USP43
Understand soft tissue dysfunction

Learning Outcome 1

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Learning Outcome 1:

Understand soft tissue dysfunction

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At the end of this learning outcome, you will be able to:

a) Differentiate between soft tissue injury and dysfunction
b) Explain the types of soft tissue injuries
c) Describe common causes of soft tissue injury
d) Differentiate between the severity of injuries
e) Describe common causes of soft tissue dysfunction
f) Describe signs and symptoms of soft tissue dysfunction

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The following slides are presented by section, a-f

a. Differentiate between soft tissue injury and dysfunction

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a. Differentiate between soft tissue injury and dysfunction

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The term “soft tissue injury” is used to describe injuries to any biological tissues in the body, except from harder tissue such as bones.

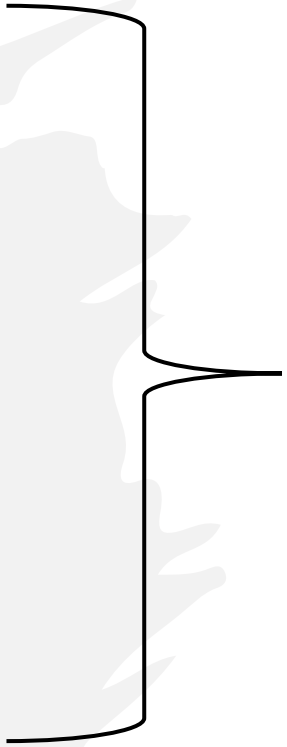
Examples of soft tissue injuries are:

- Bruises
- Sprains
- Strains
- Muscle contusions



a. Differentiate between soft tissue injury and dysfunction

What is ‘dysfunctional tissue’?



- Non-pathological
- Free from disease
- Non-injured
- Aches
- Scar tissue
- Tense areas of tissue
- Postural ischemia
- Free from inflammation

a. Differentiate between soft tissue injury and dysfunction

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Dysfunction:

- Mechanical derangement in the absence of injury.
- Altered or impaired function of the body framework (somatic) system (skeletal, arthrodial, myofascial structures).

Injury:

- Disruption of bony, cartilaginous and soft tissue structures (tears, sprains, strains).



a. Differentiate between soft tissue injury and dysfunction

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Muscle

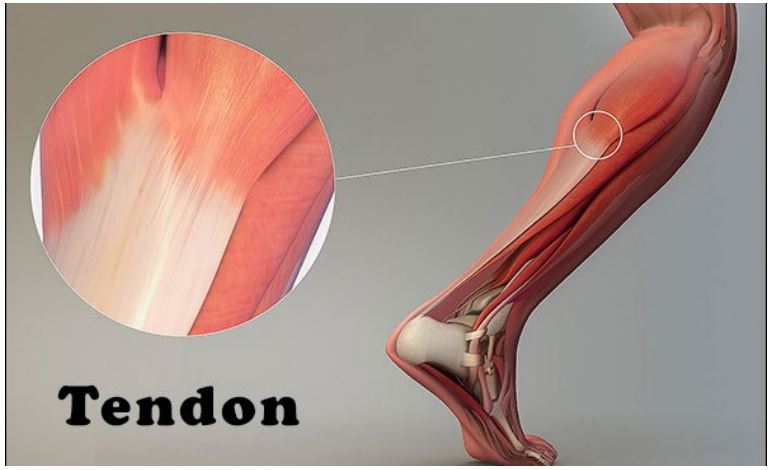
- Muscles are made up of fibres that shorten and lengthen to produce movement of a joint. Muscles are attached to bones by tendons.

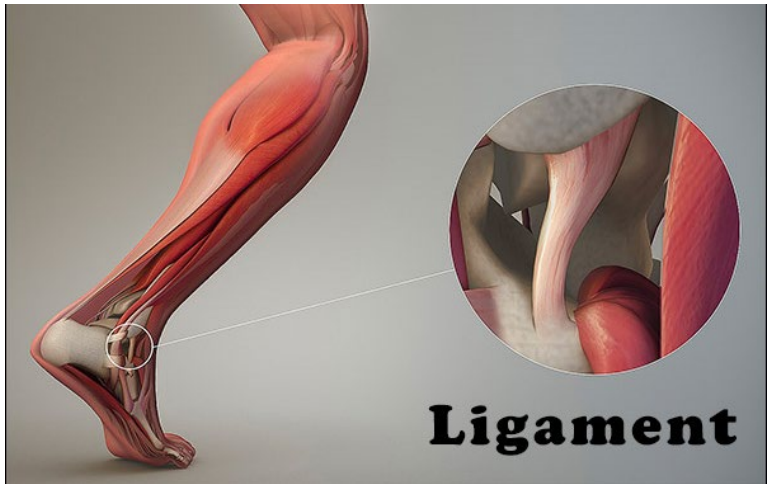
Tendon

- Tendons are tough bones of slightly elastic connective tissue that connect muscle to bone.

Ligament

- Ligaments are strong bands of inelastic connective tissue that connect bone to bone.





b. Explain the types of soft tissue injuries

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b. Explain the types of soft tissue injuries

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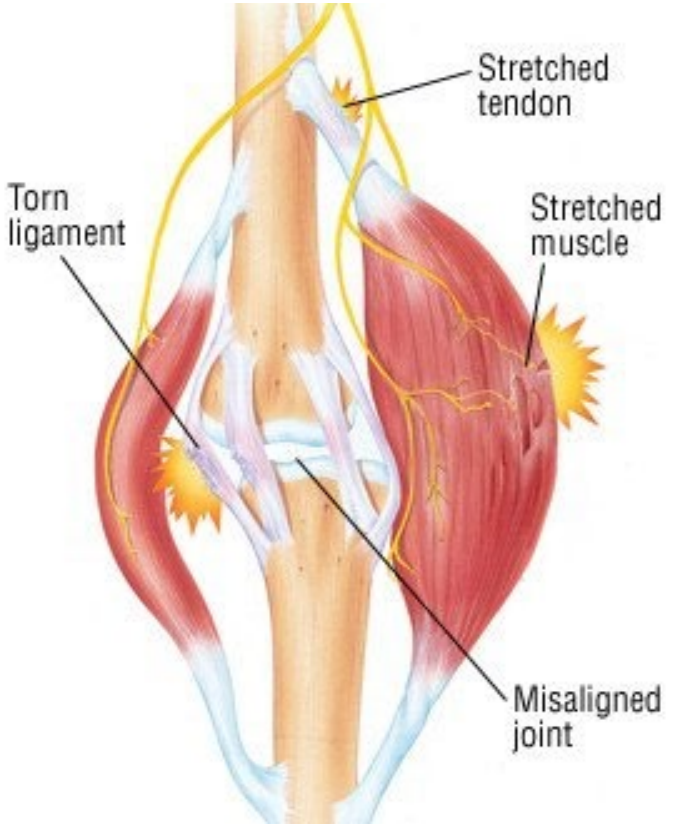
Examples of soft tissue injuries:

- Sprain (ligament)
- Strain (muscle / tendon)
- Overuse (tendinopathy, bursitis)
- Muscle Cramp
- Delayed Onset Muscle Soreness (DOMS)
- Skin (cut, abrasion, blister, friction burn)
- Contusion
- Haematoma (intra/intermuscular)

b. Explain the types of soft tissue injuries

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Examples of soft tissue injuries:



c. Describe common causes of soft tissue injury

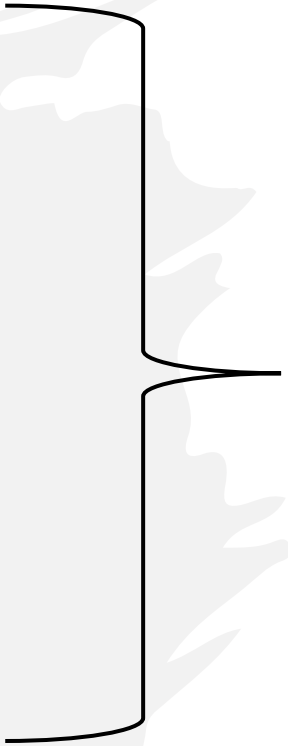
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c. Describe common causes of soft tissue injury

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The causes of soft tissue injury can be classified as **intrinsic** or **extrinsic**



Intrinsic

- Examples of intrinsic factors include, lack of physical preparation, muscle imbalances, individual variables and/or postural defects

Extrinsic

- Examples of extrinsic factors include trauma/impact, pressure, friction, environmental considerations, equipment, clothing/footwear.

d. Differentiate between the severity of injuries

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d. Differentiate between the severity of injuries *(ligament)*

There are several different grading systems available for categorising the severity of a soft tissue injury.

Grades 1-3 are recognised and determined through clinical assessment of an injury (ligament example).

Grade 1 sprain

- The ligament is stretched but still intact. Bleeding is minimal, and there is mild pain and swelling with no instability. There may have been a feeling of "popping".

Grade 2 sprain

- This involves a partial rupture of the ligament, moderate bleeding, more severe pain and swelling, and inability to walk on the limb.

Grade 3 sprain

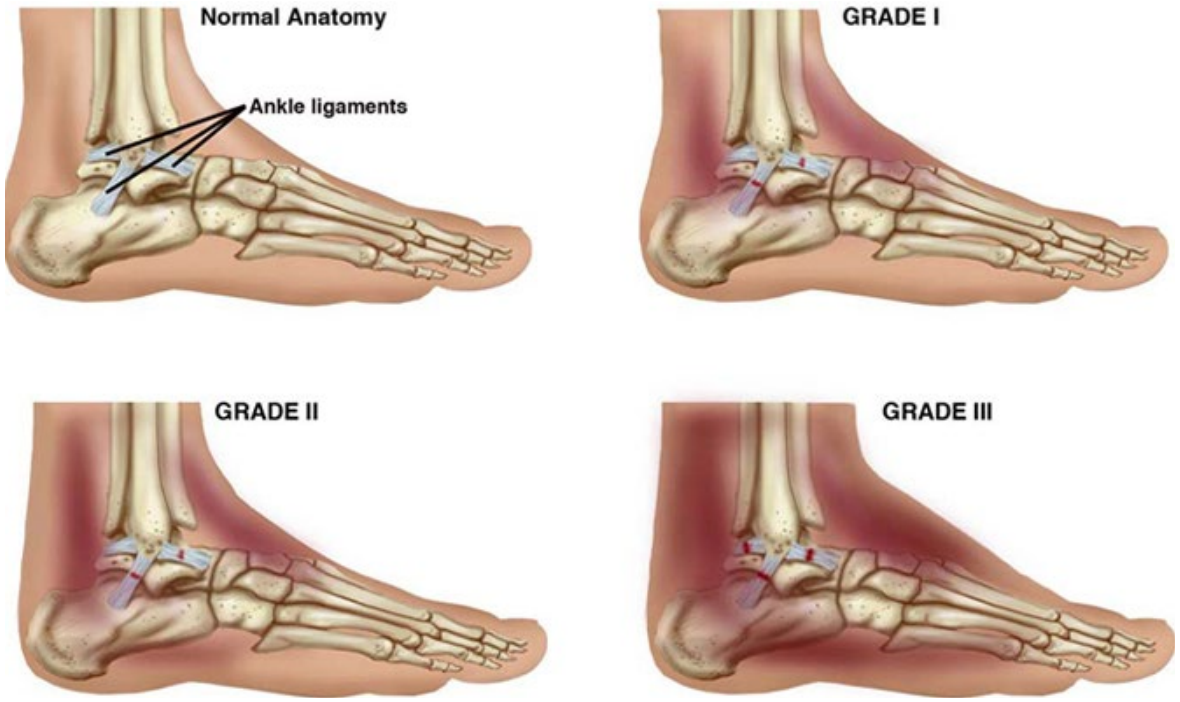
- A complete tear of the ligament resulting in severe pain, extensive bleeding, and swelling. The athlete is usually unable to bear weight on the limb. There may be a feeling of complete dislocation, even though that may not have happened.

d. Differentiate between the severity of injuries

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Signs and Symptoms (Ligament Sprain)

- Varying degrees of pain may be present, however, this may not reflect the seriousness of the injury. Athletes sustaining complete ligament tears often report little pain.
- Athletes will often report a "popping" or "snapping" sound at the time of the injury.
- Immediate discoloration and swelling is often indicative of a more severe ligament sprain.
- There can be varying degrees of joint instability depending upon the severity of the injury.



d. Differentiate between the severity of injuries *(muscle)*

There are several different grading systems available for categorising the severity of a soft tissue injury.

Grades 1-3 are recognised and determined through clinical assessment of an injury (muscle).

Grade one strain
Slight damage to the muscle fibres. May feel tender with mild pain. There should still be normal strength in the muscle, however pain may affect usual activities.

Grade two strain
Partial tear of the muscle and can vary from milder strains to more severe ones. There is likely to be pain and noticeable bruising and swelling over the affected area. There may be some strength loss.

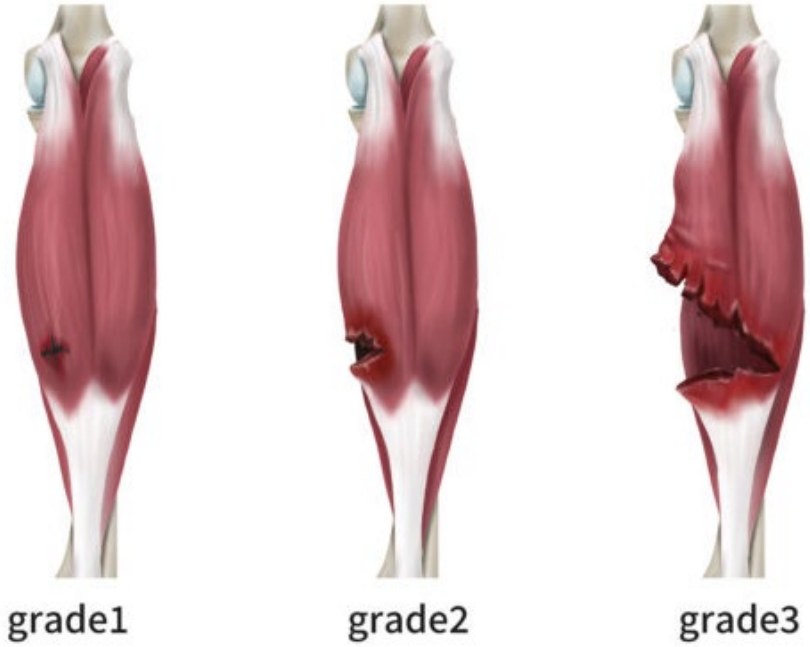
Grade three strain
Full tear of your muscle, very painful with significant amount of swelling and bruising. There may be palpable lumps with loss of all strength in your muscle.

d. Differentiate between the severity of injuries

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Muscle strain symptoms vary, depending on how bad your injury is, but may include:

- Pain
- Tenderness when you touch the muscle
- Swelling
- Bruising
- Weakness
- Loss of movement



e. Describe common causes of soft tissue dysfunction

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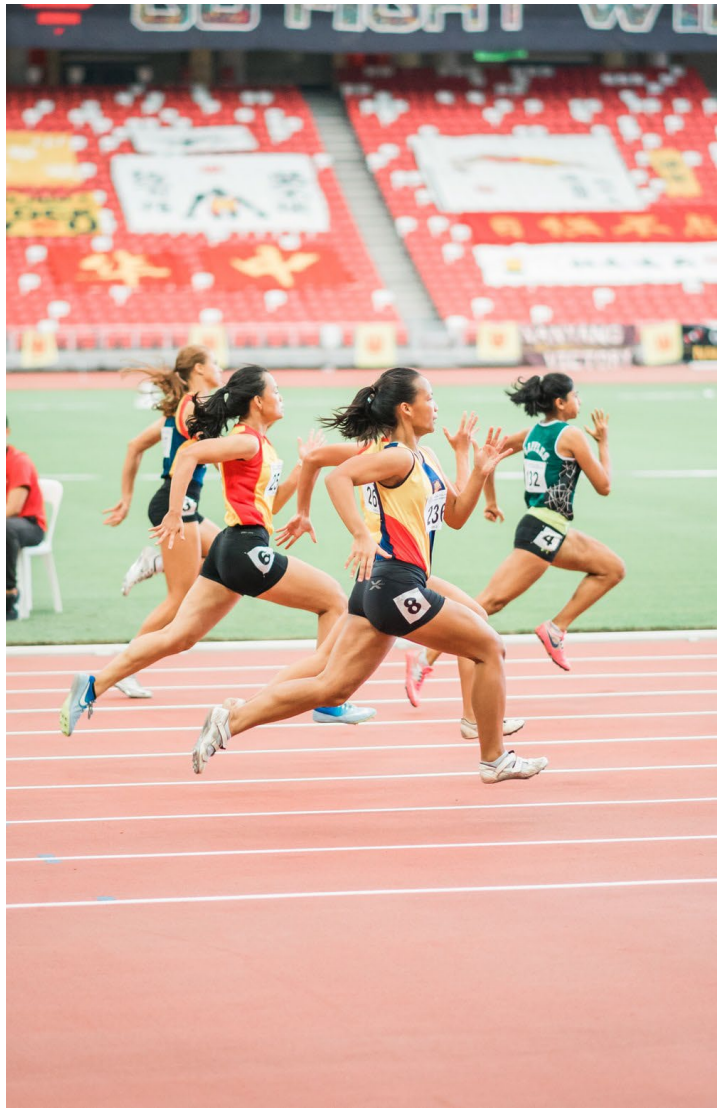
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e. Describe common causes of soft tissue dysfunction

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There are several contributing factors that may cause soft tissue dysfunction including:

- Poor posture (asymmetry)
- Inactivity
- Body composition
- Lifestyle
- Work
- Stress
- Repetitive movements
- Sport



f. Describe signs and symptoms of soft tissue dysfunction

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f. Describe signs and symptoms of soft tissue dysfunction

The key difference between signs and symptoms is who observes the effect.

What is a sign?
Something which is observed by a practitioner

What is a symptom?
Something which is reported to the practitioner by the patient

For example, a rash could be a sign, a symptom, or both:

- *If the patient notices the rash, it is a symptom.*
- *If the doctor, nurse, or anyone other than the patient notices the rash, it is a sign.*
- *If both the patient and doctor notice the rash, it can be classed as both a sign and a symptom.*

f. Describe signs and symptoms of soft tissue dysfunction

Signs of a soft tissue dysfunction can include:

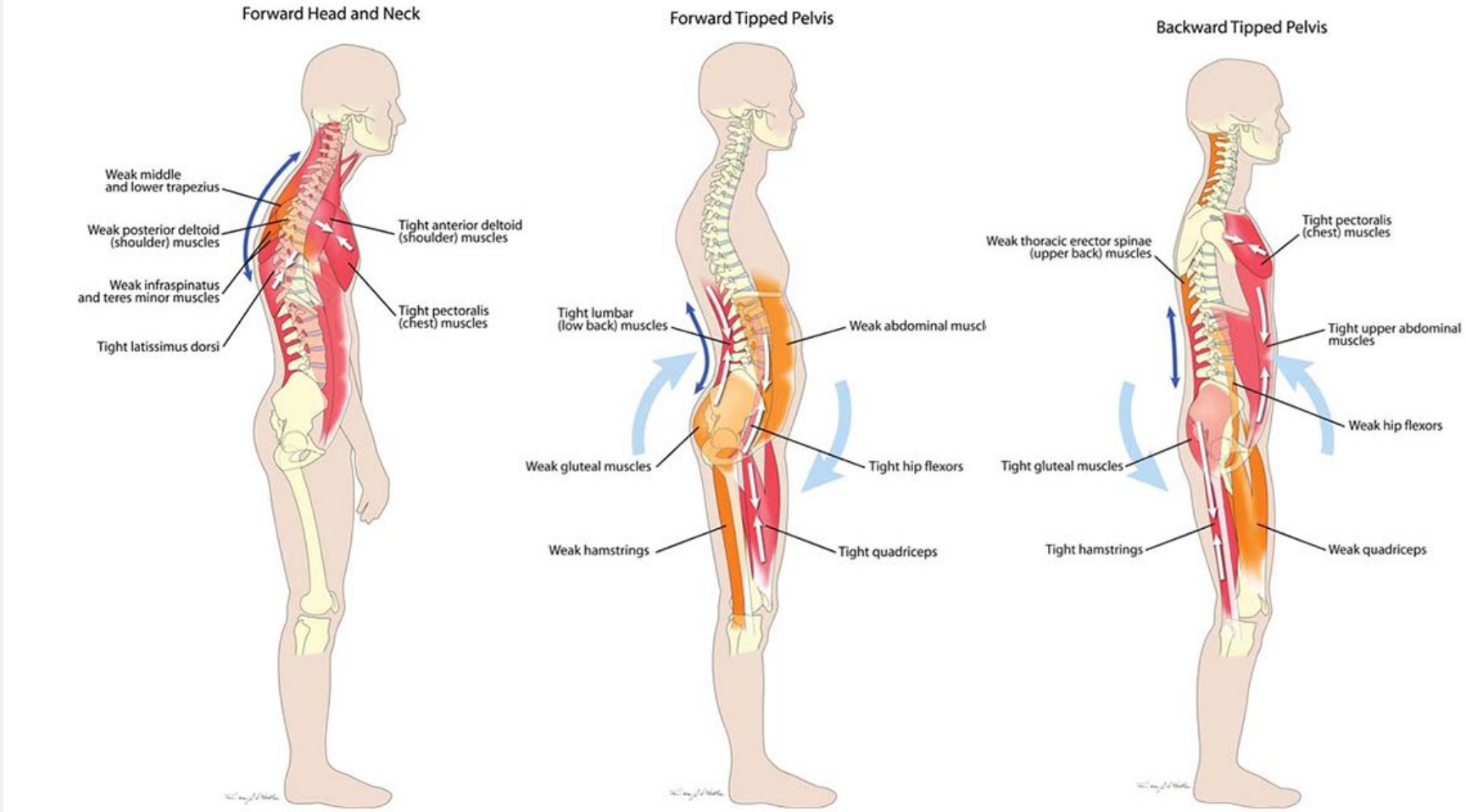
- Postural defects
- Muscular imbalance
- Joint instability
- Decreased mobility
- Bruising
- Deformation

Symptoms of a soft tissue dysfunction can include:

- Aches
- Pains
- Tightness
- Stiffness
- Weakness

f. Describe signs and symptoms of soft tissue dysfunction *(postural example)*

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What next?

- **All sections** of learning outcome 1 for unit USP43 will be assessed in through portfolio evidence.

- Refer to your VTCT Level 3 Diploma in Sports Massage Therapy learner record of assessment handbook for direction.

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