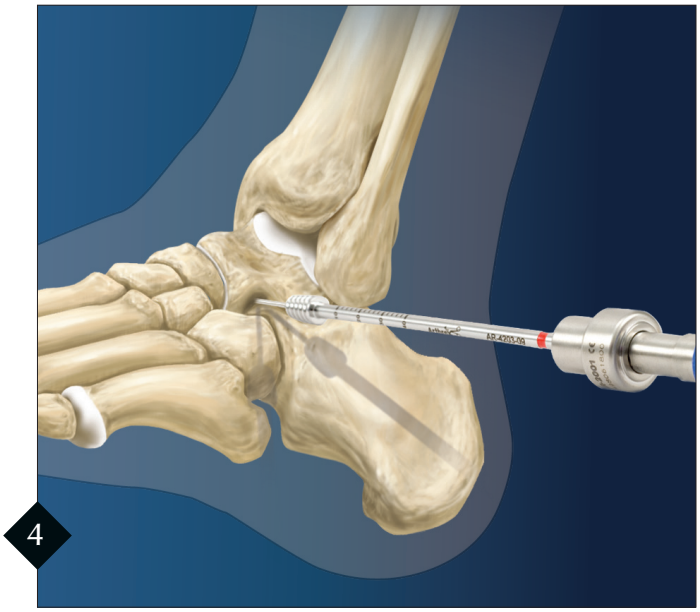
The incision should be made in the "soft spot" just proximal to the anterior process of the calcaneus. Make the incision along the course of the nerve to avoid inadvertent transection of the superficial branch of the peroneal nerve. Alternatively, an incision along the skin lines may be used. In this case, care should be taken to protect the underlying nerve.



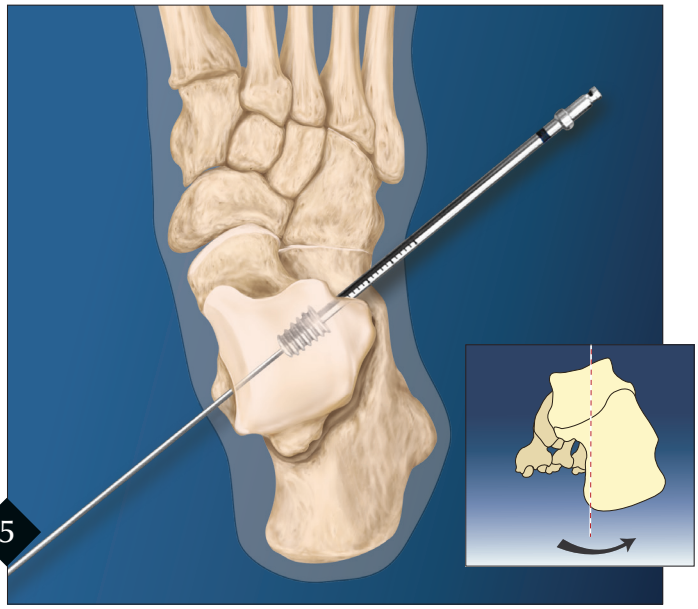
Bluntly dissect the subcutaneous tissues into the tarsal canal with a small hemostat to create a pathway for the Guidewire.



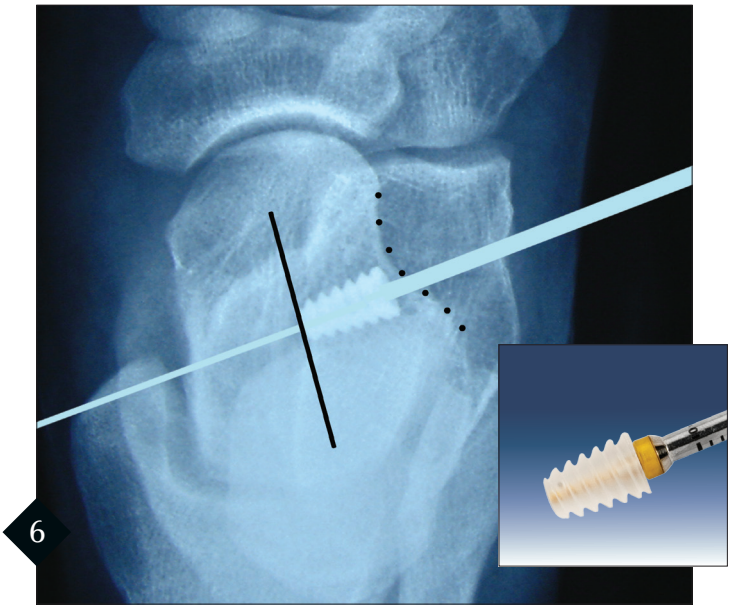
Insert the Guidewire through the tarsal canal. *Note: For the ProStop Plus, use the smallest diameter Guidewire (.054" diameter).* This wire passes about 15° off the perpendicular to the sagittal plane going from anterolateral to posteromedial. The surgeon should aim for the sustentaculum talus medially. The Guidewire will tent the skin medially and a 1 – 3 mm incision can be made here to permit clamping of the protruding wire. The wire will exit below the posterior tibial tendon. *Note: A medial incision is not necessary unless the surgeon is planning on performing an FDL tendon transfer after insertion of the ProStop.*



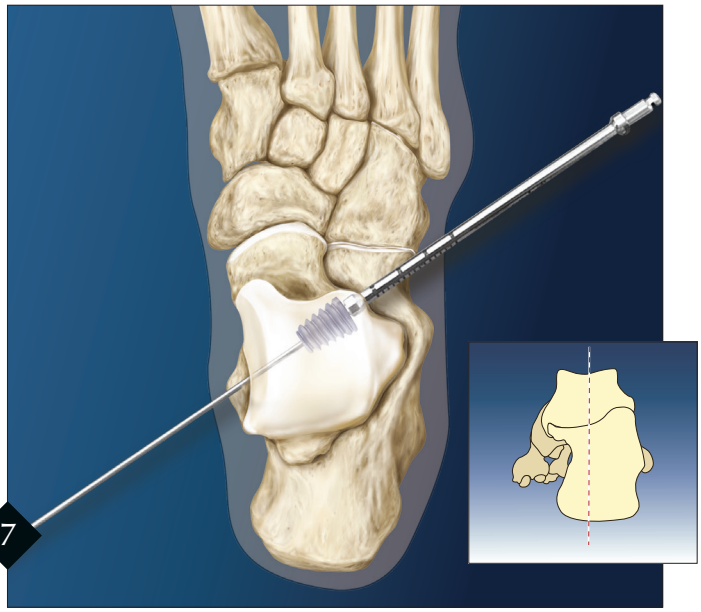
Insert the trial sizer over the Guidewire.



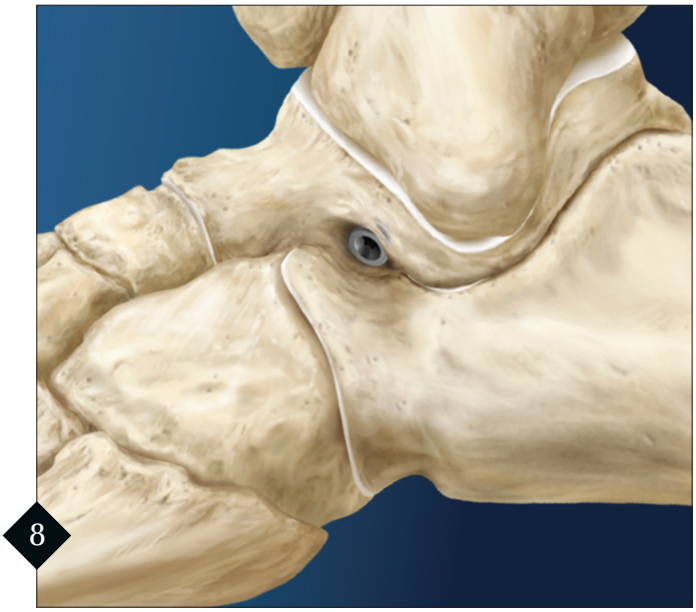
Initial assessment should check eversion of the calcaneus. If too much eversion is present, increase the diameter of the trial sizer and reassess.



AP intraoperative image. Implant/sizer should not be medial to the midline of the talar neck. Once the proper insertion distance has been visualized on fluoroscopy, confirm distance using the laser marks on the driver and compare against the skin line. The lateral edge of the implant should be at or just medial to the lateral side of the talus. *Note: For ProStop Plus, use the tip of the driver to visualize the placement of your implant.*



Insert the implant using the driver from the instrument set. It is suggested to maintain the foot in an everted position while disengaging the screw driver. To confirm final placement, check with fluoroscopy. If satisfactory, remove the Guidewire.



Procedure is complete.

Ordering Information

ProStop Instrumentation Set (AR-4200S) includes:	
ProStop Arthroereisis Driver, 3.5 mm Hex	AR-4201
ProStop Plus T15 Hexalobe Driver, 14 mm	AR-4201DB-14
ProStop Plus T15 Hexalobe Driver, 16 mm	AR-4201DB-16
Tear Drop Handle	AR-2001
ProStop Starter Dilator, 4.75 mm	AR-4203D
ProStop Arthroereisis Sizer, 7 mm	AR-4203-07
ProStop Arthroereisis Sizer, 8 mm	AR-4203-08
ProStop Arthroereisis Sizer, 9 mm	AR-4203-09
ProStop Arthroereisis Sizer, 10 mm	AR-4203-10
ProStop Arthroereisis Sizer, 11 mm	AR-4203-11
ProStop Arthroereisis Sizer, 12 mm	AR-4203-12
ProStop Arthroereisis Extraction Tamp	AR-4205
ProStop Dilator, 8 mm	AR-4203D-08
ProStop Dilator, 9 mm	AR-4203D-09
ProStop Dilator, 10 mm	AR-4203D-10
ProStop Dilator, 11 mm	AR-4203D-11
ProStop Dilator, 12 mm	AR-4203D-12
ProStop Arthroereisis Instrumentation Case	AR-4200C

Implants:	
ProStop Arthroereisis Implant, 7 mm x 12 mm	AR-4207-12
ProStop Arthroereisis Implant, 8 mm x 14 mm	AR-4208-14
ProStop Arthroereisis Implant, 9 mm x 14 mm	AR-4209-14
ProStop Arthroereisis Implant, 10 mm x 14 mm	AR-4210-14
ProStop Arthroereisis Implant, 11 mm x 16 mm	AR-4211-16
ProStop Arthroereisis Implant, 12 mm x 16 mm	AR-4212-16
ProStop Plus Arthroereisis Implant, 8 mm x 14 mm	AR-4208B-14
ProStop Plus Arthroereisis Implant, 9 mm x 14 mm	AR-4209B-14
ProStop Plus Arthroereisis Implant, 10 mm x 14 mm	AR-4210B-14
ProStop Plus Arthroereisis Implant, 11 mm x 16 mm	AR-4211B-16
ProStop Plus Arthroereisis Implant, 12 mm x 16 mm	AR-4212B-16

Disposables:	
ProStop Arthroereisis Guidewire, .078″ (2 mm), qty. 2	AR-4202
ProStop Plus Guidewire, .054″ (1.37 mm)	AR-4206

Multimedia:	
ProStop Correction of Posterior Tibial Tendon Dysfunction	DVD-1091

For more information on the adjunct procedures referenced on page 2, please refer to the Foot & Ankle Brochure (LB1-0450-EN) online at: http://prostop.arthrex.com

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This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's Directions For Use.