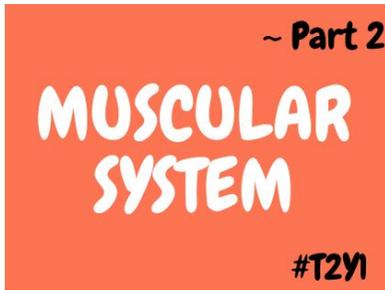


Note: All text underlined in blue are hyperlinks to external resources



Key learning outcomes:

- Describe body movements using anatomical terminology
- Understand the basic organisation of the major muscle groups
- Describe the microanatomy of muscle
- Explain the process of muscle contractions
- Understand the steps in anaerobic and aerobic respiration

ANATOMY

When starting medicine, you will learn about the different muscle groups gradually over Year 1 & 2. The full body dissection is very useful for learning muscles as you get to see how the muscle fibres interact and appreciate how each muscle overlaps. Therefore instead of bombarding you with in depth anatomy at this stage, let's start off with the major muscle groups of the body and their movements!

Firstly, here are two videos which discuss **anatomical terminology that is used to describe movements of the body**. Make sure that you have gone over body planes and directional terms from the blog as well!

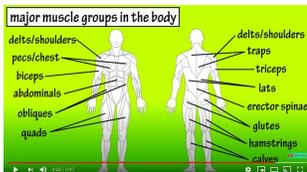


[Try this!](#)

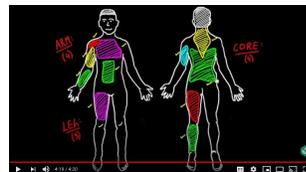


[Another example!](#)
(P.S. How cool is it that he can write backwards?!)

Next, get an appreciation of the major muscle groups of the body and their movements:



Great clear [video!](#)



Here is another [video](#) from Khan Academy, which provides great resources for pre-reading in Year 1!

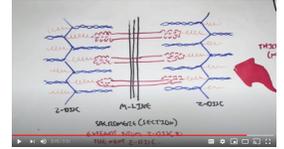
If you want to learn to start to learn about the muscles in these groups, here is a [song](#) which literally goes through the majority of the muscles that you will meet in Year 1! [WARNING: it is cringe!]. *However, the in-depth anatomy i.e. understanding the vasculature and innervations of muscles - will be left to the anatomy department when you start because they provide excellent resources and concise teaching!*

MICROANATOMY

In the previous resource, you may have looked at [connective tissue](#) and its [types](#)! (I've included the correct links here!). Now, you will learn about the histology of muscle which is another of the four main types of tissue!

Within muscles, there are three main types: skeletal, smooth and cardiac muscle. Here is a great [video](#) introducing/recapping these types!

Many of you will have covered the microanatomy of skeletal muscle specifically at A level, but if you haven't, would recommend another of [Hasudungan's videos](#) as it provides the backbone for the physiology!



As mentioned in the last resource, it is very important to have an appreciation of what the tissues will look like under the microscope as well! Check out this resource this time to see some [microscopic slides](#) of the structures which you can study in slide or quiz mode; plus a virtual microscope to play around with!

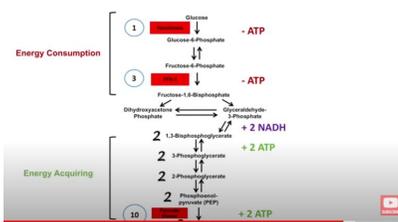
PHYSIOLOGY

Similarly with physiology, many of you may have already done muscle contraction at A Level and you'll be pleased to know that not much changes in medical school! However, please still try out some of these videos as there may be some extra details to add to your knowledge:

- Here is a 4-part Khan Academy lesson plan which goes through muscle contractions and more on skeletal muscle ([CHECK IT OUT!](#))
- [Skeletal muscle fibres](#) - do you know the difference between type 1 and 2 fibres?
- Do you understand the mechanical properties of muscle? This [video](#) will talk through key terms such as muscle twitches, tetanus and summation

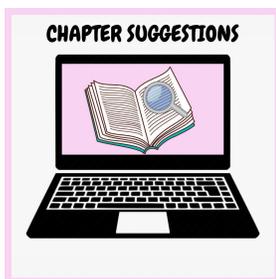


Finally, muscles need energy to function so it is important to recap aerobic and anaerobic respiration. Again, you will have likely gone over this in A Level/ other courses so please make sure to review your notes. However, in first year, you will build on this knowledge so here are two videos which will start to introduce you to the level of biochemistry that you will experience. Do not worry if you do not understand this now - wanted to get your brains stimulated!



Here is a great [video](#) which will go into detail about how glucose is transported for metabolism

- [Glycolysis](#) - note you will only need to know about steps 1, 3 and 10 for exams but it is great to understand how it all works out!



If you like to read as well, these online resources will give an overview of the topics discussed in the videos:

- Types of movements ([READ!](#))
- Summary of muscle groups ([READ!](#))
- Microanatomy of muscle - scroll up on the link to microscopic slides!
- Skeletal muscle and excitation-contraction coupling ([READ!](#))
- Great chapter summarising key topics on muscular system ([READ!](#))
- Detailed chapter on anaerobic/ aerobic respiration (again just to stress do not worry if you do not understand this + remember you only need to know steps 1, 3, 10 for glycolysis - [READ!](#))

To finish off, here are some fun quizzes/games to see what you have learnt!

- ★ DO YOU KNOW THE DIFFERENCES BETWEEN THE TYPES OF MOVEMENTS?
 - [TEST YOURSELF!](#)
 - ★ DO YOU UNDERSTAND THE DIFFERENCES BETWEEN TYPES OF MUSCLE TISSUE?
 - [QUIZ 1](#) | [QUIZ 2](#) | [QUIZ 3](#)
 - ★ TEST OUT YOUR MUSCLE PHYSIOLOGY KNOWLEDGE!
 - [HERE!](#)
-



This resource was quite extensive so please take your time through this and come back to it as much as you like! Hope you have found this resource useful! Once you have completed this, please give some short feedback - it will take 10 seconds to fill in! This will help me to get your opinions and check engagement! ([GIVE FEEDBACK](#))

