

Shoulder And Elbow Injury Assessment Curriculum



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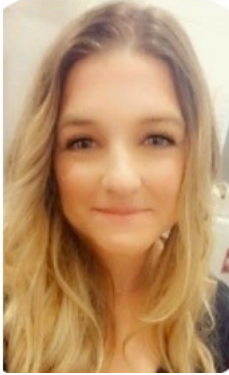
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Shoulder and Elbow Injury Assessment Curriculum

This curriculum and the accompanying Shoulder and Elbow Injury Assessment Trainer will help students learn the basics of shoulder and elbow injuries as well as how to assess and treat them.

Author



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Curriculum Structure

The *Shoulder and Elbow Injury Assessment Curriculum* is composed of the following lessons. Approximate lesson times are included.

Lesson	Title	Approximate Time
One	Rotator Cuff Injuries	50-65 minutes
Two	Labral Tears	60-75 minutes
Three	Acromioclavicular Injuries	50-65 minutes
Four	Ulnar Collateral Ligament Injuries	60-85 minutes
Five	Elbow Epicondylitis	60-85 minutes
	Total	4-7 hours

Lesson Structure

Each lesson begins with a Lesson Overview, Lesson Objectives, and a Lesson at a Glance table, which lists lesson activities, materials required, suggested preparation steps, and approximate class time.

Lesson Sections

The actual lesson follows the overview, which contains some of the sections described below.

FOCUS

Every lesson begins with a FOCUS activity intended to capture participants' attention. This may be in the form of a small or large class discussion, game, demonstration, or review of previous lesson information. During this activity, participants are introduced to the topic of the lesson.

LEARN

The LEARN activity in each lesson varies in its presentation mode. It may be a slide presentation, group activity, or demonstration.

REVIEW

The majority of lessons end with a REVIEW activity intended to briefly review the lesson's key messages or main points.

Lesson One – Rotator Cuff Injuries

Lesson Overview

In this lesson, students will explore the anatomy and function of the rotator cuff, learn about common rotator cuff injuries, and understand the mechanics behind these injuries.

Lesson Objectives

After completing this lesson, participants will be able to:

- Identify the four muscles that make up the rotator cuff and describe their function in shoulder movement and stability
- Differentiate between types of rotator cuff injuries and explain their causes
- Describe the symptoms associated with rotator cuff injuries
- Perform basic palpation, range of motion, and special tests used to assess rotator cuff injuries

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Shoulder Anatomy</i> worksheet • <i>Shoulder Anatomy</i> – Answer Key	1. Print/photocopy the worksheet (one per participant).	10-15 minutes
LEARN	• <i>Rotator Cuff Injury</i> slide presentation	1. Prepare the slide presentation for viewing.	20-25 minutes
REVIEW	• <i>Rotator Cuff Injury Scenarios</i> • <i>Rotator Cuff Injury Scenarios</i> – Answer Key • Notes from class lecture (to use as a reference sheet for the special tests and anatomy) • Shoulder Injury Assessment Trainer	1. Provide each group with an injury scenario. 2. Prepare the Shoulder Injury Assessment Trainer for practice.	20-25 minutes

Lesson One – Rotator Cuff Injuries

FOCUS: Shoulder Anatomy Review

10-15 minutes

Purpose:

Participants will use the worksheet to demonstrate prior knowledge of shoulder anatomy and identify the bones of the shoulder addressed during the lesson.

Materials:

- *Shoulder Anatomy* worksheet
- *Shoulder Anatomy – Answer Key*

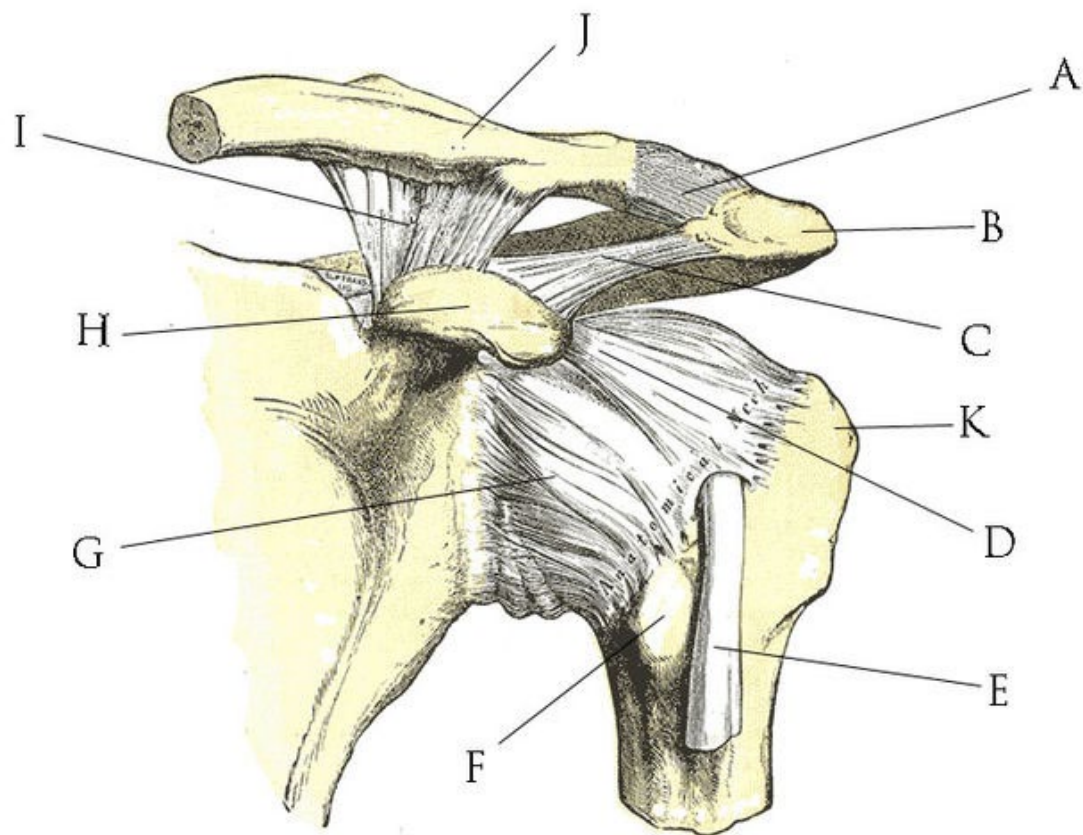
Facilitation Steps:

1. Distribute the worksheet and have participants fill out as much of it as they can on their own.
2. Ask the participants to pair up and work together to identify the remaining structures.
3. Once you have allowed enough time for students to attempt to find/know the correct answers, review the worksheet with the whole class.

Name: _____ Class: _____

Anatomy of the Shoulder

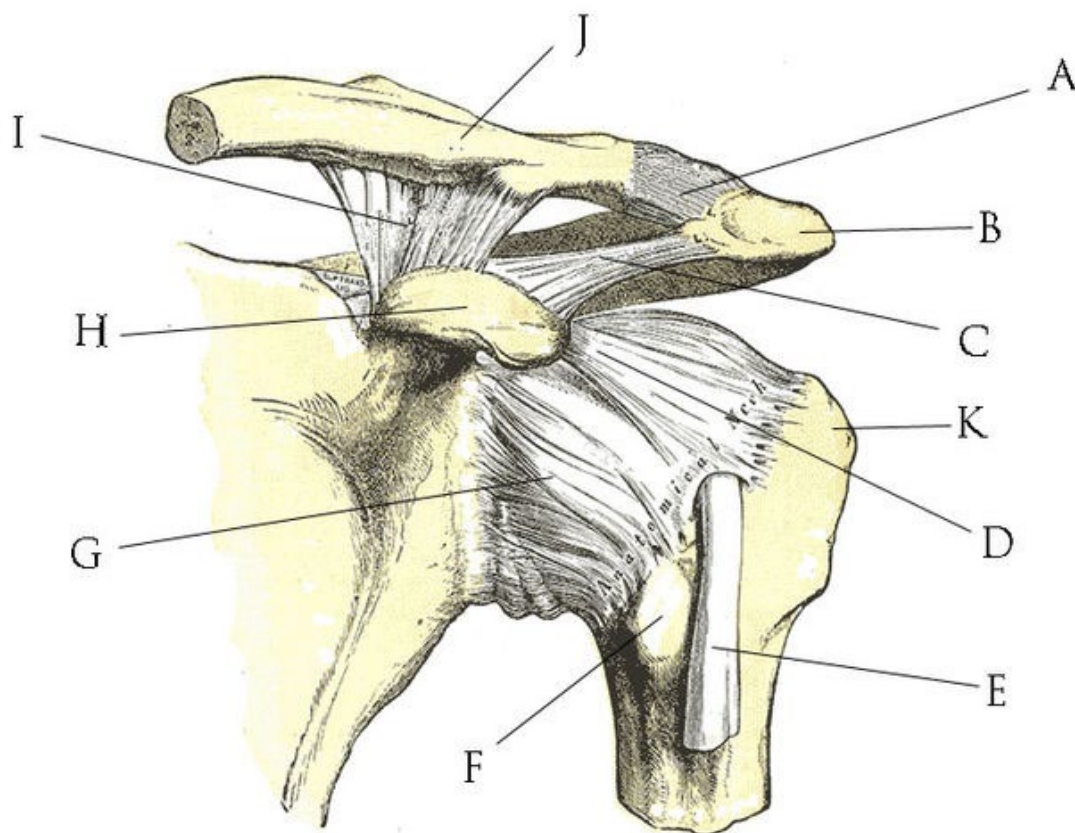
Instructions: Label the bones of the shoulder by writing the correct anatomical name of the bone in the table with its associated matching letter.



A.	G.
B.	H.
C.	I.
D.	J.
E.	K.
F.	

Anatomy of the Shoulder – Answer Key

Instructions: Label the bones of the shoulder by writing the correct anatomical name of the bone in the table with its associated matching letter.



A. Acromioclavicular Ligament	G. Glenohumeral joint
B. Acromion	H. Coracoid Process
C. Coracoacromial arch	I. Coracoclavicular Ligament
D. Coracohumeral ligament	J. Clavicle
E. Long head of the bicep tendon	K. Greater Tubercle
F. Lesser tubercle	

Lesson One – Rotator Cuff Injuries

LEARN: Rotator Cuff Injuries Presentation

20-25 minutes

Purpose:

Participants learn about rotator cuff injuries via a slide presentation.

Materials:

- *Rotator Cuff Injury* slide presentation

Facilitation Steps:

1. Share the following information with participants while showing the slide presentation.

Slide 1: Rotator Cuff Injuries

Slide 2: Rotator Cuff Anatomy

The rotator cuff is a group of four muscles that sit in a small space between your humerus and the upper portion of the shoulder blade. The muscles are identified using the acronym SITS (supraspinatus, infraspinatus, teres minor, and subscapularis).

Slide 3: Function of the Rotator Cuff

The rotator cuff muscles work together to stabilize the shoulder and allow a wide range of motion, especially for overhead movements like throwing and lifting. Each muscle has a specific role in shoulder stability and movement.

Slide 4: RTC Injuries

Rotator cuff injuries can happen in several ways and are especially common in athletes who play contact sports and sports that require repetitive overhead movements and/or heavy lifting. The supraspinatus tendon is the most important component of the rotator cuff but also the most vulnerable.

Slide 5: RTC Disorders

There are three main types of rotator cuff injuries: tendinitis, bursitis, and tears. Tendinitis and bursitis usually result from overuse, while tears can be partial or complete and are often caused by trauma or repetitive movements.

Slide 6: Mechanism of Injury

Most rotator cuff injuries are caused by repetitive overhead activities, like in sports such as baseball or swimming. However, acute injuries can occur from trauma, such as falling on an outstretched hand. It is important to differentiate between chronic injuries, from long-term overuse, and acute injuries, which happen suddenly.

Slide 7: RTC Injury Symptoms

Common symptoms include pain at night, especially when sleeping on the injured side, pain when lifting the arm, muscle weakness, and loss of or decreased shoulder range of motion. Patients may also experience popping or clicking sounds when they move their shoulder.

Slide 8: Special Tests for RTC Injuries

The diagnosis of rotator cuff injuries often involves several special tests to determine the severity of the injury and structures involved. The most performed special tests include Neer Sign, Hawkins-Kennedy, Empty and Full Can, Shoulder Shrug, Painful Arc, Belly Test, Hornblowers Test, and Lag Sign.

Slides 9-10: Neer Sign

The Neer Sign is a test for shoulder impingement, particularly to determine if the supraspinatus tendon or subacromial bursa is involved in the injury.

With the patient seated or standing, the examiner stabilizes the scapula while passively raising the arm into full flexion and internally rotating the shoulder.

The test has a positive result if the patient reports pain, particularly in the anterior or lateral shoulder. This indicates impingement of the rotator cuff under the acromion.

[Neer Sign – Shoulder Rotator Cuff Impingement Special Test](#)

Slides 11-12: Hawkins-Kennedy Test

The Hawkins-Kennedy Test is used to assess subacromial impingement and supraspinatus tendon involvement.

When performing this test, the examiner places the patient's arm in the flexed position with both the shoulder and elbow flexed to 90 degrees. Then, the examiner internally rotates the patient's arm while stabilizing the elbow.

The test is positive if the patient has pain during internal rotation. This suggests impingement of the rotator cuff or subacromial structures.

[Hawkins Kennedy Test – Shoulder Rotator Cuff Impingement Special Test](#)

Slides 13-14: Lag Sign Test

The lag sign, also known as the external rotation lag sign, is used to evaluate the integrity of the infraspinatus and supraspinatus tendons.

The patient's arm is positioned in 90 degrees of abduction and 90 degrees of elbow flexion. Then the examiner passively externally rotates the shoulder and asks the patient to hold that position.

The test indicates a tear or weakness in the infraspinatus or supraspinatus if the patient cannot maintain the externally rotated position and the arm "lags" or springs back toward internal rotation.

[Lag Sign at 90 Degrees – Shoulder Rotator Cuff Special Test](#)

Slides 15-16: Empty Can Test

The purpose of the empty can test is to assess for a supraspinatus tendon injury.

The patient's arm is placed at 90 degrees of shoulder flexion and approximately 30 degrees

of horizontal abduction, with the thumb pointed downward (as if emptying a can). The patient resists downward pressure applied to the arm.

The test is positive if there is pain or weakness while resisting downward pressure. This indicates a supraspinatus injury.

Slides 17-18: Belly Press Test

The Belly Press Test is used to assess the integrity and function of subscapularis muscle injury.

The test is done when the patient is sitting or standing and press their palm against their belly while keeping the elbow forward (not letting it drift backward) – examine the position of the elbow and wrist during this test

The test is positive if there is an inability to maintain the elbow forward (elbow drifts backward), patient cannot generate pressure against the abdomen without compensating.

Slides 19-20: Hornblower's Test

The Hornblower's Test helps to assess the integrity and function of the teres minor muscle, which is part of the rotator cuff, helps identify tear or weakness

The patient could be sitting or standing, flex the elbow to 90 degrees and elevate the arm to 90 degrees in the scapular plane. Ask the patient to externally rotate the shoulder against resistance, see if they can hold the position.

This test indicates the inability to maintain external rotation (arm falls into internal rotation), there will be pain or weakness during attempted rotation

Lesson One – Rotator Cuff Injuries

REVIEW: Rotator Cuff Injuries

20-25 minutes

Purpose:

Participants work in pairs to analyze different shoulder injury scenarios, applying their understanding of rotator cuff anatomy and special tests to diagnose the injury.

Materials:

- *Rotator Cuff Injury Scenarios*
- *Rotator Cuff Injury Scenarios – Answer Key*
- Notes from class lecture (to use as a reference sheet for the special tests and anatomy)
- Shoulder and Elbow Injury Assessment Trainer

Facilitation Steps:

1. Divide students into pairs and give each pair a scenario.
2. Each pair should:
 - a. Read the scenario carefully and identify the likely injury based on the description.
 - b. Choose the appropriate special test to confirm the diagnosis and practice performing that test on the Shoulder and Elbow Injury Assessment Trainer.
 - c. Be prepared to demonstrate tests, findings, and reasoning to the class.
3. Once all the pairs have worked through their scenarios, bring the class together for a group discussion. Ask each pair to present:
 - a. The injury they suspected
 - b. The special tests they performed
 - c. The diagnosis they concluded and their reasoning
4. Encourage classmates to ask questions and provide feedback to reinforce understanding.

Rotator Cuff Injury Scenarios

Scenario 1

Athlete: A 35-year-old baseball pitcher complains of pain in his right shoulder after a game. He describes sharp pain when raising his arm overhead, especially when throwing or lifting weights. There's noticeable weakness when he tries to hold his arm up, and he avoids fully extending it.

Key Questions:

- What special tests would you perform?
 - What do you suspect the injury is?
-

Scenario 2

Athlete: A 45-year-old swimmer reports pain during training. She mentions discomfort when moving her arm away from her body and difficulty reaching behind her back to grab her towel. Upon examination, you notice some weakness during external rotation.

Key Questions:

- Which rotator cuff muscle do you think is injured?
 - Which tests would help confirm the injury?
-

Scenario 3

Athlete: A 50-year-old carpenter complains of shoulder pain that started after lifting a heavy toolbox above his head. He feels a sharp pain at the front of his shoulder and has difficulty lowering his arm without it dropping suddenly.

Key Questions:

- What injury is likely?
 - How would you confirm the diagnosis using special tests?
-

Scenario 4

Athlete: A 40-year-old tennis player experiences gradual onset of shoulder pain. She reports pain when lifting her arm above 60 degrees and says it worsens between 60 and 120 degrees of abduction. Her pain subsides when her arm is fully raised.

Key Questions:

- What tests would you perform to confirm the injury?
- What do you think the injury is?

Scenario 5

Athlete: A 30-year-old weightlifter has been experiencing weakness and pain during external rotation of the shoulder, particularly when doing bench presses. He mentions a lagging feeling when trying to externally rotate the arm.

Key Questions:

- What tests should you perform?
- What might the issue be?

Rotator Cuff Injury Scenarios – Answer Key

Scenario 1:

- **Likely Injury:** Rotator cuff strain or tear, possibly involving the supraspinatus or infraspinatus due to pain during overhead activity and weakness
 - **Tests to Perform:** Empty Can Test or Belly Press Test
 - **Diagnosis:** Likely supraspinatus tear or strain
-

Scenario 2:

- **Likely Injury:** Rotator cuff pathology involving the supraspinatus or subscapularis, based on weakness in external rotation
 - **Tests to Perform:** External Rotation Lag Sign and Empty Can test
 - **Diagnosis:** Likely supraspinatus or infraspinatus tear
-

Scenario 3:

- **Likely Injury:** Likely a tear in the supraspinatus or another part of the rotator cuff due to inability to lower the arm
 - **Tests to Perform:** Empty Can test or Belly Press Test
 - **Diagnosis:** Likely supraspinatus tear
-

Scenario 4:

- **Likely Injury:** Shoulder impingement syndrome due to pain during abduction between 60 and 120 degrees
 - **Tests to Perform:** Neer Sign and Hawkins-Kennedy
 - **Diagnosis:** Likely subacromial impingement
-

Scenario 5:

- **Likely Injury:** Rotator cuff pathology involving the infraspinatus, based on weakness in external rotation
- **Tests to Perform:** External Rotation Lag Sign and Empty Can tests
- **Diagnosis:** Likely infraspinatus tear

Lesson Two – Labral Tears

Lesson Overview

In this lesson, students will explore the anatomy and function of the glenoid labrum, learn about common labral injuries, and understand the mechanics behind these injuries.

Lesson Objectives

After completing this lesson, participants will be able to:

- Understand the anatomy and function of the shoulder labrum
- Identify the common causes and types of labral tears
- Explain the signs, symptoms, and diagnosis of labral tears
- Perform basic palpation, range of motion, and special tests to assess labral injuries

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• Whiteboard and markers	N/A	10-15 minutes
LEARN	• <i>Labral Tears</i> slide presentation	1. Prepare the slide presentation for viewing.	25-30 minutes
REVIEW	• Shoulder and Elbow Injury Assessment Trainer • <i>Glenoid Labrum Injury Assessment Lab</i>	1. Print/photocopy the lab worksheet (one per participant).	25-30 minutes

Lesson Two – Labral Tears

FOCUS: Shoulder ROM and Injury Guessing Game

10-15 minutes

Purpose:

Participants work in groups to understand the normal range of motion of the shoulder and brainstorm potential shoulder injuries, setting the stage for learning about labral tears.

Materials:

- Whiteboard and markers

Facilitation Steps:

1. Introduce/review ROM of the shoulder by asking students, “Can anyone demonstrate the different ways you can move your shoulder?”
2. Have two to three students stand up and demonstrate shoulder ROM such as:
 - a. Flexion/extension
 - b. Abduction/adduction
 - c. Internal rotation/external rotation
 - d. Circumduction
3. As the students demonstrate, label each movement on the whiteboard and briefly explain what structures in the shoulder allow these movements (focusing on the shoulder joint and labrum).
4. After introducing the movements, tell the class, “Now that we know how the shoulder moves, what do you think could go wrong with these movements if an athlete constantly uses their shoulder in sports like baseball and swimming?”
5. Divide students into pairs or small groups and give them three minutes to discuss and write down as many shoulder injuries as they can think of, whether from their own experience or general knowledge (e.g. dislocations, rotator cuff injuries, labral tears).
6. Ask groups to share their answers, writing the different injury types on the board.
7. Lead into the lesson topic by pointing out that one of the injuries often caused by overuse or trauma is a labral tear. For example, “Great guesses! One common injury that many athletes, especially those who use overhead motions, deal with is called a labral tear. Let’s explore what that means today.”

Lesson Two – Labral Tears

LEARN: Labral Tears of the Shoulder

25-30 minutes

Purpose:

Participants will view the slide presentation while you introduce them to the causes, symptoms, and evaluation of labral tears.

Materials:

- *Labral Tears* slide presentation

Facilitation Steps:

1. Share the following information with the participants while showing the slide presentation.

Slide 1: Labral Tears

Slide 2: Glenoid Labrum of the Shoulder

The picture shows the shoulder anatomy with labeled structures, including the glenoid labrum.

The labrum is a cup-shaped rim of cartilage that lines the inside of the glenoid fossa. It is the attachment site for many shoulder ligaments.

The labrum supports and reinforces the ball-and-socket joint as well as rotator cuff muscles and tendons. Finally, it contributes to approximately 10 percent of shoulder stability.

Slide 3: Mechanism of Injury

The labrum can be injured because of repetitive shoulder motion, acute trauma, or a dislocation of the glenohumeral joint.

Slide 4: Types of Labral Tears

There are many different types of labral tears. The most common is the SLAP tear, which stands for “superior labrum anterior to posterior.” This is common in overhead athletes like baseball pitchers. Another type is the Bankart tear, which usually occurs when someone dislocates their shoulder. The third type of labral tear is the reverse Bankart or posterior labral tear, which is typically caused by a posterior shoulder dislocation.

Slides 5-6: SLAP Tears

SLAP is an acronym that stands for “superior labrum from anterior to posterior.” While not all SLAP tears extend from anterior to posterior, all are an injury to the superior portion of the labrum near the attachment of the bicep tendon

Slide 7: Types and Classifications of Lesions

There are four main types of SLAP tears that are classified based on the nature of the tear and degree of the damage.

Slide 8: Type I SLAP Lesion

A type I SLAP lesion is typically degenerative and classified by isolated fraying of the superior labrum. In this type of injury, the labrum still has a firm attachment to the glenoid and the shoulder joint remains stable.

It is thought that most of the population may currently have a Type I SLAP lesion. The patient may complain of mild or occasional shoulder discomfort or clicking.

Slide 9: Type II SLAP Lesion

This is the most common type of SLAP tear. It is characterized by a complete detachment of the superior labrum and the origin of the tendon of the long head of the biceps brachii from the glenoid fossa.

This type of tear results in loss of stability of the shoulder joint and pain, particularly with overhead activities. The patient may also complain of catching or locking sensations in the shoulder.

Slide 10: Type III SLAP Lesion

A type III lesion is a bucket-handle tear of the labrum that hangs into the shoulder joint. Although the labrum is torn in this type of lesion, the bicep tendon remains intact. The torn portion of the labrum can interfere with normal shoulder function, resulting in locking, catching, or clicking sensations, along with pain.

Slide 11: Type IV SLAP Lesion

The type IV lesion consists of a labral tear that extends into the bicep tendon. This leads to instability and significant shoulder dysfunction. The patient may complain of severe pain, weakness, instability, and an inability to rotate or flex the arm.

Slide 12: Signs and Symptoms

SLAP tears often result in generalized shoulder pain and instability. The athlete may complain of feeling grinding, locking, or catching while moving the shoulder. Overhead throwing athletes will often complain of pain while throwing, particularly between the cocking and release phase of the throw.

Slides 13-14: Bankart Lesion

A Bankart lesion, the second most common labral tear, is an injury to the anterior and inferior portion of the glenoid labrum. It is thought to occur in 90 percent of traumatic anterior instability cases and can be a direct result of an anterior dislocation or subluxation of the humeral head.

Slide 15: Types of Bankart Lesions

There are two types of Bankart lesions: soft and bony. Soft Bankart lesions are the most common and occur when the injury only affects the labrum or other soft tissue of the shoulder. Bony Bankart lesions involve the labrum along with a fracture of the portion of the glenoid fossa. This can lead to notable bone loss in the glenoid fossa and result in chronic instability.

Slide 16: Signs and Symptoms

Patients with Bankart labral tears may complain of generalized shoulder pain, along with catching, locking, or popping sensations in the shoulder. Bankart lesions are also often associated with complaints of recurrent anterior shoulder dislocations.

Slides 17-18: Posterior Labral Tear

The posterior labral tear, also called reversed Bankart lesion, is a tear of the posterior and inferior portion of the labrum that results in an avulsion of the posterior capsular. These tears are caused by repeated stress, especially for athletes in sports such as weightlifting, football, and rowing. They can also result from a posterior shoulder dislocation. These types of tears are rare and only seen in two to six percent of shoulder surgeries.

Slide 19: Signs and Symptoms

A patient with a posterior labral tear may complain of posterior shoulder pain, particularly during movements such as pushing, bench press, or reaching behind the back. They may also experience shoulder instability and weakness, especially with pushing or overhead movements. Patients may also complain of clicking, popping, or grinding sensation during movement.

Slide 20: Special Tests for Labral Tears

Slide 21: Special Tests

Special tests are performed to assess the stability and integrity of the shoulder joint and labrum. For this lesson, we will focus on:

- O'Brien's Test
- Clunk Test
- Dynamic Labral Shear Test
- Anterior Slide Test
- Biceps Load Test
- Speed Test

Slides 22-23: O'Brien's Test (Active Compression Test)

O'Brien's Test, also known as the active compression test, requires the patient to be sitting or standing with their arm placed at 90 degrees of shoulder flexion and 10 to 15 degrees of horizontal abduction.

Then, the patient is instructed to fully internally rotate the shoulder while pronating the forearm. The evaluator provides a distal stabilizing force to the patient's arm while the patient applies an upward force. Then, the test is repeated with the shoulder and elbow in a neutral position.

A positive test result occurs when the patient reports pain and clicking during the first position, which is then reduced or absent in the second position. If the patient complains of deep pain inside the shoulder, it may be indicative of a SLAP tear.

[Active Compression O'Brien's Test - Shoulder Exam SLAP Special Test](#)

Slides 24-25: Clunk Test (Internal Derangement Test)

To perform the clunk test, position the patient in the supine position with their shoulder slightly over the edge of the table. With one hand on the patient's elbow, the examiner maximally flexes the shoulder while the elbow is relaxed at approximately 60 degrees of flexion.

The examiner places their other hand on the posterior aspect (back) of the shoulder. Then, they rotate the humerus, moving it between the end ranges of abduction and flexion.

As the humeral head moves through these end motions, a labrum tear may get caught or trapped in the joint, causing a "clunking" sensation.

[Clunk Test - SLAP Special Test - Shoulder Clinical Examination](#)

Slides 26-27: Dynamic Labral Shear Test

This test is used to diagnose SLAP tears. The examiner, with the patient in a seated or standing position, instructs the patient to externally rotate and abduct their arm to 90 degrees and flex their elbow. Then, the evaluator abducts the shoulder from 90 to 120 degrees.

[Dynamic Labral Shear Test](#)

Sides 28-29: Anterior Slide Test

With the patient in a seated position with their hand on their hip and their thumb facing posteriorly, the examiner places one hand on the patient's shoulder and the other on the elbow and distal humerus. Then, the examiner exerts an anterior force along the line of the humerus while stabilizing the shoulder with the other hand.

The test would be considered positive if the patient's pain is reproduced or clicking and popping are present.

[Anterior Slide SLAP Special Test - Shoulder Clinical Exam](#)

Slides 30-31: Biceps Load Test

The biceps load test is used when a clinician suspects a SLAP lesion. A positive finding would result in pain or an exacerbation of their current pain during resisted elbow flexion.

The patient is placed in a supine position with their arm overhead at approximately 120 degrees and their shoulder fully externally rotated. The elbow is flexed to 90 degrees and the hand is supinated. Then, the patient is instructed to flex their elbow as the clinician provides resistance.

[Biceps Load Test - SLAP Special Test - Shoulder Clinical Examination](#)

Slides 32-33: Speed Test

The speed test is used to assess bicep tendon integrity and the possible presence of a SLAP lesion. Remember, the long head of the bicep attaches to the supraglenoid tubercle and can recreate labral-related pain.

With the patient seated, the arm is placed in 90 degrees of flexion with the elbow slightly flexed and the hand supinated. The examiner simultaneously resists the isometric contraction of the shoulder elevation and elbow flexion.

A positive test result would cause increased pain in the shoulder during resistance of the contraction.

[Dynamic Speed's Test - Shoulder Clinical Exam - SLAP Special Tests](#)

Slides 34-35: Anterior Apprehension Test

The Anterior Apprehension Test is used to evaluate the anterior shoulder instability.

The patient should be seated or supine and have the shoulder abducted to 90 degrees and externally rotate it, you should also apply gentle pressure to the humeral head.

A positive test would result in pain of the shoulder and even could be concern or fear that the shoulder could dislocate, resisting future rotation.

[Anterior Apprehension Test](#)

Lesson Two – Labral Tears

REVIEW: Special Test Stations

20-25 minutes

Purpose:

Participants work in groups to practice performing special tests for the glenoid labrum on each other and using the Shoulder and Elbow Injury Assessment Trainer.

Materials:

- Shoulder and Elbow Injury Assessment Trainer
- *Glenoid Labrum Injury Assessment Lab*

Facilitation Steps:

1. Distribute the lab worksheet and have participants work in pairs or groups to practice the special tests on each other as listed on the worksheet.
2. Each pair/group should rotate through performing the O'Brien's and Clunk Tests on the Shoulder and Elbow Injury Assessment Trainer to ensure each participant receives a sign off from you once the student has demonstrated proficiency with the special tests.

Name: _____

Class: _____

Glenoid Labrum Injury Assessment Lab

Instructions: Perform each test below on two people and record + (positive) or – (negative). Once you feel you are proficient in performing the special test, your teacher will assess your ability to perform the test and initial the final box.

Special Test	What are you testing for?	Left Shoulder 1	Right Shoulder 1	Left Shoulder 2	Right Shoulder 2	Teacher Check-off
O'Brien's Test						
Clunk Test						
Dynamic Labral Shear Test						
Anterior Slide Test						
Bicep's Load Test						
Speed Test						

Lesson Three – Acromioclavicular Injuries

Lesson Overview

In this lesson, students will explore the injuries to the acromioclavicular (AC) joint, covering the anatomy of the AC joint, common mechanisms of injury, signs and symptoms, and special tests.

Lesson Objectives

After completing this lesson, participants will be able to:

- Identify and describe the anatomy of the AC joint
- Explain common mechanisms of injury for the AC joint
- Recognize and distinguish between the different classifications of AC joint injuries
- Demonstrate knowledge and perform special tests to diagnose AC joint injuries

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Acromioclavicular Injury Scenario</i> slide presentation	1. Prepare the slide presentation for viewing.	10-15 minutes
LEARN	• <i>Acromioclavicular Injuries</i> slide presentation	1. Prepare the slide presentation for viewing.	20-25 minutes
REVIEW	• Shoulder and Elbow Injury Assessment Trainer • <i>Acromioclavicular Joint Injury Assessment Lab</i>	1. Print/photocopy the lab worksheet (one per participant).	20-25 minutes

Lesson Three – Acromioclavicular Injuries

FOCUS: Acromioclavicular Joint Injury Scenario

10-15 minutes

Purpose:

Participants work in groups to think critically about how shoulder injuries occur, setting the stage for deeper exploration in the lesson.

Materials:

- *Acromioclavicular Injury Scenario* slide presentation

Facilitation Steps:

1. Begin by showing the *Acromioclavicular Injuries* slide presentation (or share the presentation with the class so each group can play the video as needed).

Slide 1: Acromioclavicular Injury Scenario

Slide 2: Instructions

Slide 3: Injury Scenario Video

Slide 4: Small Group Discussion

2. Divide Students into small groups and provide them with the discussion prompts (slide 4):
 - a. What do you think happened to the athlete's shoulder?
 - b. What part of the shoulder might be injured based on the mechanism of injury?
 - c. What symptoms might the athlete experience?

3. Reconvene as a class and have each group share their ideas. As groups present, write their observations on the board under key categories:
 - a. Mechanism of injury
 - b. Symptoms
 - c. Possible injuries
4. After the discussion, introduce the lesson topic.
 - a. Highlight that the athlete in the video likely sustained an acromioclavicular (AC) joint injury based on the mechanism of falling and crashing into the boards directly onto the shoulder
 - b. Explain that in today's lesson, the class will learn about the AC joint, how it can be injured, and how to diagnose and treat these injuries.

Lesson Three – Acromioclavicular Injuries

LEARN: Acromioclavicular Injuries

20-25 minutes

Purpose:

Participants will view the slide presentation while you introduce them to the concepts of the causes, symptoms, and assessment of acromioclavicular injuries.

Materials:

- *Acromioclavicular Injuries* slide presentation

Facilitation Steps:

1. Share the following information with the participants while showing the slide presentation.

Slide 1: Acromioclavicular Injuries

Slide 2: Acromioclavicular Joint

The acromioclavicular joint is located between the clavicle's distal end and the scapula's acromion.

Slide 3: Ligaments of the Acromioclavicular Joint

There are two main ligaments associated with the acromioclavicular (AC) joint. The AC ligament covers the joint capsule and reinforces the superior aspect of the capsule, and the coracoclavicular ligament, which is made up of the conoid and the trapezoid ligaments.

These ligaments create a strong structure that allows the clavicle to hold the weight of the upper arm.

Slide 4: Types of AC Injuries

Injuries to the AC joint are usually acute and occur as sprains, dislocations, and separations. Type I and type II injuries account for most AC separations, but mild AC joint injuries are thought to be underestimated since individuals may not seek medical care for them.

Slide 5: Mechanism of Injury

The primary mechanism of injury is direct impact over the AC joint. Landing on the tip of the shoulder and falling on an outstretched arm are also common mechanisms of injury.

Slide 6: Classification of AC Injuries

The Rockwood Classification system is the most used classification system for AC joints. It can only be used to assess soft tissue injuries to the area as it does not account for bony injuries.

Slide 7: Classification

The Rockwood Classification system divides injuries to the AC joint into six classifications that increase in severity.

Slide 8: Signs and Symptoms

Patients suffering an injury to the AC joint may have pain and swelling over the AC joint. In more severe injuries, there may be a step-off deformity, and the shoulder may droop.

The patient will likely experience decreased shoulder ROM and there may be notable instability with grade three and above injuries.

Slide 9: Special Test for the AC Joint

These tests help differentiate between AC joint injuries and other shoulder pathologies: the Crossover Test, AC Shear Test, and the Piano Key Test.

Slides 10-11: Crossover (Horizontal Adduction) Test

The Crossover Test aims to assess the AC joint for pathology by stressing the joint during horizontal adduction of the shoulder.

To perform this test, have the patient sit or stand while the clinician passively horizontally adducts the arm and applies pressure to the elbow to deepen the adduction.

The test will be considered positive if the pain is localized at the AC joint during the maneuver.

Slides 12-13: AC Shear Test

The purpose of the AC Shear test is to detect instability of the AC joint by compressing the joint.

The test is performed by placing each hand on either side of the shoulder (one on the posterior aspect over the superior scapula and one on the anterior shoulder over the clavicle). The clinician then squeezes both hands together, compressing the clavicle.

If pain, discomfort, or abnormal movement of the AC joint occurs the test is positive.

Slides 14-15: Piano Key Sign

The purpose of this test is to assess AC joint ligament damage.

With the patient seated or standing and their arm relaxed at their side, the clinician applies downward pressure on the distal end of the clavicle (near the AC joint).

Visible movement of the clavicle resembling a piano key (the clavicle depresses when pushed down and springs back up when released) suggests AC joint instability or injury.

Lesson Three – Acromioclavicular Injuries

REVIEW: Acromioclavicular Joint Assessment

15-20 minutes

Purpose:

Participants work in groups to practice performing acromioclavicular special tests on each other

Materials:

- *Acromioclavicular Joint Injury Assessment Lab*

Facilitation Steps:

1. Distribute the lab worksheet and have students work in pairs or groups to practice the special tests on each other as listed on the worksheet.

Acromioclavicular Joint Injury Assessment Lab

Instructions: Perform each test below on two people and record + (positive) or – (negative). Once you feel you are proficient in performing the special test on your classmates, your teacher will assess your ability to perform the test and initial the final box.

Special Test	What are you testing for?	Left Shoulder 1	Right Shoulder 1	Left Shoulder 2	Right Shoulder 2	Teacher Check-off
Crossover Test						
AC Shear Test						
Piano Key Sign						

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Lesson Four – Ulnar Collateral Ligament Injuries

Lesson Overview

In this lesson, students will explore the anatomy and function of the ulnar collateral ligament (UCL) and understand its critical role in elbow stability. Through a combination of interactive activities, students will examine common causes, mechanisms of UCL injuries, and perform diagnostic tests for UCL injuries.

Lesson Objectives

After completing this lesson, participants will be able to:

- Describe the anatomy and function of the UCL
- Identify the common causes, symptoms, and treatments for UCL injuries
- Discuss preventative strategies to reduce the risk of UCL injuries

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• The Elbow Kahoot! • Smart Board/Projector • Smart Devices	1. Prepare for Kahoot! by loading the game and providing students with the PIN to join the game on their smart devices.	15-20 minutes
LEARN	• <i>Understanding UCL Injuries</i> slide presentation	1. Prepare slide presentation for viewing.	15-20 minutes
REVIEW	• <i>UCL Special Tests Practice</i> worksheet • Shoulder and Elbow Injury Assessment Trainer	1. Print/photocopy the worksheet (one per participant). 2. Place the Shoulder and Elbow Injury Assessment Trainer in a location that allows students to practice their evaluation skills.	30-45 minutes

Lesson Four – Ulnar Collateral Ligament

FOCUS: Kahoot! the Elbow

10-15 minutes

Purpose:

Students participate in a quick, interactive quiz on elbow anatomy to refresh their anatomical knowledge and prime them for a deeper dive into the specific role of the UCL and how it can be affected by certain movements.

Materials:

- [The Elbow Kahoot!](#)
- Projector
- Smart devices

Facilitation Steps:

1. Project the Kahoot! Quiz on the main screen in the classroom. Open the Kahoot! And get the game PIN ready to share with the students.
2. Briefly explain to the students that this quiz will help them review the anatomy of the elbow and introduce today's topic: UCL injuries.
3. Share the game PIN with students, prompting them to join by entering the PIN on Kahoot.it.
4. After the last question, display the top scores and congratulate the winners.
5. Lead a quick recap discussion by asking:
 - a. What did you find most surprising in the quiz?
 - b. Were there any questions that challenged you?
 - c. Why do you think understanding elbow anatomy is important for today's lesson on UCL injuries?
6. Transition into the lesson by discussing the anatomy and function of the UCL.

Lesson Four – Elbow Stress Test

LEARN: Understanding UCL Injuries

15-20 minutes

Purpose:

Participants will view a slide presentation while you introduce them to the concepts of the causes, symptoms, and evaluation of UCL injuries.

Materials:

- *Understanding UCL Injuries* slide presentation
- Shoulder and Elbow Injury Assessment Trainer

Facilitation Steps:

1. Share the following information with the participants while showing the slide presentation.

Slide 1: Understanding UCL Injuries

Today, we are going to learn about the UCL, a ligament crucial for stabilizing the elbow, especially in sports that involve throwing. We will talk about its anatomy, what causes UCL injuries, common symptoms, and treatment options.

Slide 2: Ulnar Collateral Ligament Anatomy

The UCL, or ulnar collateral ligament, is located on the inside of the elbow joint. It connects two bones: the humerus and ulna. This ligament is essential for stabilizing the elbow during motion, especially in activities where there is a lot of force involved.

Without a stable UCL, the elbow would be much more vulnerable to dislocation or injury.

Slide 3: UCL Function in the Elbow

The UCL prevents the elbow from moving too far to the outside, or valgus. Think about a baseball pitch or a football throw – each of these places immense stress on the elbow, especially on the inner side.

The UCL is responsible for keeping the elbow joint stable and aligned during these movements.

Slide 4: Mechanism of Injury

UCL injuries are often due to repetitive overhead motions, particularly in sports like baseball. Every time an athlete throws, the elbow experiences high stress, putting strain on the UCL.

Over time, this strain can lead to small tears that worsen. Although more common in athletes, UCL injuries can happen to anyone exposed to frequent, forceful elbow motion.

It can also occur from sudden trauma or impact to the elbow.

Slide 5: Signs and Symptoms

When someone injures their UCL, the first sign is usually pain on the inside of the elbow, especially when throwing or performing similar activities.

There may also be visible swelling, and for throwing athletes, a noticeable drop in throwing speed or accuracy. Some people may also complain of instability or weakness in their elbow and a loss of grip strength.

Slide 6: Special Tests

There are several special tests commonly used to evaluate the UCL. Each test puts stress on the ligament in a controlled way to determine if it can hold the elbow stable or if there is an injury.

The most used tests are the Moving Valgus Stress Test, Valgus Stress Test, and Milking Maneuver.

Slides 7-8: Moving Valgus Stress Test

The moving valgus stress test is considered one of the most reliable tests for UCL injury. In this test, the examiner holds the elbow and applies a valgus force. While applying this force, they move the elbow from a bent position to a straighter position. A positive result is indicated by pain between 70 and 120 degrees of elbow flexion, suggesting a possible tear in the UCL.

Slides 9-10: Valgus Stress Test

The valgus stress test is performed by applying a valgus force to the elbow while the elbow is in a slightly bent position of 20 to 30 degrees of flexion.

If the patient has pain on the medial aspect of the elbow or there is excessive movement of the elbow joint, it could indicate an injured UCL.

Slides 11-12: Milking Maneuver

The milking maneuver is performed while the patient is sitting or standing. The patient's forearm should be fully supinated, the elbow flexed past 90 degrees, and the shoulder externally rotated.

While stabilizing the elbow with one hand, the examiner pulls the patient's thumb laterally with the other. If the patient's UCL is injured, the patient may complain of pain, instability, or apprehension during the test.

The test can also be repeated with the forearm in a pronated position, causing an increase in torque on the medial side of the elbow.

Lesson Four – Elbow Special Tests

REVIEW: UCL Special Test Practice

30-45 minutes

Purpose:

Participants work in groups to practice special tests and demonstrate their ability to perform the tests as well as reflect on their learning about the UCL injuries.

Materials:

- *UCL Special Tests Practice* worksheet
- Shoulder and Elbow Injury Assessment Trainer

Facilitation Steps:

1. Place students in groups of two to three and distribute the worksheet.
2. Instruct students to fill in the table according to the instructions and.
3. As students gain proficiency performing the special tests, have them rotate through performing the tests on the Shoulder and Elbow Injury Assessment Trainer.
4. Once they have completed the skills assessment, instruct students to complete the remainder of the worksheet.

Name: _____ Class: _____

UCL Special Tests Practice

Part 1: Practice Special Tests

Instructions:

1. Fill in the *How to Perform* section of the table. Explain, in your own words, how to perform the test.
2. Working with your group members, practice each test several times.
3. Once you have practiced and can perform the test independently, your teacher will assess your ability to perform the Valgus Stress Test correctly. After performing the test on the Shoulder and Elbow Injury Assessment Trainer, note if the test outcome was positive, negative, or inconclusive, and write any additional notes or feedback about your technique.

Test Name	Purpose of Test	Patient Position	How to Perform	Positive or Negative
Moving Valgus Stress Test	Assess UCL integrity	Patient seated, elbow at 90° flexion		N/A
Valgus Stress Test	Evaluate medial stability of UCL	Patient seated, elbow slightly flexed		
Milking Maneuver	Assess UCL ligament strain	Patient seated, shoulder at 90°, elbow flexed at 70-90°		N/A
Notes:				

Part 2: Key Takeaways

In the space below, write down three key points from today’s lesson on UCL anatomy, injury mechanisms, assessment, and treatment.

Key Takeaway 1:

Key Takeaway 2:

Key Takeaway 3:

Part 3: Reflection Question

Think about the role of UCL health in sports and daily activities. How might understanding UCL anatomy and injuries be beneficial to athletes and healthcare providers?

Lesson Five – Elbow Epicondylitis

Lesson Overview

In this lesson, students will explore the anatomy, causes, symptoms, diagnosis, and treatment of elbow epicondylitis.

Lesson Objectives

After completing this lesson, participants will be able to:

- Describe the anatomy of the elbow related to lateral and medial epicondylitis
- Explain the causes and risk factors of lateral and medial epicondylitis
- Identify common symptoms associated with, and be able to distinguish between, lateral and medial epicondylitis
- Perform special tests for epicondylitis

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• Small weights (1-2 lbs.) or resistance bands • Objects for gripping exercises (e.g., stress balls, water bottles)	1. Set up stations before class.	15-20 minutes
LEARN	• <i>Elbow Epicondylitis</i> slide presentation	1. Prepare the slide presentation for viewing.	20-30 minutes
REVIEW	• <i>Epicondylitis Special Test Practice</i> worksheet • Shoulder and Elbow Injury Assessment Trainer • <i>Elbow Injury Assessment</i>	1. Print/photocopy the practice worksheet and assessment (one of each per participant). 2. Place the Shoulder and Elbow Injury Assessment Trainer in a location that allows students to practice their evaluation skills.	25-35 minutes

Lesson Five – Elbow Epicondylitis

FOCUS: Understanding Repetitive Strain and Its Impact on the Elbow

15-20 minutes

Purpose:

Participants work in groups to experience the types of repetitive movements that can contribute to epicondylitis, connecting the biomechanical factors of these injuries and helping students understand the strain felt during these movements.

Materials:

- Small weights (1-2 lbs.) or resistance bands
- Objects for gripping exercises (e.g., stress balls, water bottles)

Facilitation Steps:

1. Introduce the activity by explaining to the students that they will engage in a brief activity to simulate repetitive motions commonly associated with epicondylitis. Discuss how activities like tennis, golf, and even everyday tasks (e.g., typing or gripping objects) can contribute to strain injuries in the tendons around the elbow.

2. Demonstrate each of the movements for the students:

- a. **Grip Exercise:** Have students take a small object (like a stress ball or water bottle) and squeeze it tightly for about 10 seconds. Repeat this several times.

Note: Explain that repetitive gripping strains the tendons attaching near the epicondyles of the elbow.

- b. **Wrist Extension Exercise:** Give each student a small weight or resistance band and have them extend their wrist against the resistance, mimicking movements often used in racquet sports or while lifting objects. Perform this 5-10 times.

Note: This exercise simulates the type of motion that can strain the extensor muscles, which attach at the lateral epicondyle.

- c. **Wrist Flexion Exercise:** With the weight or resistance band, have students flex their wrists, bringing their hand towards their body against the resistance. Repeat 5-10 times.

Note: This motion highlights how flexor muscle strain can impact the medial epicondyle.

3. Encourage observations by asking students to pause and reflect on any sensations they feel around their forearms and elbows, such as mild discomfort, tension, or fatigue in specific areas.
4. Connect the activity to real-world activities by explaining how each of these repetitive movements simulates the strain placed on the elbow's tendons in real-life scenarios.

For example, mention how the grip exercise resembles the gripping motion in golf and the wrist extension exercise resembles the backhand swing in tennis.

Lesson Five – Elbow Epicondylitis

LEARN: Epicondylitis of the Elbow

20-30 minutes

Purpose:

Participants will view a slide presentation while the instructor introduces them to the concepts of the causes, symptoms, and evaluation of elbow epicondylitis injuries.

Materials:

- *Elbow Epicondylitis* slide presentation

Facilitation Steps:

1. Share the following information with the participants while showing the slide presentation.

Slide 1: Elbow Epicondylitis

Today, we're going to explore elbow epicondylitis, which includes two common overuse injuries: tennis elbow and golfer's elbow.

These injuries involve inflammation around the tendons of the elbow and are common in activities involving repetitive arm movements.

Slide 2: What is Elbow Epicondylitis?

Epicondylitis refers to inflammation of the tendons that attach to the bony prominences on either side of the elbow, known as epicondyles.

It typically results from overuse or repetitive strain on the forearm muscles, especially in activities involving repeated gripping or wrist movements.

Slide 3: Types of Epicondylitis

There are two main types of epicondylitis. Tennis elbow, or lateral epicondylitis, affects the tendons on the lateral aspect, or outside, of the elbow.

Golfer's elbow, or medial epicondylitis, affects the tendons on the medial aspect, or inside, of the elbow. Despite the names, you do not have to play tennis or golf to develop these conditions; they can result from any activity involving repetitive strain on the forearm.

Slide 4: Anatomy Review

Let's quickly review the anatomy of the elbow. The lateral epicondyle is the bony prominence on the lateral side of the elbow, where extensor tendons attach.

The medial epicondyle is the prominence on the medial side, where flexor tendons attach. In epicondylitis, inflammation occurs where these tendons attach to the bone.

Slide 5: Epicondylitis Causes

Lateral epicondylitis often involves overuse of the wrist extensor muscles, especially a muscle called the extensor carpi radialis brevis, which is crucial for wrist stabilization.

Medial epicondylitis, on the other hand, results from overuse of the wrist flexors, including the pronator teres and flexor carpi radialis. These muscles are engaged during gripping and flexion movements.

Slide 6: Lateral Epicondylitis Symptoms

Symptoms of lateral epicondylitis include pain and tenderness on the lateral side of the elbow, especially during activities that involve gripping, lifting, or twisting.

Patients may also experience weakness when trying to extend the wrist or lift objects.

Slide 7: Medial Epicondylitis Symptoms

With medial epicondylitis, pain and tenderness are present on the inner side of the elbow. Pain often increases with gripping or wrist flexion movements, and patients may have weakness in wrist flexion as a result.

Slide 8: Special Tests

Slides 9-10: Cozen's Test

To perform Cozen's test, with the patient in a standing or seated position, the clinician stabilizes the patient's forearm and instructs them to make a fist, pronate the forearm, radially deviate, and extend the wrist.

Next, the clinician palpates the lateral epicondyle with the same hand they used to stabilize the patient's arm and applies a flexion force against the patient's resistance.

A positive test is the reproduction of lateral elbow pain.

Slides 11-12: Mill's Test

With the patient in a standing position, the clinician palpates the lateral epicondyle while passively pronating the forearm, flexing the wrist, and extending the elbow.

If the patient has pain on the lateral side of the elbow the test is considered positive.

Slides 13-14: Maudsley's Test

With the patient sitting or standing and their arm extended and palm in pronation, the clinician stabilizes the patient's humerus while palpating the lateral epicondyle.

Then, the patient is instructed to extend the third digit of the hand, stressing the extensor digitorum muscle and tendon. The test is positive if the patient has pain over the lateral epicondyle.

Slides 15-16: Medial Epicondylitis Test

This test is also called the Golfer's Elbow test. With the patient seated or standing, the

clinician palpates the medial epicondyle while supporting the elbow with one hand.

With the other hand, the clinician passively supinates the patient's forearm and fully extends the elbow, wrist, and fingers. The test would be considered positive if the patient has sudden pain or discomfort in the medial epicondylar region.

Slides 17-18: Varus Stress Test

With the patient seated or standing, the patient's arm is placed in approximately 20 degrees of flexion and the medial side of the elbow is supported by the examiner.

The clinician holds the patient's wrist with the other hand and applies a varus stress to the elbow joint. The test is considered positive if the patient has pain or laxity of the elbow.

Lesson Five – Elbow Epicondylitis

REVIEW: Epicondylitis Special Test Practice

20-30 minutes

Purpose:

Participants work in groups to practice performing special tests to assess for medial and lateral epicondylitis.

Materials:

- *Epicondylitis Special Tests Practice* worksheet
- Shoulder and Elbow Injury Assessment Trainer
- *Elbow Injury Assessment Quiz*

Facilitation Steps:

1. Divide students into groups of two to three and distribute the worksheet.
2. Instruct students to fill in the table according to the instructions and then practice the special tests for medial and lateral epicondylitis.
3. As students gain proficiency performing the special tests, have them rotate through performing the Mill's and Medial Epicondylitis Tests on the Shoulder and Elbow Injury Assessment Trainer.
4. Once they have completed the skills assessment, instruct students to complete the remainder of the worksheet.
5. Distribute the quiz and give students time to complete it.

Name: _____ Class: _____

Epicondylitis Special Tests Practice

Instructions: As you perform each epicondylitis special test with a partner, complete the table by filling in the steps of the procedure (in your own words), noting test outcomes, and any reflections. This will help you refine your skills and technique for assessing tennis elbow and golfer's elbow.

Part 1: Test Documentation Table

Test Name	Patient Position & Setup	Procedure Steps (List Key Actions)	Test Outcome (Positive Negative or Inconclusive)	Reflection & Notes (Challenges, Technique, etc.)
Cozen's Test	Patient seated with forearm pronated and wrist extended			
Mill's Test	Patient seated, forearm extended and pronated			
Medial Epicondylitis Test	Patient seated, forearm supinated			
Maudsley's Test	Patient seated, forearm pronated, fingers extended			

Part 2: Reflection Questions

After practicing the tests, answer the following questions:

1. Which test was most effective in identifying signs of epicondylitis? What made it effective?

2. Did any test yield unexpected results? If so, what factors could have influenced this?

3. How did you ensure that each test was performed accurately? What challenges did you encounter?

4. What tips would you give a peer about performing these tests effectively?

Name: _____ Class: _____

Elbow Injury Assessment Quiz

Instructions: Choose the best answer for each of the questions below.

1. The ulnar collateral ligament (UCL) is located on which side of the elbow?
 - a. Lateral
 - b. Anterior
 - c. Posterior
 - d. Medial
2. Which of the following activities is most likely to cause a UCL injury?
 - a. Swimming
 - b. Pitching in baseball
 - c. Running
 - d. Cycling
3. The Moving Valgus Stress test is used to assess:
 - a. Tennis elbow
 - b. Golfer's elbow
 - c. UCL injury
 - d. Medial epicondylitis
4. During the Milking Maneuver, a positive test result typically indicates:
 - a. Lateral epicondylitis
 - b. UCL injury
 - c. Radial collateral ligament injury
 - d. Flexor muscle strain
5. Which muscle is primarily affected in lateral epicondylitis?
 - a. Flexor carpi radialis
 - b. Extensor carpi radialis brevis
 - c. Biceps brachii
 - d. Pronator teres
6. Which test involves resisting wrist extension to provoke pain in cases of lateral epicondylitis?
 - a. Cozen's Test
 - b. Mill's Test
 - c. Valgus Stress Test
 - d. Maudsley's Test

7. Golfer's elbow primarily affects which anatomical area?
 - a. Lateral epicondyle
 - b. Medial epicondyle
 - c. Olecranon process
 - d. Radial head

8. Which of the following tests is specifically used to assess for medial epicondylitis?
 - a. Moving Valgus Stress test
 - b. Medial Epicondylitis test
 - c. Mill's test
 - d. Maudsley's test

9. A positive result in Maudsley's Test for lateral epicondylitis occurs when the patient experiences:
 - a. Pain over the medial epicondyle
 - b. Pain at the lateral epicondyle during resisted middle finger extension
 - c. Pain in the biceps brachii
 - d. Decreased range of motion in the wrist

10. Which structure provides primary stability to the medial side of the elbow?
 - a. Ulnar collateral ligament (UCL)
 - b. Radial collateral ligament (RCL)
 - c. Extensor muscles
 - d. Biceps tendon

Name: _____ Class: _____

Elbow Injury Assessment Quiz – Answer Key

1. The ulnar collateral ligament (UCL) is located on which side of the elbow?
 - a. Lateral
 - b. Anterior
 - c. Posterior
 - d. **Medial**
2. Which of the following activities is most likely to cause a UCL injury?
 - a. Swimming
 - b. **Pitching in baseball**
 - c. Running
 - d. Cycling
3. The Moving Valgus Stress test is used to assess:
 - a. Tennis elbow
 - b. Golfer's elbow
 - c. **UCL injury**
 - d. Medial epicondylitis
4. During the Milking Maneuver, a positive test result typically indicates:
 - a. Lateral epicondylitis
 - b. **UCL injury**
 - c. Radial collateral ligament injury
 - d. Flexor muscle strain
5. Which muscle is primarily affected in lateral epicondylitis?
 - a. Flexor carpi radialis
 - b. **Extensor carpi radialis brevis**
 - c. Biceps brachii
 - d. Pronator teres
6. Which test involves resisting wrist extension to provoke pain in cases of lateral epicondylitis?
 - a. **Cozen's Test**
 - b. Mill's Test
 - c. Valgus Stress Test
 - d. Maudsley's Test

7. Golfer's elbow primarily affects which anatomical area?
 - a. Lateral epicondyle
 - b. Medial epicondyle**
 - c. Olecranon process
 - d. Radial head
8. Which of the following tests is specifically used to assess for medial epicondylitis?
 - a. Moving Valgus Stress test
 - b. Medial Epicondylitis test**
 - c. Mill's test
 - d. Maudsley's test
9. A positive result in Maudsley's Test for lateral epicondylitis occurs when the patient experiences:
 - a. Pain over the medial epicondyle
 - b. Pain at the lateral epicondyle during resisted middle finger extension**
 - c. Pain in the biceps brachii
 - d. Decreased range of motion in the wrist
10. Which structure provides primary stability to the medial side of the elbow?
 - a. Ulnar collateral ligament (UCL)**
 - b. Radial collateral ligament (RCL)
 - c. Extensor muscles
 - d. Biceps tendon

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