

## Muscle Fibers Part 3 of 3

Imagine: Grandpa Jensen comes into your well-decorated clinic for a personal trainer. He has been medically cleared and wants to return to his pre-grandpa size and weight, where he was bench pressing two Sapphire dancers on his off-day. Now, he looks like Heidi Klum with a primary goal of gaining overall muscle. Although, Grandpa Jensen has not lifted anything heavier than a pack of Double-Stuffed Oreos in ten years, he is determined to have 32 inch biceps.

Not likely, pops. As the human body ages, neural inhibitions increase and excitatory processes decrease, making it more difficult to activate Type II muscle fibers, which are the key to hypertrophy. In order to activate Type II muscle fibers, a large excitatory demand is required and with an elder body overall motor units begin to decline. Additionally, muscle fibers alter due to physical demand (reinforced by exercise) and alter neural assignments to more recurrent task-specific activities. When Grandpa Jensen swapped Sapphire babes for Double-Stuffed Oreos, he neglected his Type II muscle fibers, which either disintegrated or converted to Type I to accommodate his daily activities. This is due to the concept of self-preservation and eliminating metabolically expensive fibers that were non-contributing.

Although his primary goal may be unobtainable (dependent on the quantity of his muscle fiber type), exercise for elder populations is highly recommended to maintain bone density, decrease non-communicable disease, ect, ect. It is noteworthy to tell Grandpa Jensen that he will achieve semi-results due to Type I muscle fibers increasing in size, but it will not be comparable to his aspired 32 inch biceps.