Mensical repair using the Meniscus Mender II
Meniscal Repair System
Meniscal Repair using the Meniscus Mender II Repair System

The Meniscus Mender II (MMII) System is designed for repairing the meniscus under arthroscopic visualization. The MMII System allows the surgeon to work from the outside of the knee into the joint, instead of starting sutures inside the capsule and exiting blindly out the back. This represents a safer, more effective method of treatment for repairable meniscal tears.

The MMII System utilizes curved and straight needles and a patented loop. These components combined with the outside-in approach minimize the risk of damage to neurovascular structures during meniscal repair. The suture circle arthroscopically assists the surgeon in stabilizing the meniscus during needle placement.

Passing suture material through the loop is accomplished with either the straight or curved suture passer. The tiny jaws of each suture passer are smooth to minimize the risk of crimping the suture material. Simple and safe to use, each MMII Disposable Set is packaged sterile for your convenience.

Meniscal Repair of a lateral meniscal tear

1. Flex the knee to relax neurovascular structures. Palpate and transilluminate to locate the joint line plus other anatomical landmarks, i.e., peroneal nerve, fibular head, etc.

2. With the knee in flexion and viewing from the most advantageous portal (medial or lateral), place the proper needle (straight or curved) with stylet outside-in across the meniscal tear (Fig. 1). This is achieved by external palpation and internal visualization. Advance the needle with stylet into the side wall of the meniscus through the tear. A Smith & Nephew Suture Circle may be used to stabilize the meniscus. After safe skin placement, the knee can be extended.

3. Make a 1 cm skin incision adjacent to the first needle encompassing the needle in the incision. The needle must be free in the incision. This is confirmed by moving the head of the needle to see that it is free from the skin.

4. A regular hemostat is used to spread the small incision down to the capsule. This provides an opening for placement of the second needle. Subsequent ligature will be tied over the capsule and not the subcutaneous fat. This maneuver also moves small veins, cutaneous nerves, etc., to the side of the portal.
5. The second needle is passed through the skin opening and into the joint in such a position that the subsequently placed suture would secure the meniscus (Fig. 2). This may require trial and error.

**Note:** The desire is to place the needles parallel to one another, but it is difficult because of space. Therefore, it is possible for the needles to cross one another on the outside so they are parallel on the inside.

6. Remove the stylet from the posterior needle. Insert the Smith & Nephew Loop through the needle until you see the loop open in the joint. Rotate the loop to accept the suture.

7. From the opposite portal, use the Smith & Nephew Straight or Curved Suture Passer to introduce the suture into the joint. Pass both the suture passer and suture through the loop (Fig. 3). Release the suture by carefully opening and withdrawing the suture passer from the loop, then the joint, leaving the suture in the loop. Pull back on the loop, capturing the suture material and easing it through the needle and outside the joint (Fig. 4). Leave the needle inserted.

**Note:** The selection of a straight or curved suture passer depends upon the patient’s anatomy. The curved suture passer is used for most lateral repairs and some posterior medial repairs.

8. Repeat steps 6 and 7 for the opposite needle (Fig. 5).

**Note:** Place the suture through the same portal as the first suture. Take care not to catch tissue in the portal. This can be avoided by clearing the portal with motorized instrumentation, increasing intra-articular fluid distention to create flow, and/or moving the suture passer side-to-side on the way through the portal.
9. Identify that both suture ends are outside of the needles on the outside of the joint. Remove both needles under arthroscopic visualization leaving both suture ends exposed.

10. Relax the knee to neutral position. Tie the suture subcutaneously, directly over the capsule (Fig. 6). For multiple sutures, start anteriorly on the tear and work toward the posterior horn, repeating steps 2–8.

**Note:** If ACL reconstruction is to accompany the meniscal repair, it is recommend that the sutures be placed prior to ACL surgery, but tied at the end of the case. The exposed sutures can be secured and held out of the way with skin tape.

Suture material is not included in the kit. #2-0 suture is preferred, however, type your suture selection based on the patient’s age, nature of the tear, and surgeon experience. There is a benefit to having different-colored suture material when multiple sutures are utilized.

**Postoperative Management**

- Four weeks restrictive bracing (20° to 60°) to prevent extremes of motion.
- Partial weight bearing, but not full as the knee is restricted from full extension.
- Full motion and full weight bearing is initiated by six weeks.
- Restriction from acceleration/deceleration sports for six months.
- The remainder of rehabilitation is individualized.