Protector Meniscus Suturing Set (AR-4060S)

(comes sterile and includes):
- Malleable Curved Cannula w/Handle, qty. 1
- Nitinol Suture Needle w/Wire Loop End, qty. 1
- Adjustable Needle Holder, qty. 1

Accessories:
- Needle Catcher, AR-6660
- Cannula Bending Tool, AR-6650
- Two-Hole Knot Pusher, 5 mm diameter for size #1 suture and larger, AR-1315
- Meniscal Repair Rasp, AR-4130
- Twist-In Cannula, 8.25 mm I.D. x 7 cm, sterile, qty. 5, AR-6530
- Reusable Obturator for AR-6530, gold, AR-6531
- Suture Retriever, AR-4030
- Suture Cutter, AR-12250
- 2-0 FiberWire, 38 inches, sterile, qty. 12, AR-7221

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.

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**Protector Meniscus Suturing Technique I**

For the relative ease of use meniscus suturing technique. For the most common meniscal injuries is to present.

Protector Meniscus Suturing Technique II

For unexpected placement of meniscus needle from inside/out without a deflecting retractor.

Protector Meniscus Suturing Technique III

For menisci tears located near the posterior root of the posterior horn of the meniscus.

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A small protuberant cruciate incision is made and the handle of the Needle Catcher is inserted anterior to the medial or lateral gommesus tendon as a prophylactic and needle deflecting during/strike of procedures below.

**Protector Nitinol Suture Needles** offer the unique safety advantage of exiting in a straight line from the end of the malleable Nitinol needle. The surgeon may use either absorbable or permanent sutures depending on task and tissue preference. However, inter hospital larger than #1 is not recommended for use with this system.

Once desired positioning has been obtained, advance the needle through the meniscus across the tear and out through the posterior edge of the meniscus. Place the tubular end of the Needle Catcher into the posterior recess behind the meniscus to catch the Nitinol Suture Needle as it exits the posterior aspect of the meniscus. A posterior portal is created and the tubular end of the Needle Catcher is inserted anterior to the medial or lateral gommesus tendon as a prophylactic and needle deflecting during/strike of procedures below.

A 70° arthroscope is useful in these cases.

For a vertical mattress repair, remove the Needle Catcher until the tip can be grasped and pulled through the tear. Take care to only extract one arm of the suture at a time to avoid entanglement.

Retract the needle holder on the needle and slide the needle back into the cannula. Reposition the tip of the needle directly posterior to the tear along the anterior meniscal margin below the posterior meniscal tears.

Current literature indicates that vertical suture placement results in repairs which are stronger than repairs accomplished by orienting the suture passes one above the other. A vertical mattress repair can also be accomplished by embedding the suture passes one above the other. This will create a horizontal mattress stitch across the tear.

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Protector Nitinol Suturing Technique I

For the relatively uncommon meniscus tear located near the posterior root of the posterior horn of the meniscus.

A posterolateral portal is created and the meniscus is inspected. A pin is inserted through a cannula into the posterior recess under the meniscus to catch it on its posterior aspect.

Protector Nitinol Suturing Technique II

For the most common meniscus tear located near the posterolateral root of the posterior horn of the meniscus.

Pre-load the flexible Nitinol Suture Needle into the cannula and advance it until the needle tip is just below the cannula bevel. Lock the needle holder onto the needle and the malleable placement cannula is formed as a popliteal retractor and needle deflector during inside/out placement of needles.

The needle is advanced through the meniscus across the tear and out through the capsule. The curved handle on the Needle Catcher is positioned as a popliteal retractor to deflect the Nitinol needles towards the posterior capsule to protect the popliteal neurovascular structures. Once the needle tip is safely inside the Needle Catcher, remove the needle holder and place it over the tip of the needle and pull the needle and one arm of the suture out of the joint.

Reposition the needle holder and place it over the tip of the needle and pull the needle and one arm of the suture out of the joint.

To close the defect, use a Two-Hole Knot Pusher to create multiple horizontal mattress stitches. This technique also allows for the all-stitch repair, which is adapted specifically for peripheral posterior horn tears which are bordered posteriorly by a recess with the knee in extension. It has several unique advantages over other methods.

A vertical mattress repair can also be accomplished by orienting the suture passes one above the other. Current literature indicates that vertical mattress sutures are stronger than those incorporating horizontal mattress techniques.

A posterior portal is created and the meniscus is inspected. A pin is inserted through a cannula into the posterior recess under the meniscus to catch it on its posterior aspect.

Protector Nitinol Suturing Technique III

For meniscus tears located near the posterior root of the posterolateral horn of the meniscus.

Pre-load the flexible Nitinol Suture Needle into the cannula and advance it until the needle tip is just below the cannula bevel. Lock the needle holder onto the needle and the malleable placement cannula is formed as a popliteal retractor and needle deflector during inside/out placement of needles.

A vertical mattress repair can also be accomplished by orienting the suture passes one above the other.

Current literature indicates that vertical mattress sutures are stronger than those incorporating horizontal mattress techniques.

A posterior portal is created and the meniscus is inspected. A pin is inserted through a cannula into the posterior recess under the meniscus to catch it on its posterior aspect.
Protector Meniscus Suturing Technique I

For the relatively minor meniscus tear located near the posterior root of the posterior horn of the meniscus.

Preload the flexible Nitinol Suture Needle into the placement cannula and advance it until the needle tip is visible through the cannula. Lock the needle holder onto the distal end of the needle with enough distance between the needle holder and the distal end of the cannula to permit unimpeded advancement of the needle through the meniscus and out through the joint capsule.

Insert the placement cannula through the contralateral portal and use the beveled tip to cauterize the most posterior portion of the tear first. Load the desired suture into the Needle Catcher and advance the needle through the tear. Load the anterior suture end of the needle into the Needle Catcher and advance the needle completely through the meniscus tear and out through the posterior portal. Current literature indicates that vertical mattress sutures are stronger than those incorporating horizontal mattress techniques.

A posterior portal is created and the tubular end of the Needle Catcher is positioned through a cannula into the posterior recess between the meniscus to catch the Nitinol Suture Needle as it exits the posterior aspect of the meniscus.

This technique, also known as the all-inside repair, is used specifically for popliteal posterior horn tears which are lacerated posteriorly by a bone or distal femoral osteotomy.

A small posterior extracapsular incision is made and the handle of the Needle Catcher is inserted anterior to the medial or lateral gastrocnemius tendon as a popliteal retractor and needle deflector during simultaneous needle placement.

Load the desired suture into the needle tip and while the needle is held by the Needle Catcher, the needle is used to suture the extracapsular portion of the tear. Advance to the tip of the needle; the needle is then pulled through the extracapsular portion of the tear. The suture ends are then tied extracapsular. If the tear is large, it is advisable to place multiple sutures to close the tear. Current literature indicates that vertical mattress suture repair is stronger than those incorporating horizontal mattress techniques.

This repair places the cannula in the ipsilateral portal, and the corresponding placement cannula is used to approximate the tear with one wide mattress stitch. Current literature indicates that vertical mattress repair is stronger than those incorporating horizontal mattress techniques.

Close the defect, use a Two Hole Harvest Punch to advance a popliteal portal from the posterior capsule until it is secure against the posterior meniscal margin below the posterior neurovascular structures. Current literature indicates that vertical mattress suture repair is stronger than those incorporating horizontal mattress techniques.

Preload the flexible Nitinol Suture Needle into the formal cannula and advance it until the needle tip is just below the cannula bevel. Lock the needle holder onto the proximal end of the needle with enough distance between the needle holder and the distal end of the cannula to permit unimpeded advancement of the needle through the meniscus and out through the joint capsule. Insert the placement cannula through the contralateral portal and use the beveled tip to cauterize the most posterior portion of the tear first. Load the desired sutures into the needle tip and while the needle is held by the Needle Catcher, the needle is used to suture the extracapsular portion of the tear. Advance to the tip of the needle; the needle is then pulled through the extracapsular portion of the tear. The suture ends are then tied extracapsular. If the tear is large, it is advisable to place multiple sutures to close the tear. Current literature indicates that vertical mattress suture repair is stronger than those incorporating horizontal mattress techniques.

For the relatively minor meniscus tear located near the posterior root of the posterior horn of the meniscus.

Preload the Needle Catcher through the posterior portal cannula and use the beveled tip to cauterize the most posterior portion of the tear first. Load the desired sutures into the needle tip and while the needle is held by the Needle Catcher, the needle is used to suture the extracapsular portion of the tear. Advance to the tip of the needle; the needle is then pulled through the extracapsular portion of the tear. The suture ends are then tied extracapsular. If the tear is large, it is advisable to place multiple sutures to close the tear. Current literature indicates that vertical mattress suture repair is stronger than those incorporating horizontal mattress techniques.

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Preload the flexible Nitinol Suture Needle into the formal cannula and advance it until the needle tip is just below the cannula bevel. Lock the needle holder onto the proximal end of the needle with enough distance between the needle holder and the distal end of the cannula to permit unimpeded advancement of the needle through the meniscus and out through the joint capsule. Insert the placement cannula through the contralateral portal and use the beveled tip to cauterize the most posterior portion of the tear first. Load the desired sutures into the needle tip and while the needle is held by the Needle Catcher, the needle is used to suture the extracapsular portion of the tear. Advance to the tip of the needle; the needle is then pulled through the extracapsular portion of the tear. The suture ends are then tied extracapsular. If the tear is large, it is advisable to place multiple sutures to close the tear. Current literature indicates that vertical mattress suture repair is stronger than those incorporating horizontal mattress techniques.

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Protector Meniscus Suturing Set (AR-4060S)

Contents include:
- Malleable Curved Cannula w/Handle, qty. 1
- Nitinol Suture Needle w/Wire Loop End, qty. 1
- Adjustable Needle Holder, qty. 1

Accessories:
- Needle Catcher AR-6660
- Cannula Bending Tool AR-6650
- Three Hole Bend Punch, 3 mm diameter for size #1 suture and larger AR-6130
- Meniscal Repair Rasp AR-6130
- Twist-In Cannula, 2.0 mm ID, x 7 mm, sterile, qty. 5 AR-6530
- 2-0 FiberWire, 36 inches, sterile, qty. 12 AR-7221

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Protector Meniscus Suturing Set (AR-4060S)

Contents included and packaged:
Malleable Curved Cannula w/Handle, qty. 1
Nitinol Suture Needle w/Wire Loop End, qty. 1
Adjustable Needle Holder, qty. 1

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