

## 6.5 Stretching + The Leg

### Benefits of Stretching



### Recommendations

Begin with a general warm-up to increase body temperature, heart rate, muscle temperature and joint fluid.

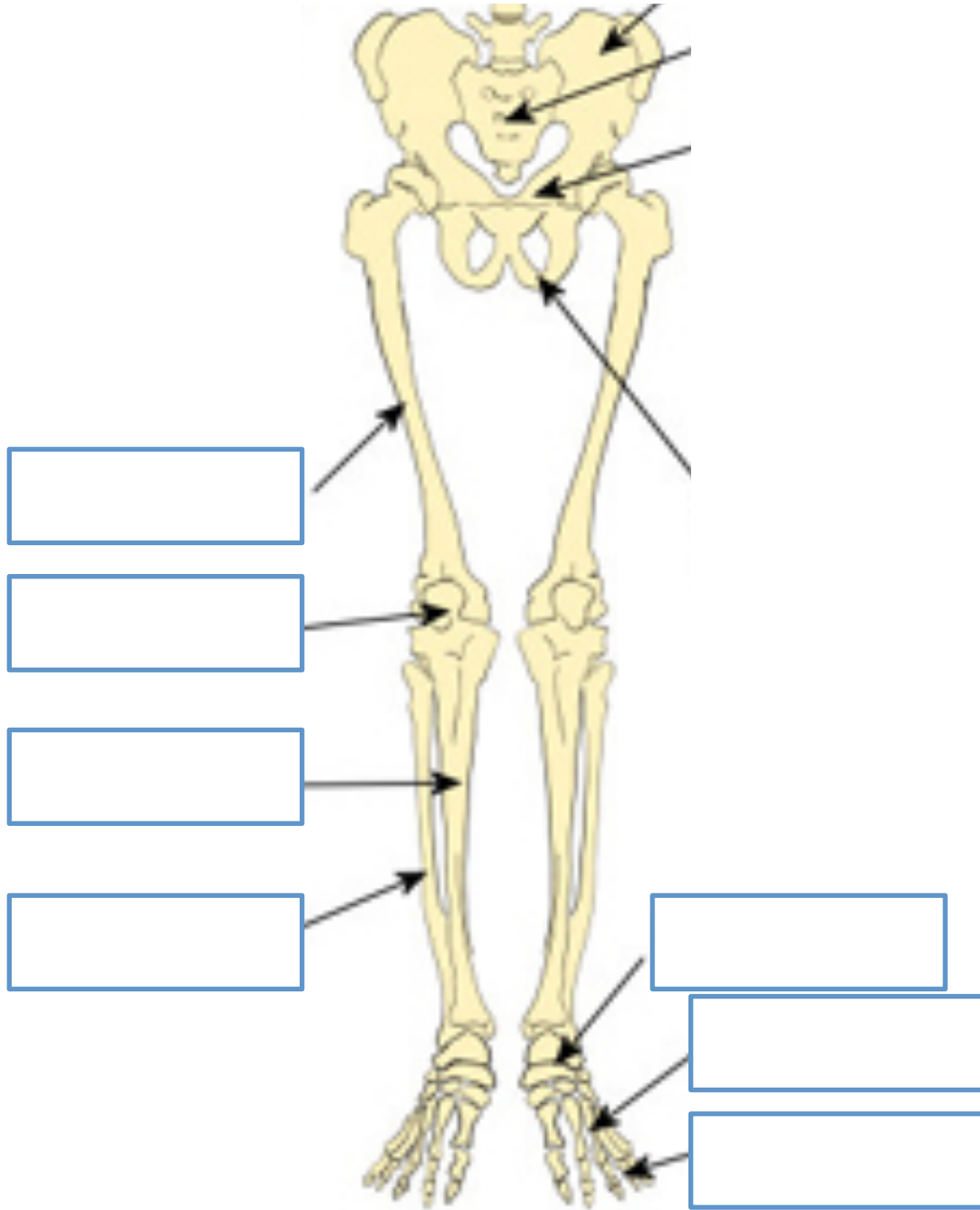
- 1)
- 2)

### Guidelines for Long- Term Flexibility Development:

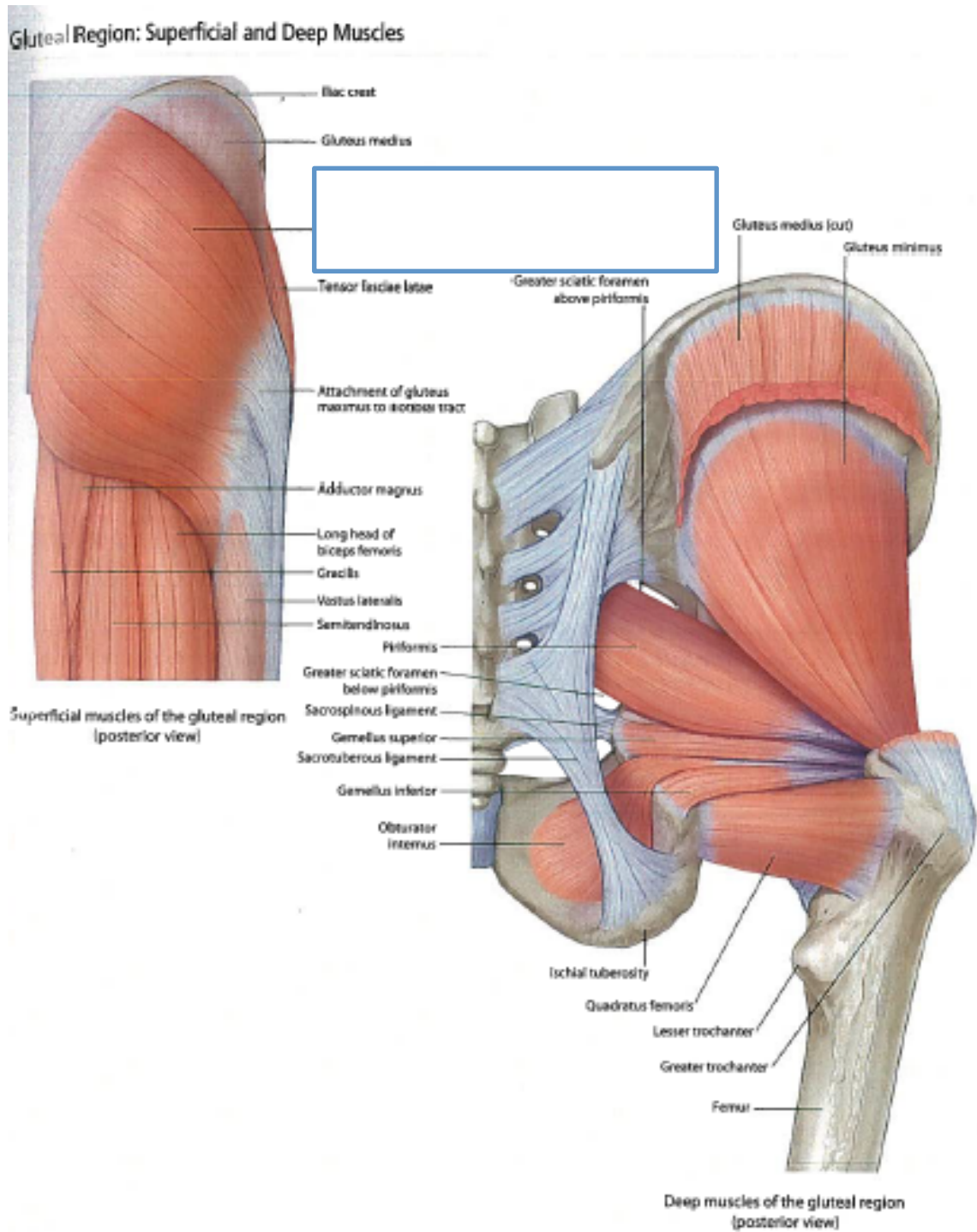
The stretching component should follow soon after the cool-down before the muscles cool right down. The stretch component should last between 5-10 mins, depending on your exercise program goals and design. Each stretch should be held long enough to feel the benefits \_\_\_\_\_

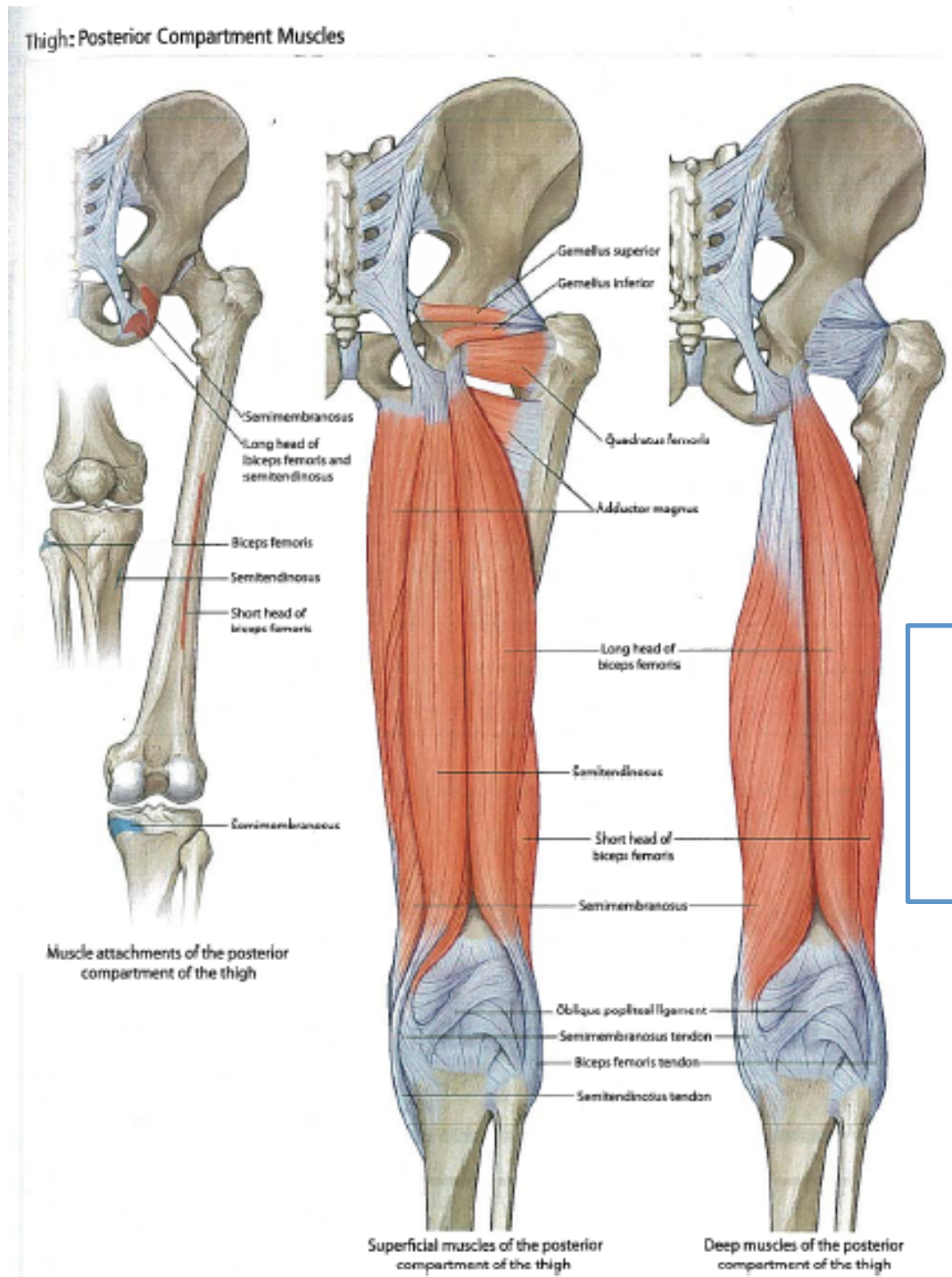
**Note:** If time is limited, it is better to hold a stretch for at least 10 sec than to not stretch at all.

**Bones**

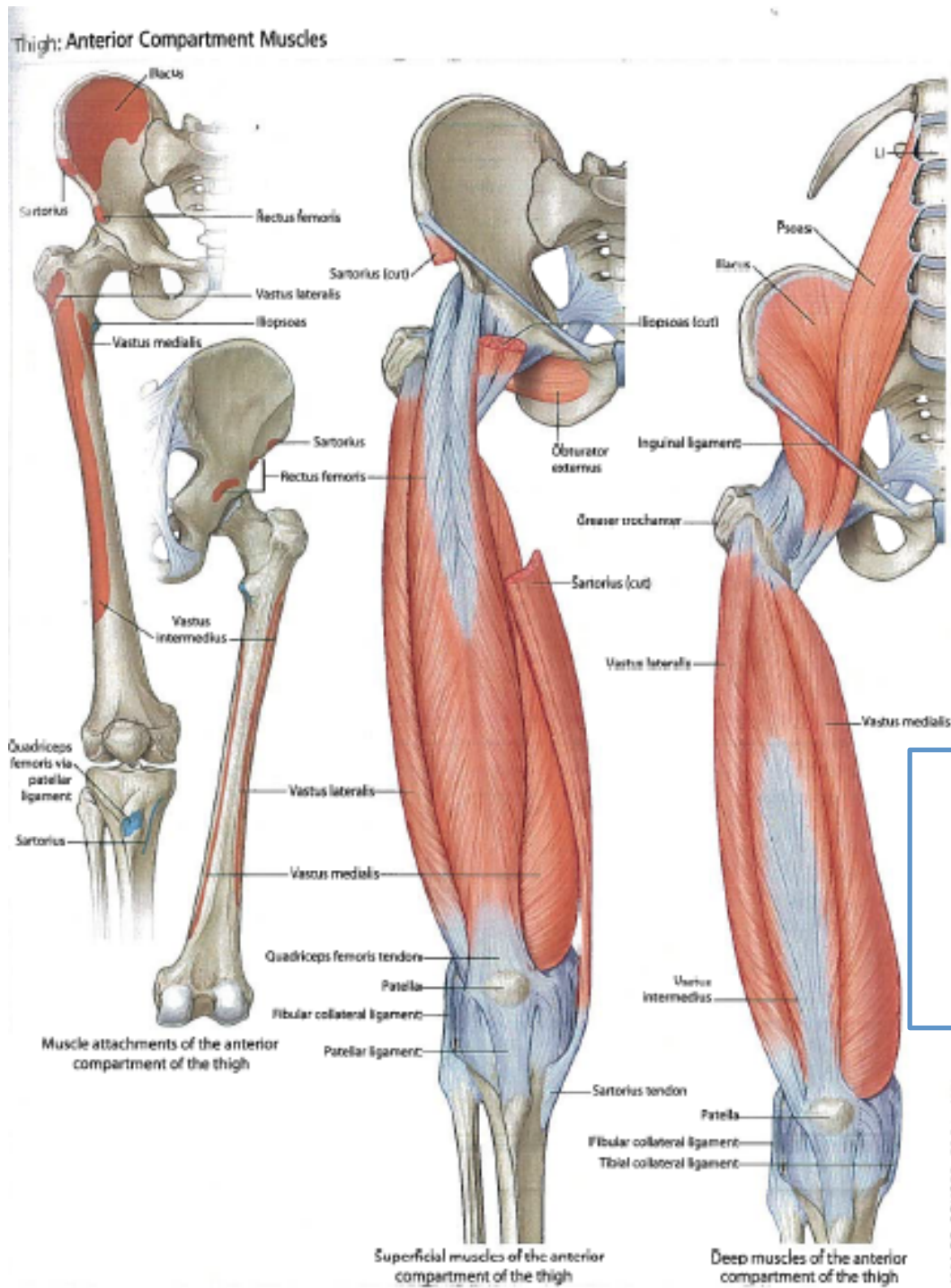


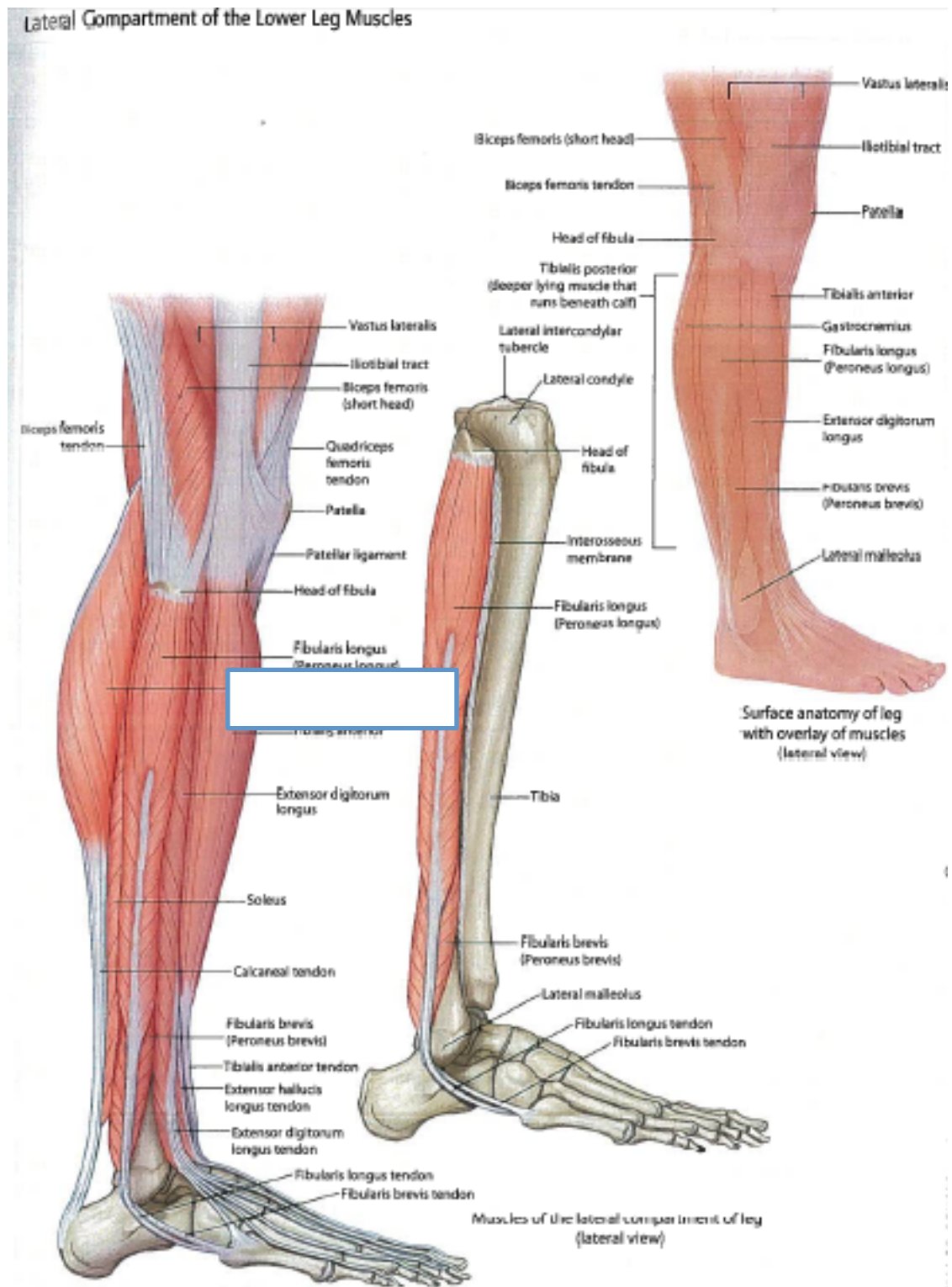
## Muscles



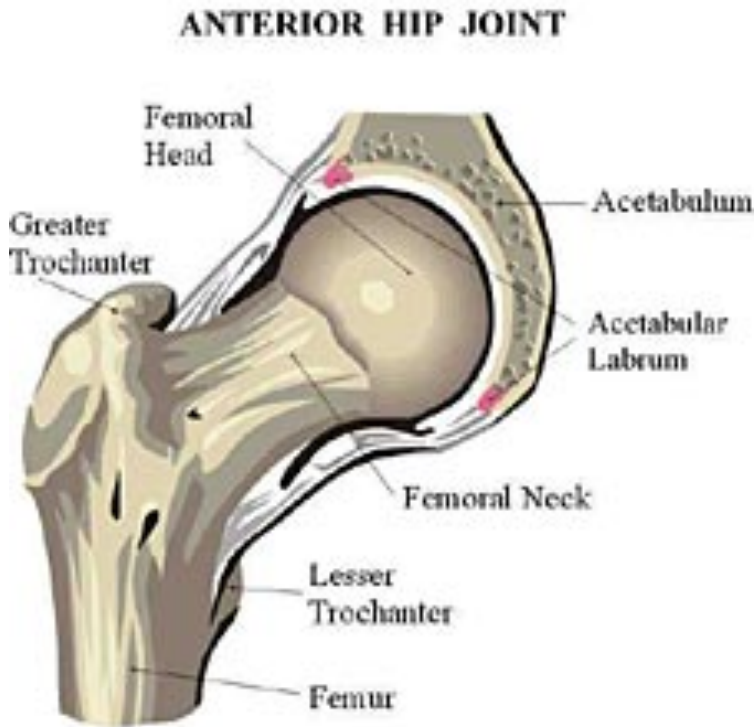




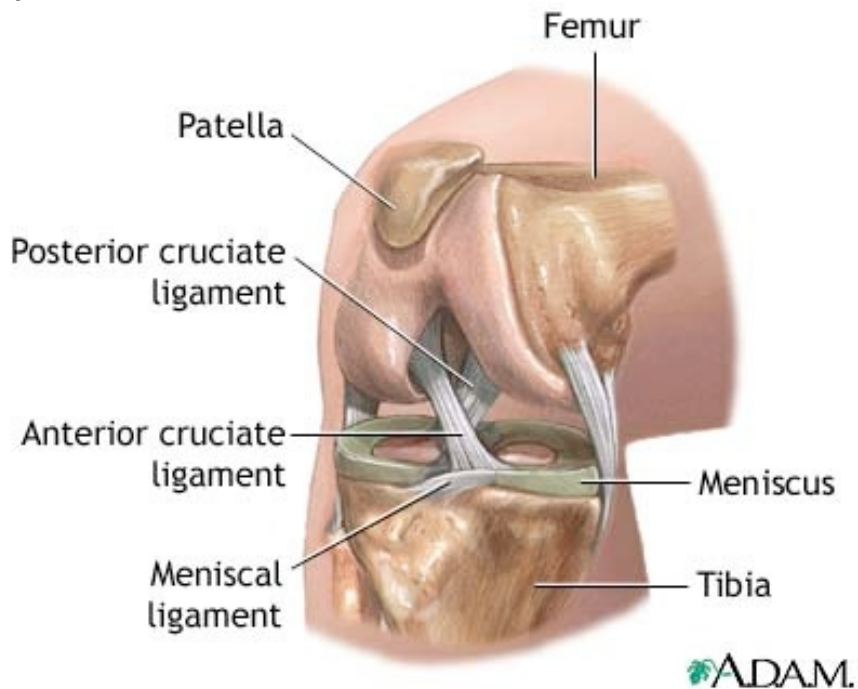




## 1) Hip



## 2) Knee



## **Runner's Knee**

Patellofemoral pain syndrome is pain in the front of the knee. It frequently occurs in teenagers, manual labourers, and athletes. It sometimes is caused by wearing down, roughening, or softening of the cartilage under the kneecap.

### **What causes patellofemoral pain syndrome?**

Patellofemoral pain syndrome may be caused by \_\_\_\_\_, injury, excess weight, a kneecap that is not properly aligned

### **What are the symptoms?**

The main symptom of patellofemoral pain syndrome is knee pain, especially when you are sitting with bent knees, squatting, jumping, or using the stairs (especially going down stairs). You may also experience occasional knee buckling, in which the knee suddenly and unexpectedly gives way and does not support your body weight. It is also common to have a catching, popping, or grinding sensation when you are walking or when you are moving your knee.

### **How is it treated?**

Patellofemoral pain syndrome can be relieved by avoiding activities that make symptoms worse.

- \_\_\_\_\_, sitting, squatting, or kneeling in the \_\_\_\_\_, position for long periods of time.
- Adjust a bicycle or exercise bike so that the resistance is not too great and the seat is at an appropriate height. The rider should be able to spin the pedals of an exercise bike without shifting weight from side to side. And the rider's legs should not be fully extended at the lowest part of the pedal stroke.
- Avoid bent-knee exercises, such as squats or deep knee bends.

Other methods to relieve pain include:

- Ice and rest. You can also try heat to see if it helps.
- Physiotherapy exercises. Exercises may include stretching to increase flexibility and decrease tightness around the knee, and straight-leg raises and other exercises to strengthen the quadriceps muscle.
- Taping or using a brace to stabilize the kneecap.



## Shin Splints

Shin splints are a condition that causes \_\_\_\_\_, and sometimes swelling in front part of the lower shin. The pain is most likely from repeated stress on the shin bone (tibia) and the tissue that connects the muscle to the tibia. They are common in people who run or jog. Activities where you run or jump on hard surfaces, such as basketball or tennis, can also lead to this painful condition.

### What causes shin splints?

Most people get shin splints from repeated pounding on \_\_\_\_\_, during activities such as running, basketball, or tennis. You can also get them when you:

- Change to new running or workout shoes or wear shoes that don't have enough support. This can happen when you wear your shoes too long and they wear out.
- Run or walk on a different surface than you are used to. For example, you might get shin splints when you switch from running on a trail to concrete or asphalt.
- Work out harder than usual or train too hard or too fast instead of working up to a training level gradually.

### How are they treated?

In many cases you can use home treatment to help relieve pain and swelling from shin splints.

- \_\_\_\_\_, is often the best treatment for shin splints. This doesn't mean that you have to stop exercising. The idea is that you can exercise as long as it isn't painful. You may need to avoid high-impact activities like running until you feel better, or at least cut back on how often and how long you run. As you recover, it may help if you:
- \_\_\_\_\_, helps to reduce pain and swelling. Apply the ice or cold pack for 10 to 20 minutes, 3 or more times a day.
- \_\_\_\_\_, exercises, such as heel cord stretches, may also help.

### Can shin splints be prevented?

There are things you can do to help prevent shin splints.

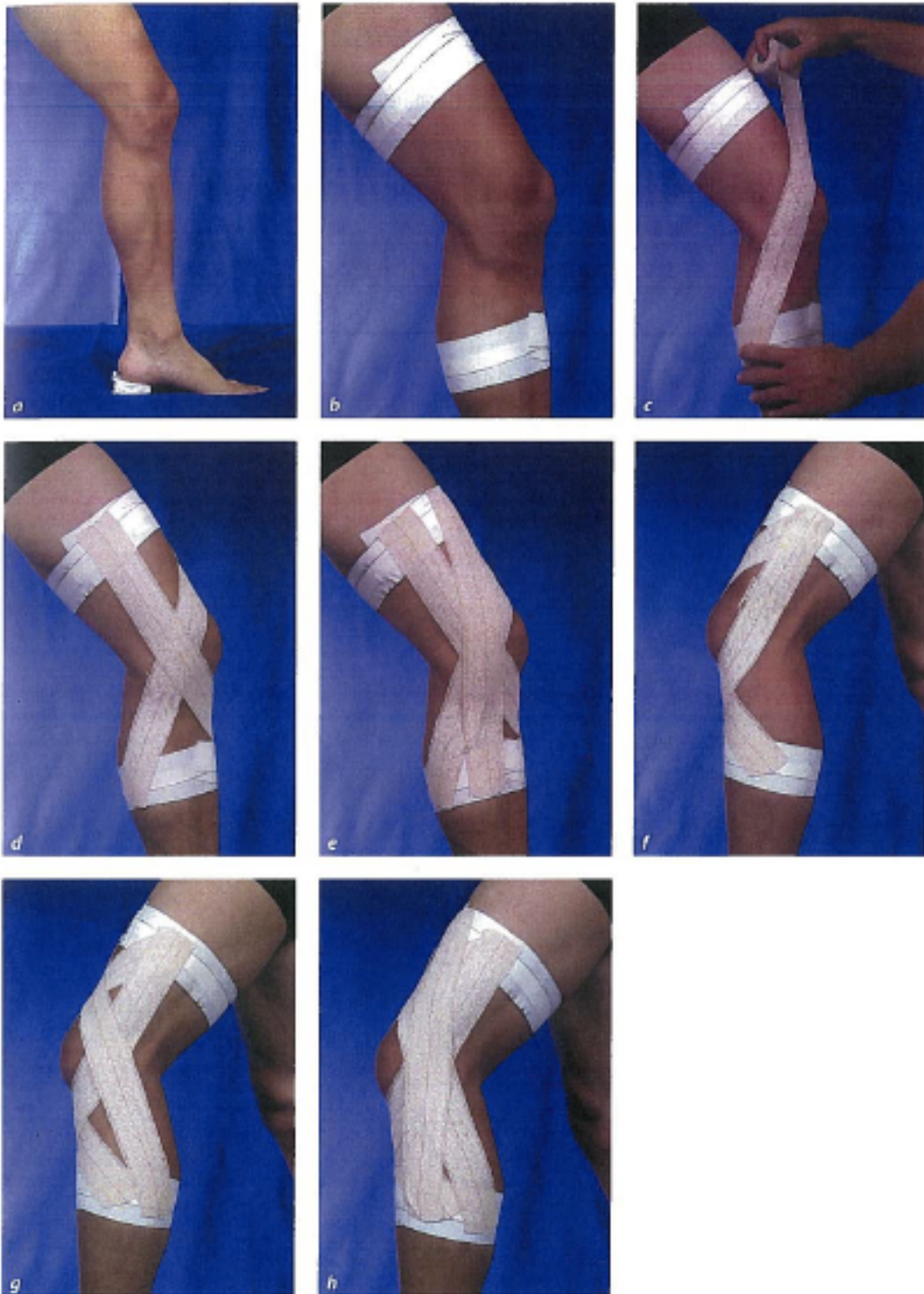
- \_\_\_\_\_, when you try a new activity. For example, if you are new to running, increase the distance and pace of your run over several weeks.
- Wear shoes that fit your foot right. And don't work out in shoes that are worn out.
- If you have flat feet, you may try a shoe insert to give you more support and cushion the impact of exercising on hard surfaces.
- If you are a runner, try cross-training with a low-impact sport, such as swimming or cycling.

**Injury Examples**

Ankle/Lower 3 <sup>rd</sup> Fracture	Sam Splint on Ankle
Major Bleeding	Loop Tie
Leg Fracture	Splint to other leg
Hip Dislocation	Broad Bandage
Knee Sprain	Taping
Runner's Knee	Strapping
Shin Splints	Taping

**Knee Taping**

*for collateral or cruciate sprains*







**Shin Splint Tape**





## 6.5 Stretching + The Leg (Teacher Key)

### Benefits of Stretching

- increase ROM
- increase posture
- injury management
- increased blood flow



### Recommendations

Begin with a general warm-up to increase body temperature, heart rate, muscle temperature and joint fluid.

- 1) Dynamic Stretch before training (but after warm-up)
- 2) Static Stretch after training (within 5-10 mins)

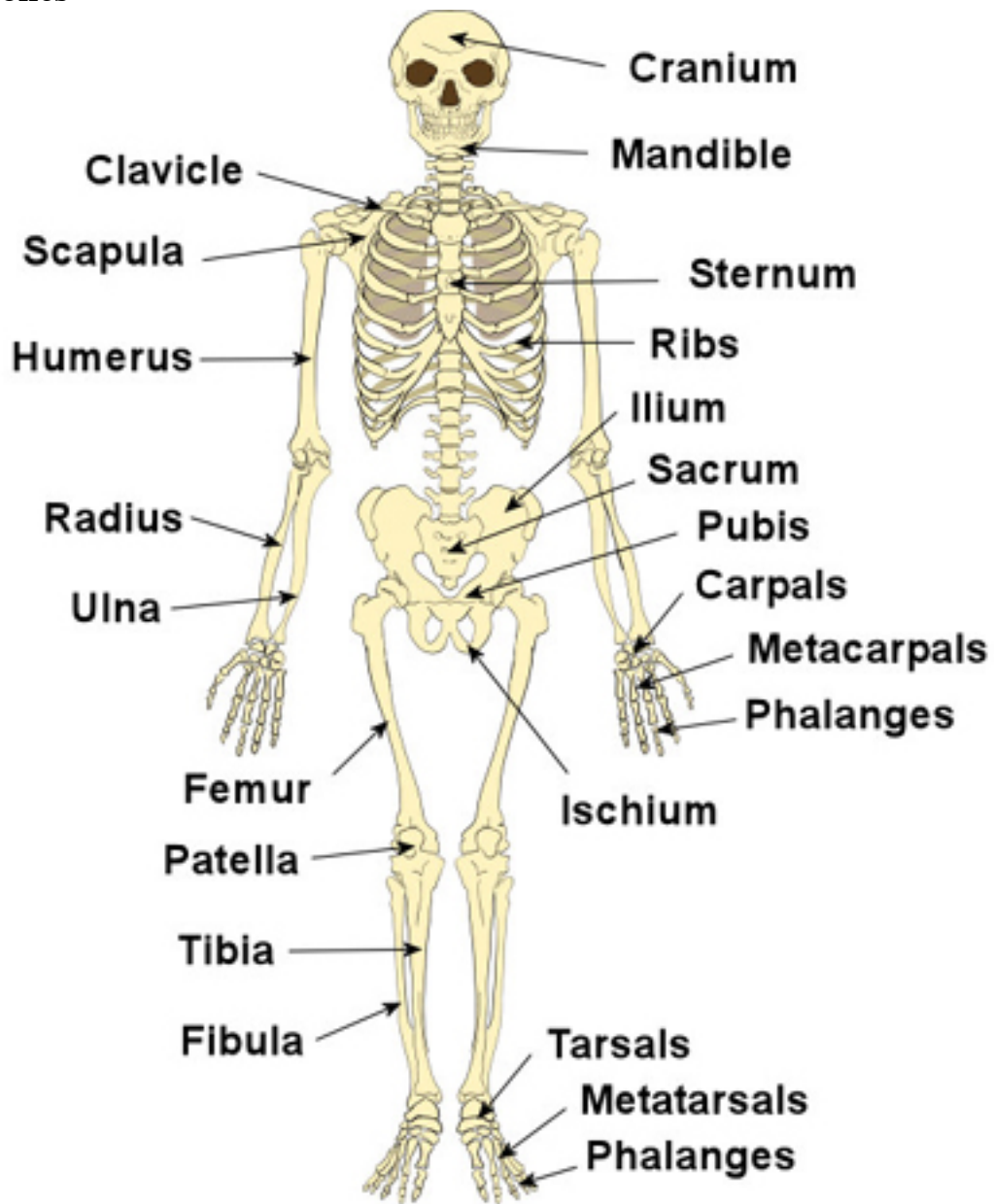
### Guidelines for Long- Term Flexibility Development:

Flexibility is increased during the stretch portion of a workout **not** during the warm-up or cardio.

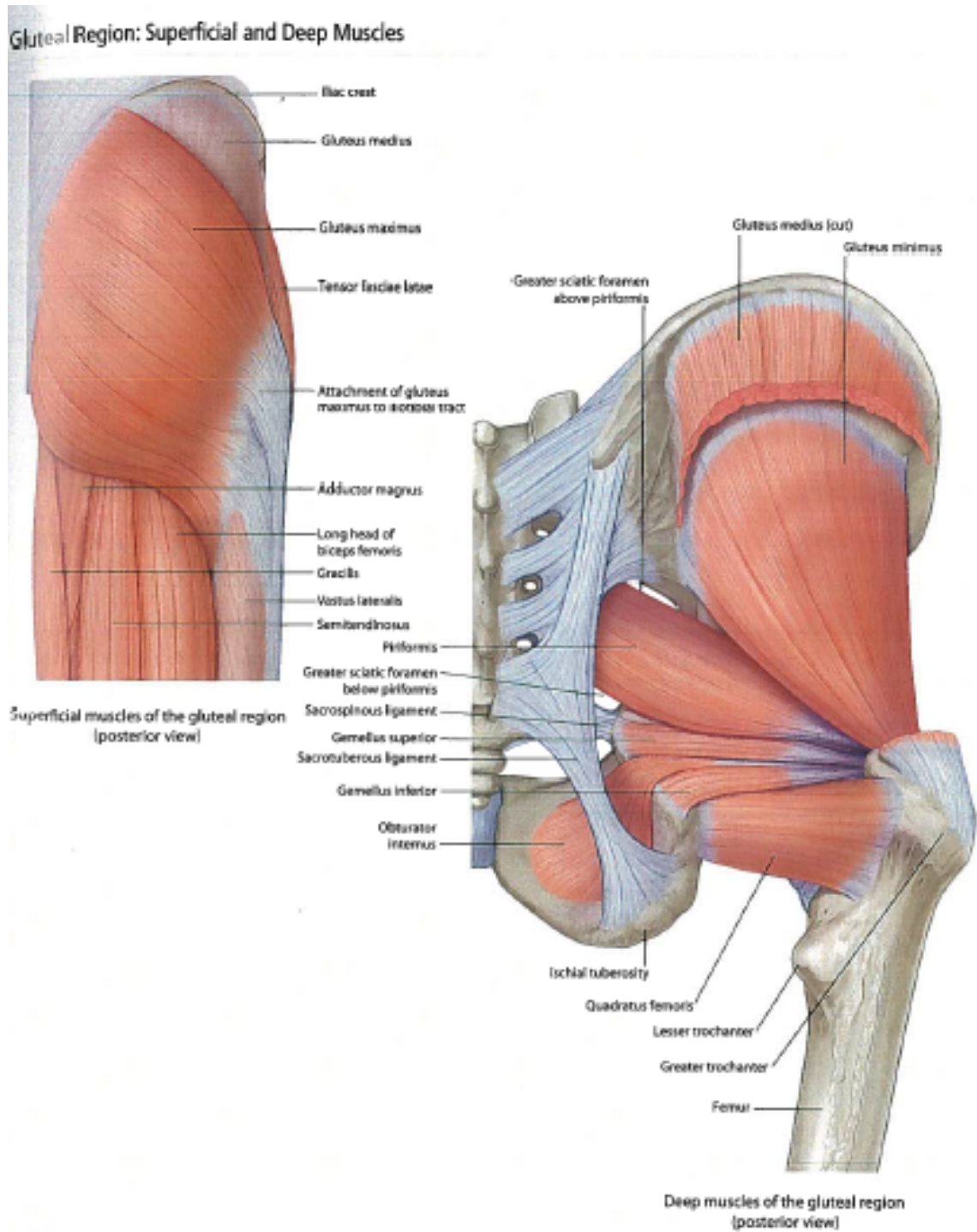
The stretching component should follow soon after the cool-down before the muscles cool right down. The stretch component should last between 5-10 mins, depending on your exercise program goals and design. Each stretch should be held long enough to feel the benefits **20-30 seconds**

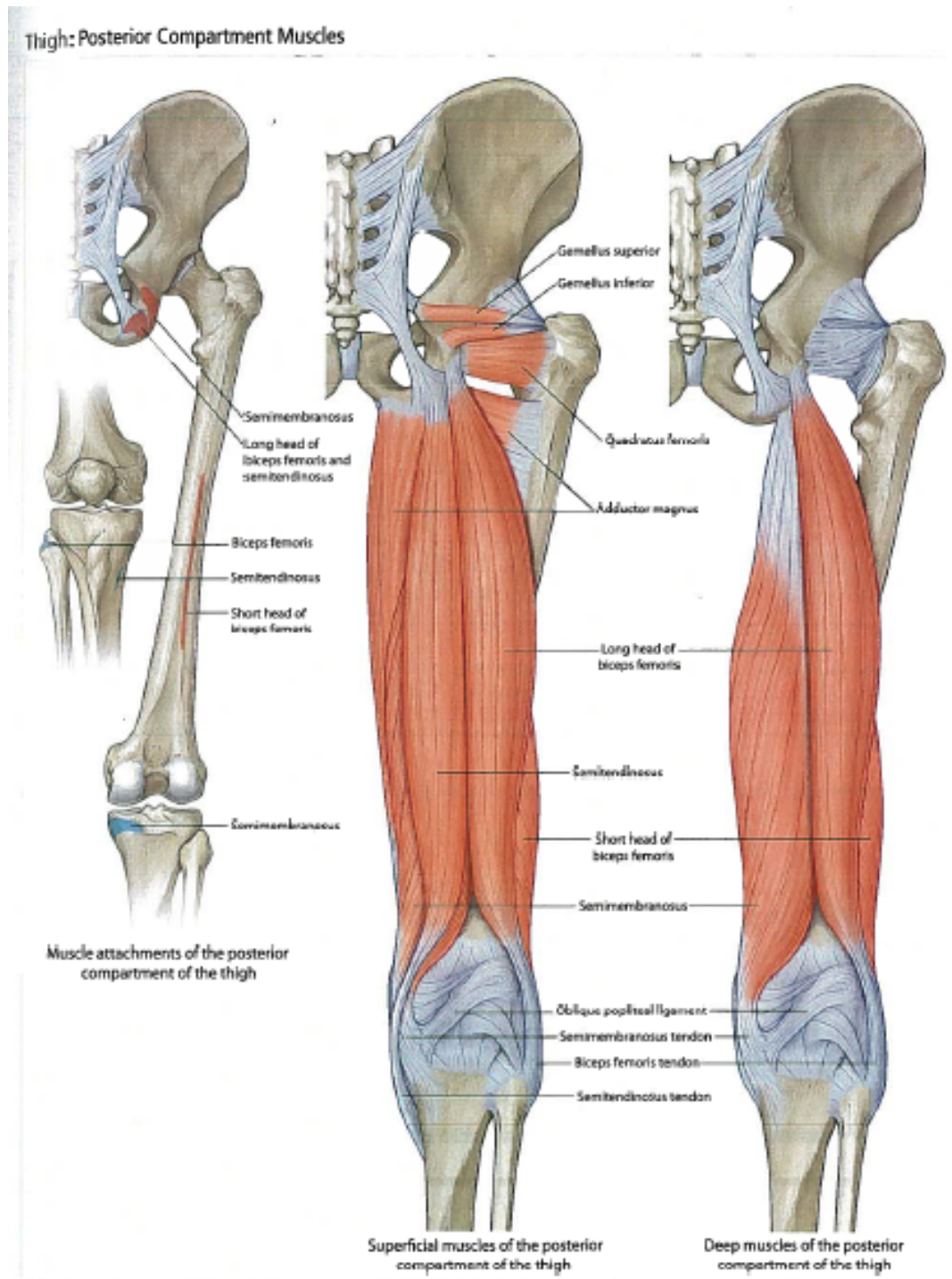
**Note:** If time is limited, it is better to hold a stretch for at least 10 sec than to not stretch at all.

**Bones**

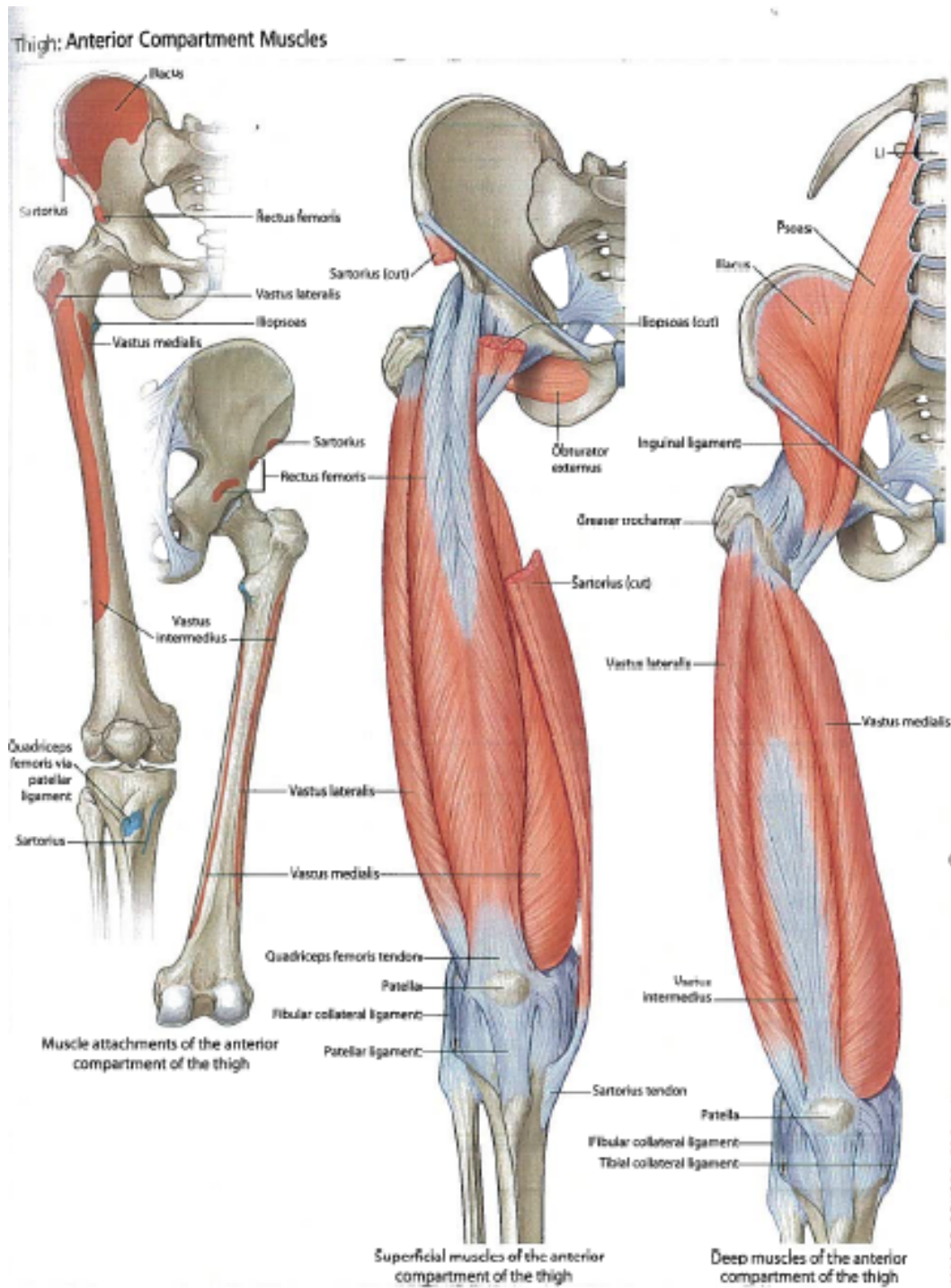


## Muscles

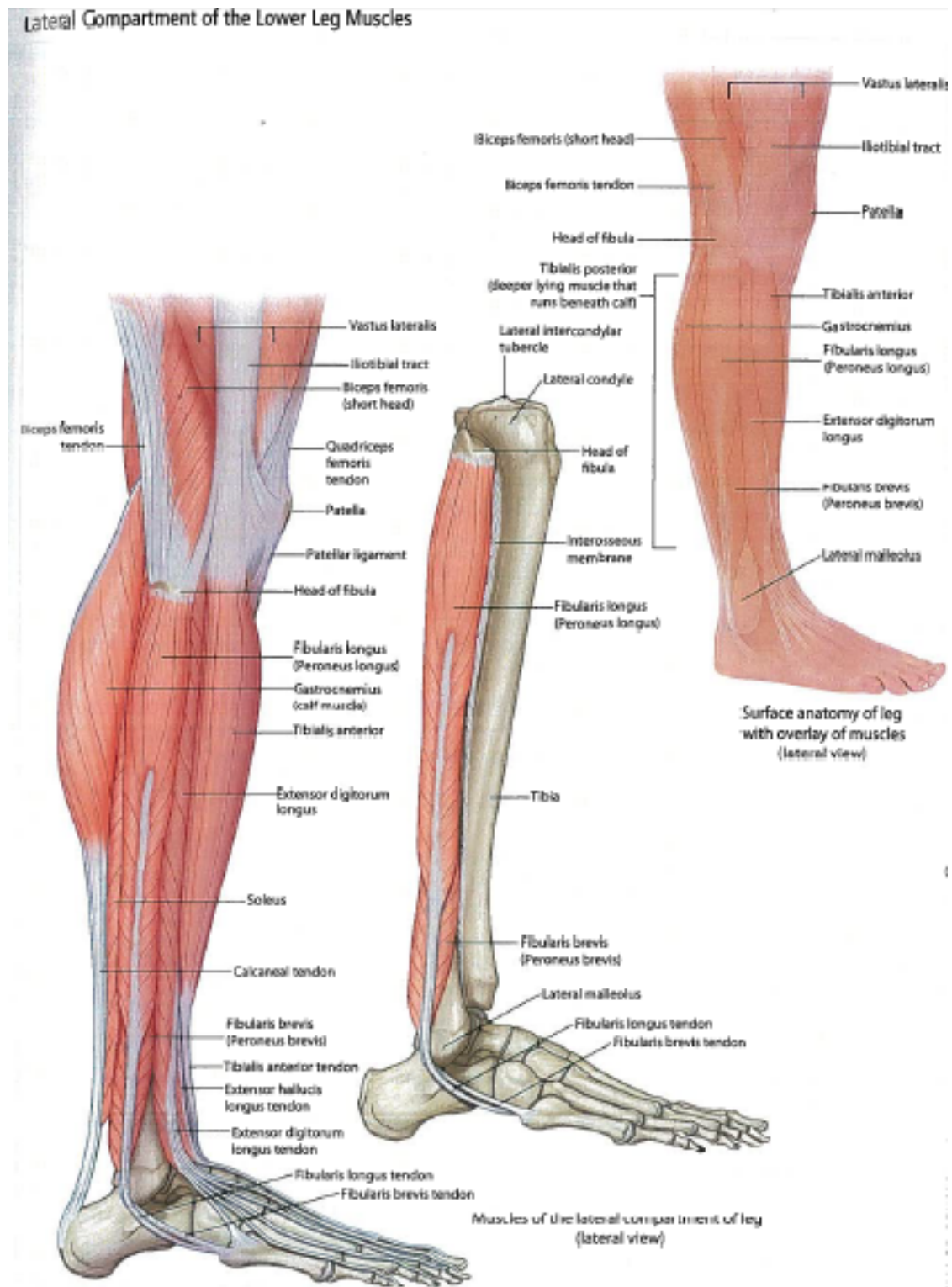












## Runner's Knee

Patellofemoral pain syndrome is pain in the front of the knee. It frequently occurs in teenagers, manual labourers, and athletes. It sometimes is caused by wearing down, roughening, or softening of the cartilage under the kneecap.

### What causes patellofemoral pain syndrome?

Patellofemoral pain syndrome may be caused by **overuse**, injury, excess weight, a kneecap that is not properly aligned

### What are the symptoms?

The main symptom of patellofemoral pain syndrome is knee pain, especially when you are sitting with bent knees, squatting, jumping, or using the stairs (especially going down stairs). You may also experience occasional knee buckling, in which the knee suddenly and unexpectedly gives way and does not support your body weight. It is also common to have a catching, popping, or grinding sensation when you are walking or when you are moving your knee.

### How is it treated?

Patellofemoral pain syndrome can be relieved by avoiding activities that make symptoms worse.

- **Avoid** sitting, squatting, or kneeling in the **bent-knee** position for long periods of time.
- Adjust a bicycle or exercise bike so that the resistance is not too great and the seat is at an appropriate height. The rider should be able to spin the pedals of an exercise bike without shifting weight from side to side. And the rider's legs should not be fully extended at the lowest part of the pedal stroke.
- Avoid bent-knee exercises, such as squats or deep knee bends.

Other methods to relieve pain include:

- Ice and rest. You can also try heat to see if it helps.
- Physiotherapy exercises. Exercises may include stretching to increase flexibility and decrease tightness around the knee, and straight-leg raises and other exercises to strengthen the quadriceps muscle.
- Taping or using a brace to stabilize the kneecap.

## Shin Splints

Shin splints are a condition that causes **pain** and sometimes swelling in front part of the lower shin. The pain is most likely from repeated stress on the shin bone (tibia) and the tissue that connects the muscle to the tibia. They are common in people who run or jog. Activities where you run or jump on hard surfaces, such as basketball or tennis, can also lead to this painful condition.

### What causes shin splints?

Most people get shin splints from repeated pounding on **hard surface** during activities such as running, basketball, or tennis. You can also get them when you:

- Change to new running or workout shoes or wear shoes that don't have enough support. This can happen when you wear your shoes too long and they wear out.
- Run or walk on a different surface than you are used to. For example, you might get shin splints when you switch from running on a trail to concrete or asphalt.
- Work out harder than usual or train too hard or too fast instead of working up to a training level gradually.

### How are they treated?

In many cases you can use home treatment to help relieve pain and swelling from shin splints.

- **Rest** is often the best treatment for shin splints. This doesn't mean that you have to stop exercising. The idea is that you can exercise as long as it isn't painful. You may need to avoid high-impact activities like running until you feel better, or at least cut back on how often and how long you run. As you recover, it may help if you:
- **Ice** helps to reduce pain and swelling. Apply the ice or cold pack for 10 to 20 minutes, 3 or more times a day.
- **Stretching** exercises, such as heel cord stretches, may also help.

### Can shin splints be prevented?

There are things you can do to help prevent shin splints.

- **Gradual entry** when you try a new activity. For example, if you are new to running, increase the distance and pace of your run over several weeks.
- Wear shoes that fit your foot right. And don't work out in shoes that are worn out.
- If you have flat feet, you may try a shoe insert to give you more support and cushion the impact of exercising on hard surfaces.
- If you are a runner, try cross-training with a low-impact sport, such as swimming or cycling.

