

## SURGICAL TECHNIQUE



**mba**™

Titanium Subtalar Implant

**kmi**  
KINETIKOS MEDICAL INC.

"Elegant Solutions for Extremity Challenges"

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# Subtalar MBA® Surgical Technique

## DESCRIPTION

The subtalar MBA titanium implant is the original, time-tested metallic arthroereisis implant for the correction of pediatric pes valgus and adult posterior tibial tendon dysfunction.

## THE SUBTALAR MBA SYSTEM OFFERS THESE UNIQUE FEATURES:

- Barrel-shaped implant provides optimal medial support.
- Uniform implant diameter minimizes lateral discomfort.
- Exclusive slotted design helps prevent implant extrusion.
- Cannulated, color-coded instrumentation simplifies surgical procedure.

## INDICATIONS

- Pediatric pes valgus
- Adult posterior tibial tendon dysfunction

## CONTRAINDICATIONS

- Vertical calcaneus
- Rigid flatfoot (unreducible)
- Rearfoot varus
- Peroneal spasm
- Ankle joint valgus
- Excessive ligamentous laxity
- Degenerative joint disease of the subtalar joint
- Severe obesity
- Asymptomatic flatfoot condition
- Patients less than 3 years of age



PRE- OP LATERAL VIEW



POST- OP LATERAL VIEW

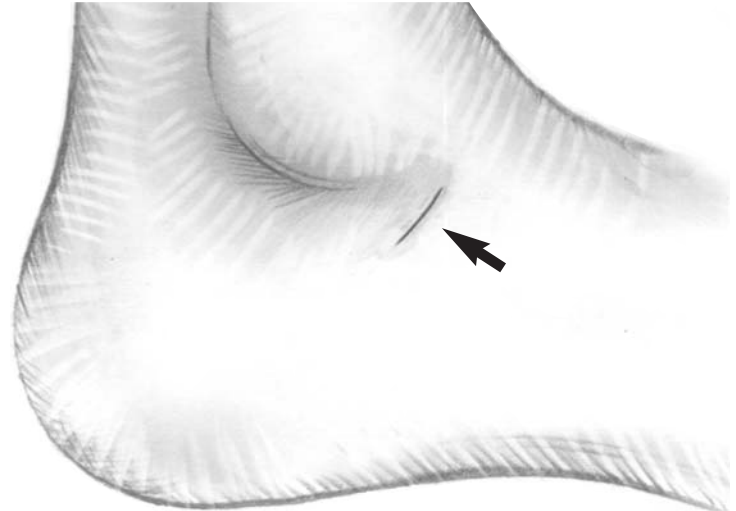


POST- OP AP VIEW

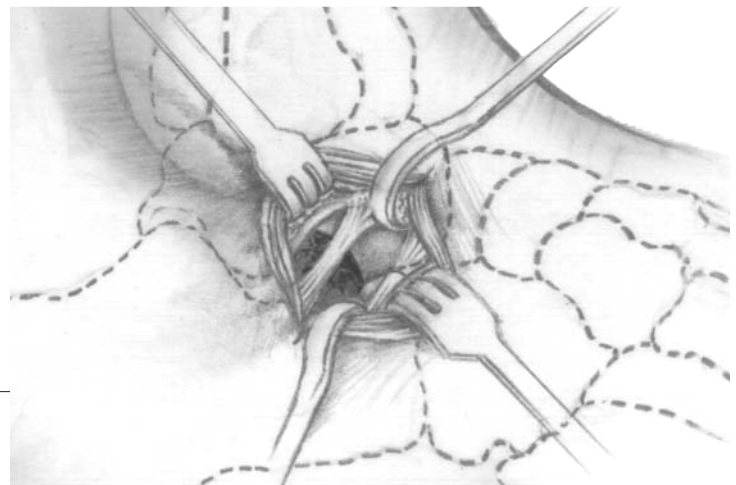
STEP  
1

### INCISION AND DISSECTION

- Make a **1-3cm incision over the sinus tarsi** along the relaxed skin tension lines (**Figure 1**).
- The intermediate dorsal cutaneous nerves should course superior to the incision.
- The sural nerve should course inferior to the incision.
- Incise the deep fascia.
- The anterior lateral edge of the posterior facet of the calcaneus should be palpable with instrumentation upon completing the dissection into the tarsal canal (**Figure 2**).



(FIG. 1)

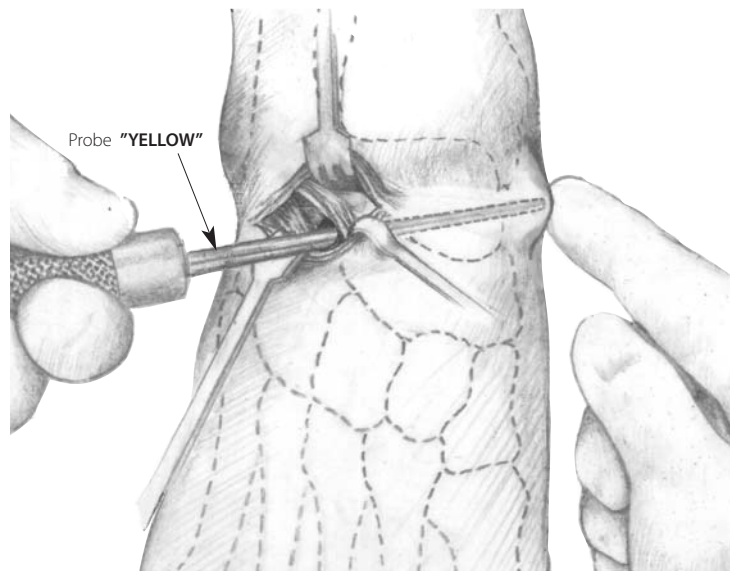


(FIG. 2)

STEP  
2

### PROBE INSERTION

- Insert the yellow Probe instrument **through the sinus tarsi into the sinus canalis** from lateral to medial until tenting is noted on the medial aspect of the foot (**Figure 3**).
- The Probe should be positioned perpendicular to the lateral wall of the calcaneus, **angled slightly posterior and superior**.
- Move the Probe in a clockwise and counter clockwise direction to **slightly dilate** the tarsal canal.
- Remove the Probe.

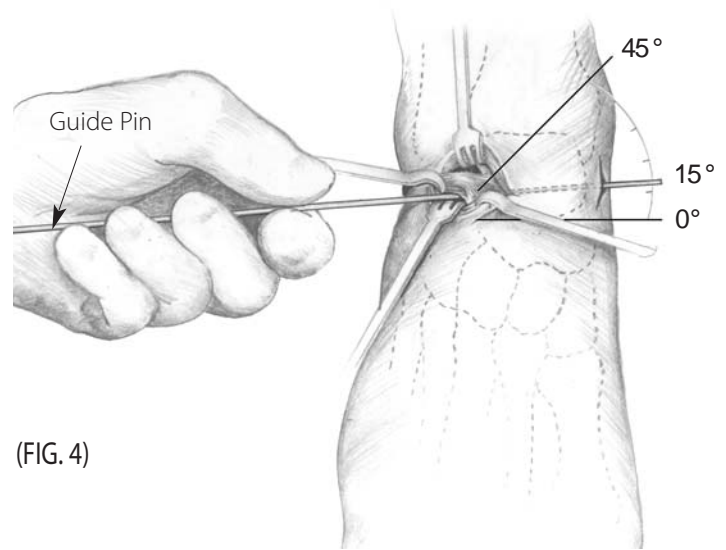


(FIG. 3)

## STEP 3

### GUIDE PIN INSERTION

- Insert the Guide Pin and make a **small incision medially** to allow the Guide Pin to exit through the medial aspect of the foot (**Figure 4**).
- The distal aspect of the pin should exit the skin just inferior to the tibialis posterior tendon and anterior and slightly inferior to the medial malleolus.

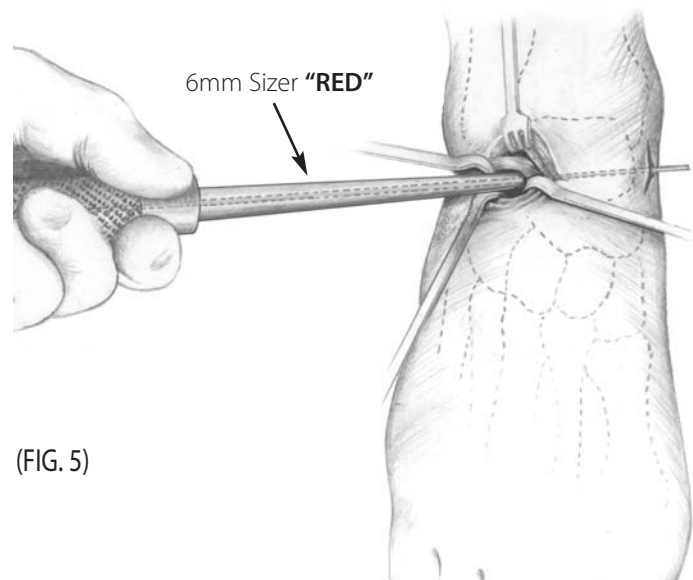


(FIG. 4)

## STEP 4

### SIZER INSERTION

- Place the cannulated, 6mm sizer over the guide pin and insert it **through the sinus tarsi into the sinus canalis** from lateral to medial (**Figure 5**).
- Assess the range of motion of the subtalar joint.
- Continue to insert the remaining sizes (8, 9, 10, 12mm) until proper correction is achieved.
- The appropriate size will allow approximately **2-4 degrees of subtalar joint eversion**.

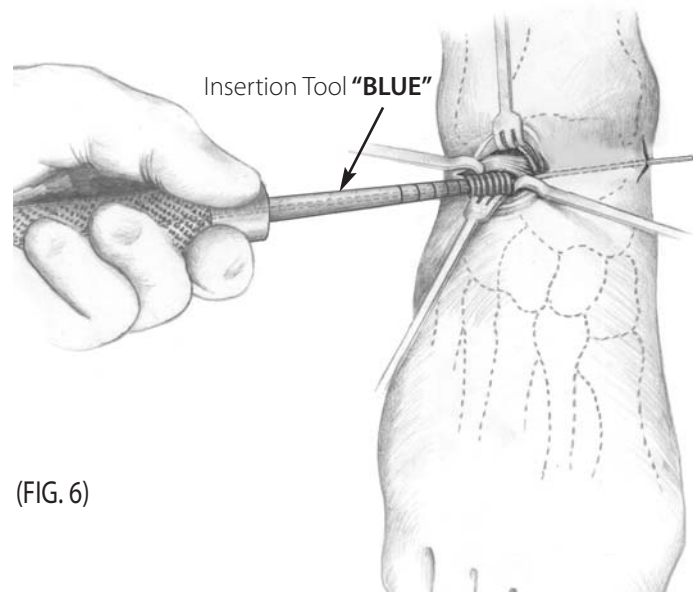


(FIG. 5)

## STEP 5

### TRIAL IMPLANT INSERTION

- After the appropriate size is determined, remove the sizer.
- Insert the **corresponding Trial Implant** using the cannulated **3.5mm Hex Insertion Tool** (**Figure 6**).
- Assess the range of motion of the subtalar joint.
- **Use intra-operative imaging** to evaluate the degree of correction and placement of the Trial Implant.

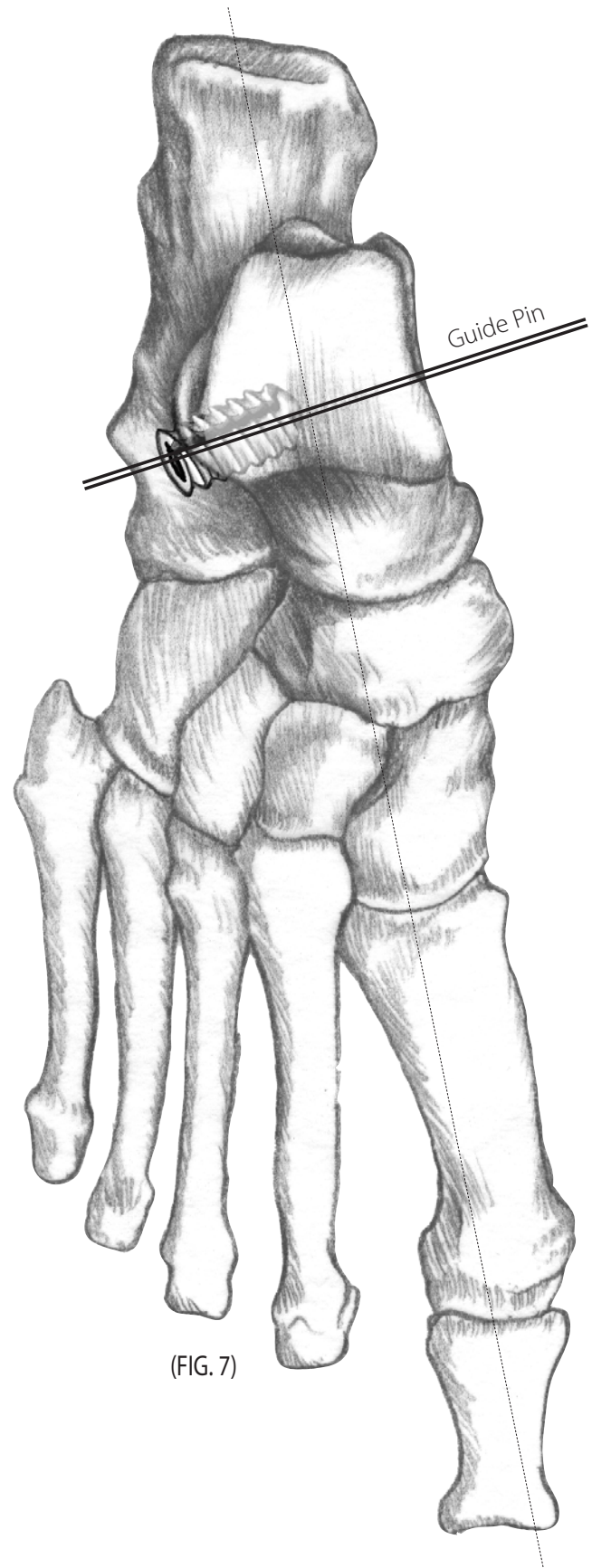


(FIG. 6)

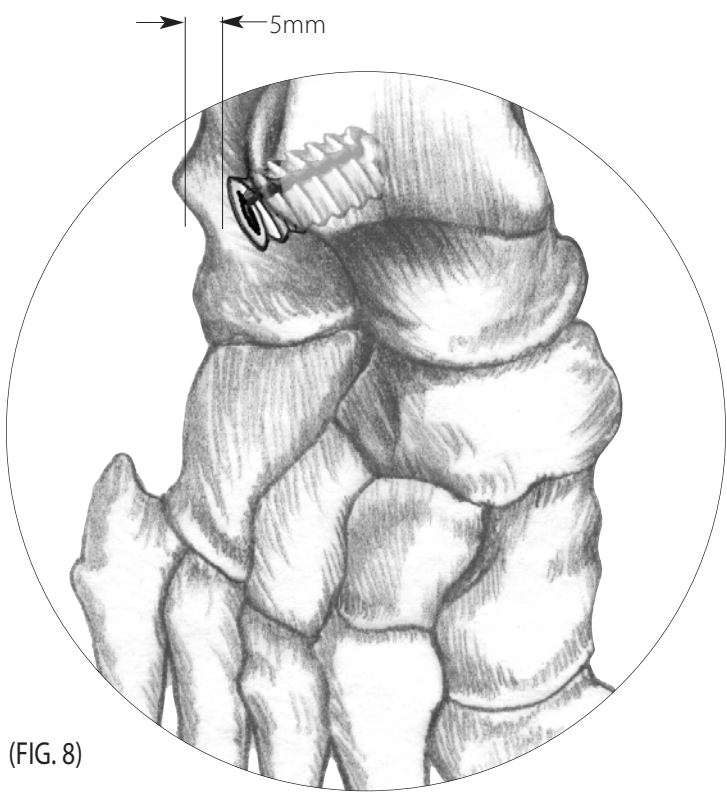
### INTRA-OPERATIVE RADIOGRAPHS

- To determine the correct position on AP view, the leading edge of the Trial Implant should **approach, but not cross, the longitudinal bisection of the talus (Figure 7).**
- The trailing edge of the implant should be at least 5mm medial to the lateral wall of the calcaneus (**Figure 8**).
- Examining the lateral view, the Trial Implant should be **angled posterior**, and the implant should not be sitting on the floor of the calcaneus.

Longitudinal Bisection of the Talus



(FIG. 7)

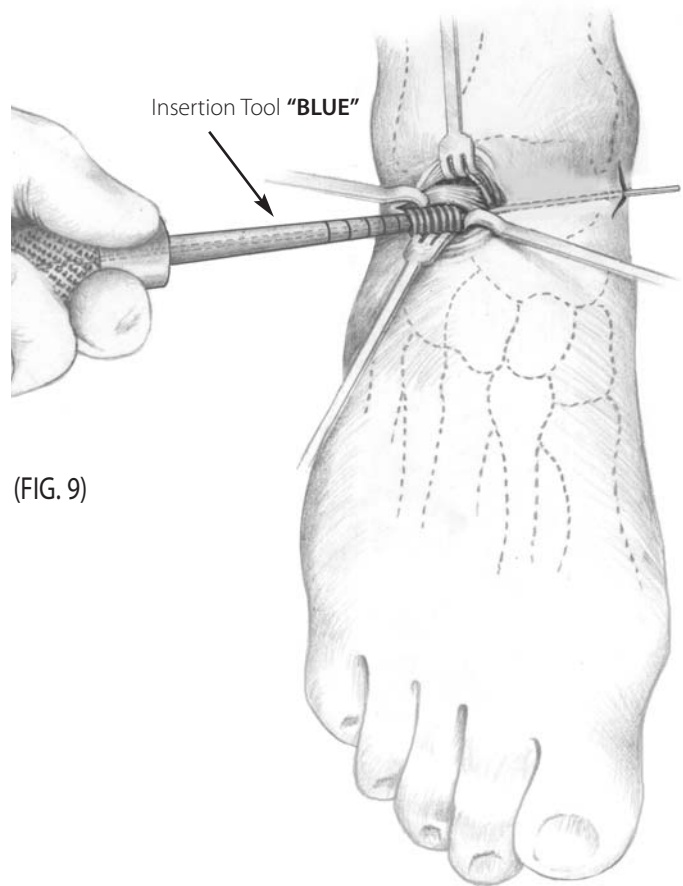


(FIG. 8)

**STEP  
7**

## IMPLANTATION

- Once the appropriate sized Trial Implant and placement is determined, remove the trial implant.
- The **equivalent size sterile implant is placed** onto the insertion tool over the Guide Pin and threaded in a **clockwise direction** until clinical correction is noted **(Figure 9)**.
- Intra-operative imaging is essential to verify proper positioning of the implant **(Refer to Step 6)**.
- Once the implant has been properly positioned, assess the range of motion of the subtalar joint.
- The appropriate size will allow **2-4 degrees of subtalar joint eversion**.

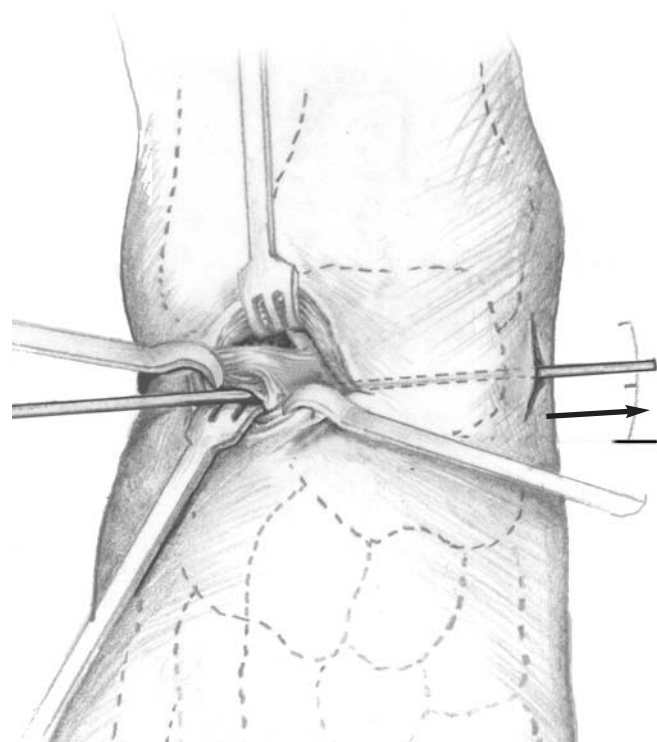


(FIG. 9)

**STEP  
8**

## GUIDE PIN REMOVAL AND CLOSURE

- Remove the Guide Pin **medially** when satisfactory positioning of the MBA Implant is obtained **(Figure 10)**.
- Copiously irrigate the area with saline and reevaluate subtalar joint motion.
- Close the deep tissue, fascia, subcutaneous and skin layers.
- Place the foot in a mildly compressive dressing.



(FIG. 10)

## POST-OP/FOLLOW-UP

- Restrict ambulation for the first 48 hours followed by protective weight-bearing in a removable, below-the-knee, walking cast for two weeks.
- Allow a gradual return to activity over the course of the next month.
- Typically, adjunctive procedures are performed, so the appropriate post-operative care should be followed for these procedures.



Titanium Subtalar Implant



## INSTRUMENT TRAY



- |                                                              |                                          |
|--------------------------------------------------------------|------------------------------------------|
| <p><b>A</b> Probe</p>                                        | <p><b>E</b> Insertion Tool</p>           |
| <p><b>B</b> Sizes<br/>6mm, 8mm, 9mm, 10mm, 12mm</p>          | <p><b>F</b> Insertion Tip Extractor</p>  |
| <p><b>C</b> Guide Pin Holder</p>                             | <p><b>G</b> Insertion Tip</p>            |
| <p><b>D</b> Trial Implants<br/>6mm, 8mm, 9mm, 10mm, 12mm</p> | <p><b>H</b> Guide Pin 2mm (.078 in.)</p> |



## Titanium Subtalar Implant



*The original, time-tested subtalar implant*

### FEATURES

- The Subtalar MBA® implant system has the longest history of successful clinical outcomes.\*
- Barrel-shaped implant provides optimal medial support.
- Uniform implant diameter minimizes lateral discomfort.
- Patented slotted design helps prevent extrusion.
- Simple, minimally-invasive surgical procedure.

*\*Data available upon request*



### INSTRUMENT SET



PART NO.	DESCRIPTION	SIZE
05-0106	Subtalar Implant	6mm
05-0108	Subtalar Implant	8mm
05-0109	Subtalar Implant	9mm
05-0110	Subtalar Implant	10mm
05-0112	Subtalar Implant	12mm
05-0017	Guide Pin	2mm (.078 in.)
05-5000	Instrument Set	

### COMPONENT MATERIALS

- Subtalar Implant: Titanium Alloy



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