

Muscles - Fast and slow twitch

Two fibres: There are two different fibres in muscle

Slow twitch muscle fibres: Contract slowly, but keep going for a long time

Fast twitch muscle fibres: Contract quickly, but rapidly get tired

Endurance or speed

Slow twitch muscle fibres are good for endurance activities like long distance running or cycling. They can work for a long time without getting tired. Fast twitch muscles are good for rapid movements like jumping to catch a ball or sprinting for the bus. They contract quickly, but get tired fast, as they consume lots of energy.

Most of your muscles are made up of a mixture of both slow and fast twitch muscle fibres. But, your soleus muscle in your lower leg and muscles in your back involved in maintaining posture contain mainly slow twitch muscle fibres. And muscles that move your eyes are made up of fast twitch muscle fibres.

Dark and white meat

Chickens have fast and slow twitch muscle, too. Dark meat, like in chicken legs, is mainly made up of slow twitch fibres. White meat, like in chicken wings and breasts, is largely made up of fast twitch muscle fibres. Chickens use their legs for walking and standing, which they do most of the time. This doesn't use much energy. They use their wings for brief bursts of flight. This requires lots of energy and the muscles involved tire very quickly.

Slow twitch and fast twitch muscle fibres make energy in different ways

Muscles that contain a lot of slow twitch fibres are red, because they contain lots of blood vessels. Slow twitch muscle fibres rely on a rich supply of oxygenated blood as they use oxygen to produce energy for muscle contraction.

Fast twitch muscle fibres don't use oxygen to make energy, so they don't need such a rich blood supply. This is why fast twitch muscles are lighter in colour than muscles that contain a lot of slow twitch muscle fibres.

Fast twitch muscle fibres can produce small amounts of energy very quickly whereas slow twitch muscles can produce large amounts of energy slowly.