

## Learning The Muscle Fiber Types

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While you can't differentiate between muscle fibers from your outside appearance, on the inside of the muscle tissue body, there are three main different fibers present.

### Type A Fast-Twitch Muscle Fibers

The first type of muscle fibers are known as Type A Fast Twitch and are responsible for the most forceful contractions generated, however, will fatigue the fastest.

For example, if you were to perform an all out set of 3 reps for bench press, you would predominately be using these type A muscle fibers.

They tend to have very large motor neurons and very low mitochondrial density. They also have a low oxidative capacity, meaning they will not be able to utilize oxygen very well. It is for this reason that they are not suited to endurance type of activities, because during these exercise variations, oxygen must be present in order to sustain the muscular contractions.

The major type of fuel that these muscle fibers are going to rely on is creatine phosphate and stored muscle glycogen (glucose). They will not utilize stored body fat at all due to the fact that they are only able to continually contract for between one and about 20 seconds.

### Type B Fast-Twitch Muscle Fibers

The next muscle fiber is also classified as a fast twitch muscle fiber but not to the extent that type A are.

This muscle fiber type is mostly utilized in activities that are relatively short in duration, but are not at an all out pace.

For example, if you were to sprint 100 meters, you'll be using mostly type A. If on the other hand, you are to do a running interval at about 80-90% of your max capacity for 30 seconds, this would utilize the type 2A more.

Some of the characteristics of the type B muscle fibers are that they still have a large motor neuron (not as large as Type A though), they are on the intermediate scale as far as being resistant to fatigue, and they have a high degree of mitochondrial density.

These muscle fiber types are also able to use oxygen to a great extent, as demonstrated by their higher resistance to fatigue and longer duration of contraction abilities.

Slow Twitch

Finally, the third type of muscle fiber that you have in your body is classified as slow-twitch.

This is the muscle fiber type you would use if you were to run a marathon or any other extended duration, medium-to-low intensity activity.

These muscle fibers have a very high ability to resist fatigue and have a large oxidative capacity.

They are also relatively slow to contract, therefore you cannot expect a great deal of force generation from these muscles, and thus, will not be intended for exercises requiring a high degree of power.

They are very high in terms of mitochondrial density and have a large number of capillaries running throughout their bodies. This is to enable sufficient oxygen to get to the muscle tissues so that they can carry on the extended duration of muscular work they are intended to do.

These are also the muscle fibers that will also rely more on fat as fuel, as opposed to strictly using carbohydrates or creatine phosphate.

### Training The Muscle Fiber Types

So, now that you're familiar with the three major classes of muscle fiber types, it's time to recognize how you would train each effectively.

Since type A are your primary force generators, if you wish to get a higher performance from them you'll need to train using exercises that require you to max out your effort for a short period of time.

Think sprinting at full speed, 1-5 rep sets for lifting, and any type of plyometric activities.

Next, to train your type B muscles fibers you'll want to slightly decrease the force with which you are to contract while simultaneously increasing the time over which you contract ever so slightly.

For example, perform 30-45 intervals repeated ten times with about a minute or a minute and a half at a low to moderate pace. For your weight training activities, aim to target the 6-10 rep range to utilize the fact these muscle fibers have a higher oxidation ability.

Finally, to improve your slow twitch muscle fibers, think endurance. This type of fiber will usually require the greatest amount of time to train for improvement because you'll want to focus on simply going longer.

If you're a runner, try and run longer. If you're a biker, bike longer. If you're a swimmer, swim longer &ndash; you get the point.

This type of muscle has the ability to go for extended periods of time so this is exactly what you want to train it to do.

So, next time you are trying to sort out your training plan make sure to take the various muscle fiber types into consideration.

Doing so will allow you to make the most out of your training program so you get the exact results you're looking for.

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About the Author:

Vince DelMonte is the author of No Nonsense Muscle Building: Skinny Guy Secrets To Insane Muscle Gain found at [VinceDelMonteFitness](http://VinceDelMonteFitness)

He specializes in helping you understand all the principles behind muscle fibers and gaining muscle and weight quickly without drugs, supplements and training less than before.

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