

Starting Strength

Bad Advice About Higher Reps

by

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As we get older, many of us go to the doctor more than we should. We ask the doctor about things doctors don't really know much about, like diet and exercise. Doctors – having had no institutional training in either diet or exercise while at the same time feeling as though they must maintain their authority over all things physical – most usually just go ahead and provide advice about these things anyway. They advise you to eat less fat and go walking every once in a while.

If you ask about strength training – since you have heard that it was a good idea and you know that walking is not strength training – their advice will be to just lift lighter weights and do more reps. Lighter weights and higher reps. Same effect, less risk, lighter is safer and more reps make up for the lighter weight, right?

It could be that doctors tell older people to just lift lighter weights because they have a genuine interest in not hurting older people, and they perceive that heavier weight is more dangerous than lighter weight. If they didn't tell this to *everybody else too*, I might believe this was their intent. Hell, if they didn't tell this to everybody, I wouldn't be writing about it.

You have never seen an article here that I have written about diet, because that is not my field of either expertise or experience. I know something about it, most likely more than your doctor, but I reserve my public opinions for things about which I am qualified to opine. Diet and exercise are complicated subjects that require study, training, and experience for expertise in them. When your doctor tells you to just use lighter weights and higher reps, he is wrong, because he is not qualified to give advice about diet and exercise. Like when I refrain from writing about brain surgery, he should refrain from giving this advice about exercise. Here's why.

Strength, as I have said many times, is merely the production of force by your muscles. The more weight you lift, the more force you produce. Since you can't lift as much weight 10 times as you can 5 times, 5 heavy reps is a heavier weight than 10 heavy reps. Therefore, 5 heavy reps makes you stronger than 10 heavy reps.

And that's really all you need to know, because it really is this simple. The more weight you can lift, the stronger you are, and the heavier the weight you use in your training, the stronger you will become. Even *you*. A heavy set of 10 is mathematically lighter than a heavy set of 5. And there you have it.



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But more importantly, sets of 10 are not just inefficient for building strength – they are counterproductive in a couple of ways. First, fatigue is the result of more repetitions of a weight, even a lighter weight. You know this yourself from working with your body. Any task repeated many times produces fatigue, and the heavier the task the more rapidly fatigue sets in. Walking doesn't count because walking isn't hard. Shoveling snow is a better example, and it's easy to get pretty tired pretty quick with a big shovel.

Here's the critical point: fatigue produces sloppy movement, and sloppy movement produces injuries. A set of 10 gets sloppy at about rep number 8 or 9, unless you're an experienced lifter, and even then it's damned hard to hold good form on the last reps of a high-rep set. A set of 5 ends before you get fatigued – 5 reps is an interesting compromise between heavy weight and higher reps. Unless you're a heart/lung patient, 5 reps won't elevate your breathing rate until after the set is over, but a set of 10 will have your respiration rate elevated before the end of the set.

A fatigued movement is a potentially incorrect movement, the more so the less experience you have. Practicing a new exercise that requires balance and precision under conditions of fatigue will have you practicing it incorrectly, thus creating a poor learning environment for your lessons in correct movement under load. Not only is the weight too light to make you strong, it is probably heavy enough that you're doing it wrong at the end of the set because you're tired.

Secondly, an experienced lifter using a heavy set of 10 is not the same person who listened to his doctor say, "Just lift lighter weights and do more reps." Experienced lifters may have specific reasons for using higher reps, because higher reps produce a different training adaptation than heavier weights.

Think about the continuum between the heaviest weight you can lift once and a weight you can lift 50 times. *The limiting factors controlling each extreme are the abilities that each extreme develops.* The heavy weight requires strength, and the light weight done 50 times requires muscular endurance, the ability to breathe effectively, and the ability to deal with the boredom. So lifting the heavy weight builds strength and lifting the light weight builds endurance. But a set of 50 doesn't build strength, because none of the reps is actually heavy, not even the last one – it merely feels like shit because you are *fatigued*. And merely feeling like shit does not meet the criterion for getting strong: lifting more weight.

The physics here is really very simple: the heavier the weight, the higher the force must be to lift it. And strength is force production. *Even for you.*

Strength and endurance both deteriorate as we age. But think about the relationship between the two, and the relative value of each. If you are not strong enough to get up off the toilet without using your hands, do you really think that a lack of endurance is your biggest problem? And what do you think happens to your endurance if you become strong enough that a repetitive task becomes easier – when each repeated motion is less difficult because you're stronger? For a weaker person, strength produces endurance without doing any endurance-specific work.

Nonetheless, the advice to lift lighter weights just keeps rolling along. The fact is that doctors repeat this mythology because they just don't know any better. Medical school provides



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no training or education in the field of strength development, this simplistic approach sounds plausible to uninformed people, and most doctors don't really appreciate the value of getting stronger because most of them haven't experienced it personally.

Nobody using a correctly designed program gets underneath a weight they can't actually lift. A correctly designed program starts off with an easy weight and becomes progressively heavier as time goes on, producing a strength increase because the numbers go up. The weight on the bar increases a little every time, you lift the weights correctly every time, and nobody gets hurt. You just get stronger. It's just *not dangerous*. And it's not that complicated.

But if you let somebody talk you into doing a program in which the weight never gets heavy enough to challenge your strength, it's not a strength program – it's a *patience* program, one that may also get you hurt. Keep the reps at 5s, go up gradually, and enjoy the process of getting stronger.

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