



BK/TT with Supracondylar Suspension

Age: 30

Sex: Male

Weight/Height: 155 lbs, 6'1"

Amputation Level: 1"

Previous Socket Design: Short BK/TT

Challenges Addressed: Old BK/TT SC socket with removable Pelite liner
Very active K4, cannot tolerate any type of distal attachment due to nerve damage (no pin, no lanyard)

Background:

The patient is very active – swimming, running (6-minute mile), paintball, and climbing, for example. He wears a knee sleeve during activity to aid suspension.

Patient Challenges:

(anatomical, physical, mental)

A motorcycle accident shattered the patient's arm and pelvis, leaving him with a limited range of motion (ROM) and strength in the right arm. His leg is extra short with skin-on-bone scarring along the tibial crest and distal nerve damage (making the area highly sensitive). The knee has a 10-degree flexion contracture. The patient is very active K4 and cannot tolerate any type of distal attachment due to nerve damage (no pin, no lanyard). The patient wants to use a gel liner instead of Pelite on new socket.

Protocol & Design:

BK/TT SC socket with adjustable medial brim controlled by one RevoFit™ dial, positioned for left-handed use as patient's right hand is impaired. Gel liner with 9mm anterior for added anterior protection and 3mm posterior for better ROM.



Patient Outcome:

The socket was easy for the patient to put on/take off with an adjustable medial brim. By adding foam to the medial brim, the patient could also adjust the proximal compression and increase the socket's medial-lateral stability when active. Releasing the dial allowed for socket expansion (relief) and better ROM while seated.

Key Learnings:

Run tubing vertical from dial to create a hinge for a medial brim. Run tubing close to trim lines for solid closure of brim. Cut brim in slight _/_ shape for added strength (see yellow lines below). Do not cut brim straight across (= weak closure). Add foam to the brim for additional closure force and compression. Place RevoFit™ dial close to the panel for ease of use for the patient.

