

Suture Bridge Double Row Rotator Cuff Repair by Neal ElAttrache, M.D. and James Tibone, M.D., Kerlan-Jobe Orthopaedic Clinic, Los Angeles CA

A medial row of Bio-Corkscrew anchors with FiberWire[®] combined with lateral fixation using 5.5 mm Bio-Tenodesis^M Screws creates a transosseous equivalent suture bridge over the tendon to broaden footprint compression and promote accelerated tendon healing to bone.



 Two Bio-Corkscrews with FiberWire are placed in the medial footprint and FiberWire suture tails passed through the tendon with the Scorpion Suture Passer. The medial row sutures are tied. Once completed, the remaining suture tails are used to drape over the lateral aspect of the tendon. Pilot holes for the 5.5 mm Bio-Tenodesis Screws are created on the lateral aspect of the greater tuberosity with a Bio-Corkscrew FT Punch.

One FiberWire end from each medial anchor is docked in the lateral cannula. The FiberWire ends in the superior portal are passed through the FiberSnare^M in the Bio-Tenodesis Driver.



2). The Bio-Tenodesis extended driver is inserted into the base of the pilot hole, the FiberWire tensioned and the screw inserted. The remaining FiberWire ends in the lateral portal are pulled arthroscopically through a second FiberSnare for Bio-Tenodesis screw fixation.

Tensioning of the FiberWire during second screw insertion maximizes tendon compression and fixation of the tendon footprint on the tuberosity.



3). A knot may then be tied over the recessed heads, locking the construct into place. The FiberWire is cut at the screw head with an open ended Suture Cutter.

Pressure-sensitive Fuji film studies provide evidence of substantially increased compression of the tendon to bone compared to double row repair with suture anchors. Biomechanical testing indicates that the suture bridge technique has greater pull-out strength, tissue fixation and tendon compression to bone than tied suture anchors and can be performed reproducibly as a mini-open or arthroscopic technique.