

Lecture 68:

Sports Nutrition in Sports Injuries

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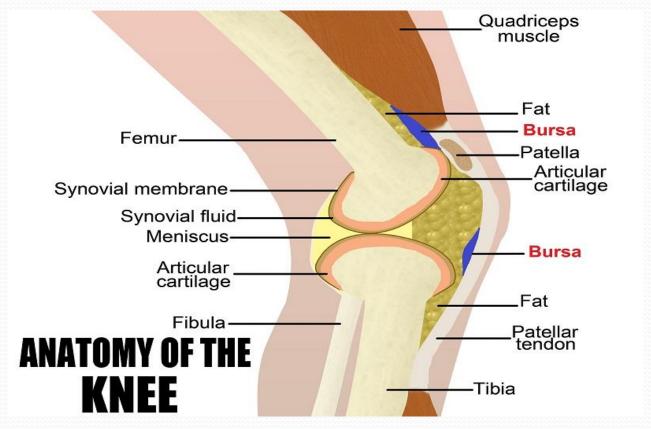
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Common Sports Injuries:

- Bursitis
- Tendinitis
- Sprain
- •Strain

Bursitis:

 Bursitis is the inflammation or infection of one or more bursae (small sacs) of synovial fluid in the body.



What is Bursa?

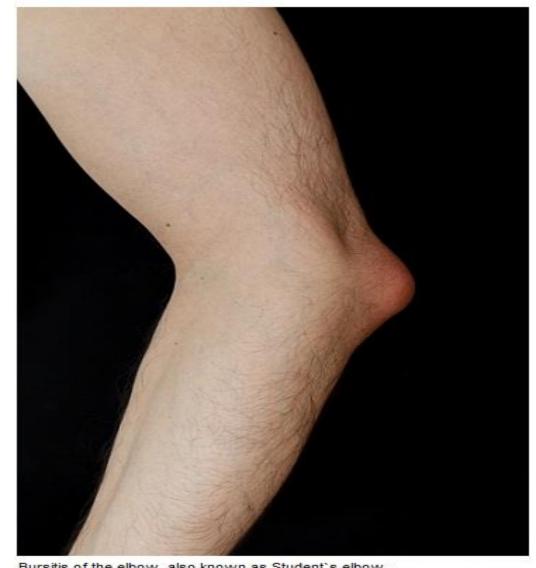
Bursa in Latin means purse, because of its similarity to a purse.

A <u>bursa</u> is a small pouch lined by synovial membrane and filled with fluid.

Functions:

It provides a cushion between bones and tendons and or muscles around a joint. This helps to reduce friction between the bones and allows free movement.

Bursae are <u>filled with synovial fluid</u> and are found around most major joints of the body.



Bursitis of the elbow, also known as Student's elbow.

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Tendinitis:

 Tendinitis is the inflammation of a tendon. It is mostly due to inflammation of the sheath of the tendon.

 The most common risk factor for tendinitis is overuse of the tendon, which is usually associated with microscopical tearings in the tendon. Tendinitis and bursitis cause pain, tenderness, swelling, and limited range of motion. They could affect any joints in the body and are sometimes called in different names:

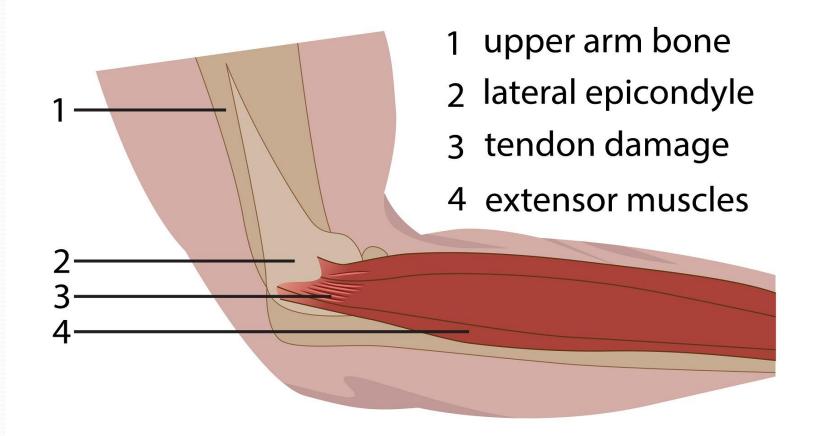
- Student's elbow (bursitis of the elbow).
- - Housemaid's knee (bursitis of the prepatellar bursa in the knee).
- - Clergyman's knee (bursitis of the infrapatellar bursa in the knee).

De Quervain disease (tendinitis of the wrist).

• - Golfer's elbow (tendinitis of the medial epicondyle).

• - Tennis elbow or Painter's elbow (tendinitis of the lateral epicondyle).

• - Jumper's knee (tendinitis of the patellar tendon).



tennis elbow

Potential contributing factors:

- a. Repetitive movements and excessive pressure.
- b. Overuse.
- c. Rheumatoid arthritis.
- d. Gout.

Strain and Sprain:

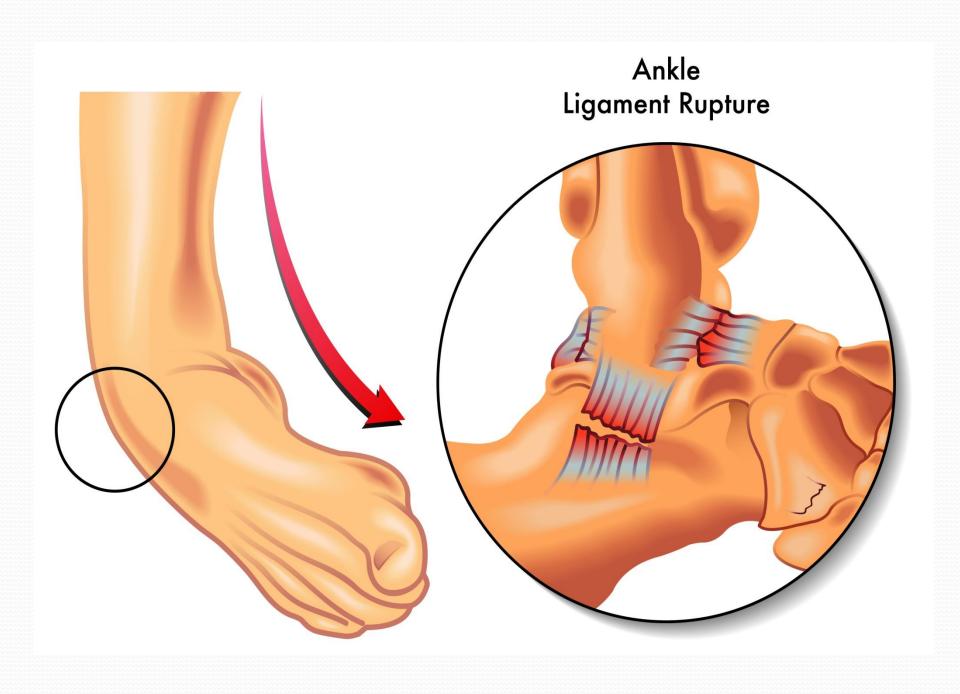
• Strain: damage to a tendon or muscle.

Sprain: damage to a ligament.

Ankle Sprain (Twisted Ankle):

It is a common injury in sports in which there is a tear in one or more ligaments of the ankle.





Nutritional Supports in Sports Injuries:

Restricted Foods.

• Recommended Foods.

Recommended Supplements.

Restricted Foods:

- Saturated fats.
- Trans-fats.
- Processed foods.
- Fried foods.
- Sugars and sweets. They delay healing process.
- Inflammatory foods: red meats, eggs, and dairy products.
- Alcohol.
- Coffee.

- Foods high in solanine:
- potatoes
- tomatoes
- eggplants
- peppers
- Solanine is a poisonous plant alkaloid produced by the plants from nightshade family as a natural defense mechanism against external microorganisms.
- Solanine exacerbates inflammation.

- Foods high in Omega-6:
- soy
- sunflower oil
- safflower oil
- corn oil
- borage oil
- sesame oil
- evening primrose oil.

Omega-6, particularly Alpha-Linoleic Acid, is a proinflammatory.

Recommended Foods:

- Plenty of water: at least 2 liters a day.
- Legumes.
- Cold water fish: salmon, and mackerel.
- Flaxseeds.
- Chia seeds.
- Hemp seeds.
- Fresh fruits and vegetables, except solaninecontaining veggies.

- Fruits high in flavonoids: berries, and red grapes.
- Ginger.
- Pineapple.
- Spices high in antioxidants: sumac, turmeric, and cinnamon.
- Cayenne pepper.

Recommended Supplements:

- 1) Omega 3 Fatty Acids: 2 -3 grams a day. Omega-3 has an anti-inflammatory activity.
- 2) French Maritime Pine Bark Extract: 200 300 mg a day. It is a powerful antioxidant that improves blood circulation and decreases inflammation.
- 3) Grape Seed Extract: 100 200 mg a day.

- 4) Curcumin: 1000 1500 mg a day. It is a powerful antioxidant extracted from turmeric powder that fights inflammation.
- 5) Vitamin C: 2000 3000 mg a day.
- 6) Bromelain: 1500 mg a day.
- 7) White Willow Bark: 400 800 mg a day. It contains salicin that reduces pain and inflammation.

• 8) Boswellia Extract: 1200 mg a day. It improves blood supply to the tissues and reduces inflammation as well.

• 9) Capsaicin: apply the cream to the affected area 3 to 4 times a day. It reduces pain.

• 10) DMSO (dimethyl sulfoxide): apply 25-50% gel or cream to the affected area 2 to 3 times a day. DMSO reduces pain and inflammation.

• 11) Arnica oil: apply 2 to 3 times a day to the affected area. It reduces pain, soreness, bruise and swelling.

Homework:

• 1) Describe briefly the three common sports injuries.

• 2) Describe the dietary advices you would suggest to an athlete to recover fast from his injury.

