

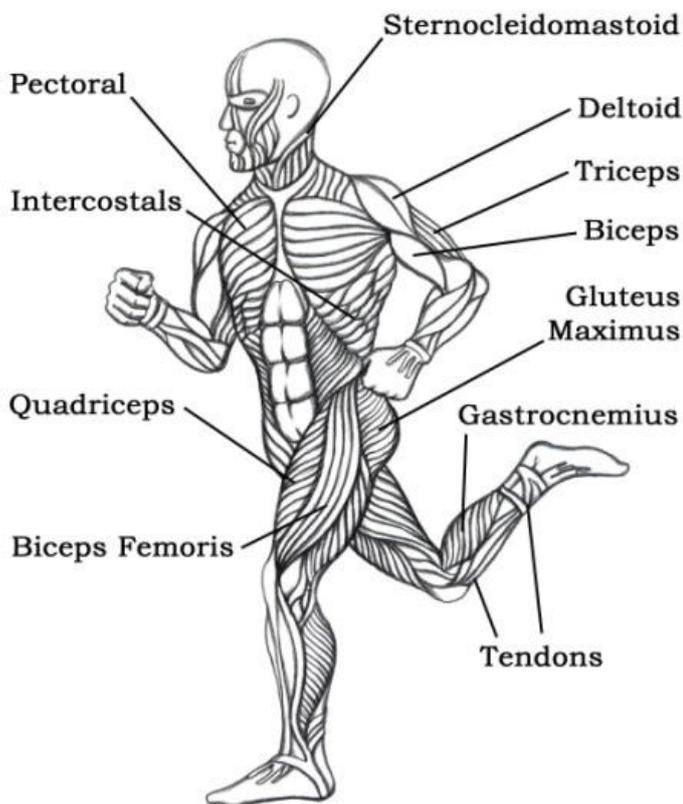
## Orthopedic Physiotherapy

### Human Body

Look at the diagram and study the main muscles of the body.  
Define which muscles have the following functions:

- lowers the arm.
- turn the upper half of the body and are between the ribs.
- straighten the knees.
- extend the thigh or bend the knee.
- rotates the head.
- raises the upper arm.
- raise and lower arms.
- straightens the hip joint and holds the body upright.
- helps to stand on toes.

### Some Important Skeletal Muscles



## Reading

Fill in the missing letters and you will get the techniques used in orthopedic physical therapy:

el...ct...ic st...m...lat...on

...ltr...so...n...

s...r...tc...in...

...tr...ng...he...ing

i...e t...er...p...

Find the words which mean the following in the text:

- tissue connecting a muscle to a bone
- inflammation of a joint (symptoms – pain, swelling, stiffness)
- the process of lengthening or widening
- movement of blood (2)

Orthopedic physical therapy focuses on the problems of the muscular skeletal system (muscles, bones, ligaments or tendons). It deals with diagnosing, managing and treating injuries and problems and rehabilitating right after orthopedic operations, as well. Orthopedic therapy workers function particularly in treating post-operative joints, injuries due to sporting activities, arthritis and amputations.

Orthopedic physical therapy is very important for restoring the patients' activity, strength and motion right after injuries or surgery. You can find a number of things therapists can do in orthopedic physical therapy and there are lots of rehabilitation tools that they have on hand. Among these we should mention: stretching, strengthening, ice and heat therapy (hot and cold packs), electrical stimulation, ultrasound, etc.

Stretching is necessary if a patient has a stiff joint which can affect normal activities severely. Proper stretching exercise can assist to preserve such functions. To help a patient in improving the function of his/her muscles, increasing endurance and maintaining or improving the range of motions strengthening workouts are used.

The ice and heat therapy warm up and cool off muscles and contribute to the stimulation of blood circulation and assist to decrease swellings, as well. By using an ultrasound probe, deep tissues are stimulated and warmed while the blood flow will improve.

Which problems does orthopedic physiotherapy focus on?  
Which conditions is it required for?  
When are stretching exercises necessary?  
How is ice and heat therapy used?

<http://physical-therapy-treatment.com/orthopedic-physical-therapy.html>

Listening

Watch the video and fill in the blanks:

The knee is comprised of the top bone which is the \_\_\_\_\_ which makes a \_\_\_\_\_ with the bottom bone which is the \_\_\_\_\_.

In between these two bones is the cartilage or the \_\_\_\_\_ of the knee.

Enveloped in the tendon is the \_\_\_\_\_.

The patella has to move up and down the groove as we \_\_\_\_\_ and \_\_\_\_\_ the knee.

It's important for the muscles around the knee like the \_\_\_\_\_ and the \_\_\_\_\_ muscle to have a balance between their strength and flexibility.

What can you say about the structure of the knee?

What is important for the health of the knee?

Do you know any exercises for the knees?

<http://www.youtube.com/watch?v=t7rsPgxaoDY>