AO AO Sports Course– Principles of Sports Medicine: the Joint Is an Organ S1.1: Knot tying

Surgeons knot

Learning objectives

- Define common terminology (suture limb, post limb, half hitch)
- Perform different knot-tying techniques

Tasks

- Practice commonly used knots: surgeons knot, sliding knot
- To increase difficulty, practice knot tying in a restricted area (cylinders)
- Practice with varying thread sizes, starting with the thickest thread and using gradually thinner ones



Sliding knot

Take-home messages

- There are different knot-tying principles and techniques used for specific surgical applications.
- The most widely used knots are the surgeon's knot and the sliding knot.



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A AO Sports Course-

Principles of Sports Medicine: the Joint Is an Organ

S1.2: Placement of anchors

Passing suture through tissue

Learning objectives

- Explore different options for passing sutures through tissue
- Demonstrate proficiency in the use of sports medicine tools and techniques
- Differentiate between insertion of different anchor types

Tasks

- Explore different options for passing sutures through tissue: lasso, suture gun, hook
- Insert a screw-in and tap-in anchor in the hard foam block



Take-home messages

- There exists a wide variety of devices and techniques to transport a suture through tissue.
- Suture anchors can be inserted in the bone in various ways during arthroscopic surgery.



Screw-in anchor



AO AO Sports Course– Principles of Sports Medicine: the Joint Is an Organ S1.3: Shoulder arthroscopic procedures

Learning objectives

- Demonstrate competency in shoulder arthroscopic techniques
- Identify the standard portals for common shoulder procedures: posterior, anterior, and lateral
- Perform a diagnostic arthroscopy of the shoulder joint
- Locate and name common structures within the shoulder: glenohumeral and subacromial
- Develop and improve the skill of triangulation and probing
- Optional: Identify the posteroinferior portal, Neviaser portal, and anteroinferior portal



Tasks

- Perform portal placement: posterior, anterior, and lateral
- Perform a diagnostic arthroscopy of the glenohumeral joint, including the anterior working portal
- Perform a diagnostic subacromial arthroscopy, including the lateral working portal
- Optional:
 - Identify the posteroinferior portal, the Neviaser portal, and the anteroinferior portal
 - Remove loose bodies

Take-home messages

- Establishing the proper portal placement is essential for a successful arthroscopic procedure.
- Different portals have different indications depending on the procedure planned.
 Triangulation and probing skills are essential to complete the arthroscopic procedure.

AO AO Sports Course– Principles of Sports Medicine: the Joint Is an Organ S2.1: Biceps tenotomy and tenodesis

Inlay tenodesis

Learning objectives

- List the indications for biceps tenotomy and tenodesis
- Identify the pros and cons of tenotomy versus tenodesis
- Discuss fixation techniques for biceps tenodesis

Tasks

- Perform a biceps tenotomy
- Perform a biceps tenodesis using an intramedullary button
- Perform a biceps tenodesis using an all-suture anchor



Take-home messages

- Biceps tendonitis is a very painful pathology. Surgical treatments depend on multiple factors including age and function of the patient.
- Biceps tenotomy can reduce the patient's pain, whereas biceps tenodesis can also preserve the function.
- Biceps tenodesis can be achieved using an onlay or inlay technique.

Onlay tenodesis



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AO AO Sports Course– Principles of Sports Medicine: the Joint Is an Organ S2.2: Labrum repair

Learning objectives

- State the principles for labral repair
- Perform knotted labral repair with an all-suture tap-in anchor

Tasks

- Expose the glenoid and the labrum
- Identify the labrum
- Debride the undersurface of the labrum
- Use the drill guide to drill the glenoid for the anchor placement
- Use the right anchor for the repair



Take-home messages

- Labrum repair requires meticulous exposure, debridement, and the proper anchor placement.
- Different anchors can be used including knotted and knotless fixation.

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A AO Sports Course-Principles of Sports Medicine: the Joint Is an Organ S2.3: Rotator cuff repair AO AO AO AO

Learning objectives

- Learn the techniques for rotator cuff repair
- Discuss the principles of knotted versus knotless fixation
- Discuss the differences, indications, and technique for a single-versus double-row rotator cuff fixation

Tasks

- Practice knotted and knotless techniques
- "Repair" the rotator cuff using the single-row (knotted) and double-row (knotless) techniques



Take-home messages

- Different rotator cuff tear patterns require varying fixation techniques.
- Knotted and knotless anchors can be used in different configurations to achieve repair.

Double row suture bridge

AO AO Sports Course– Principles of Sports Medicine: the Joint Is an Organ S2.4: Shoulder arthroscopic procedures

Tasks

- Perform a labral repair in the arthroscopic environment
- Optional: Perform a rotator cuff repair in the arthroscopic environment

Take-home message

 Portal placement and arthroscope handling determine performance and outcome.

Labral repair



Optional: rotator cuff repair