



Exercise Capacity, the Most Important Health Risk Factor

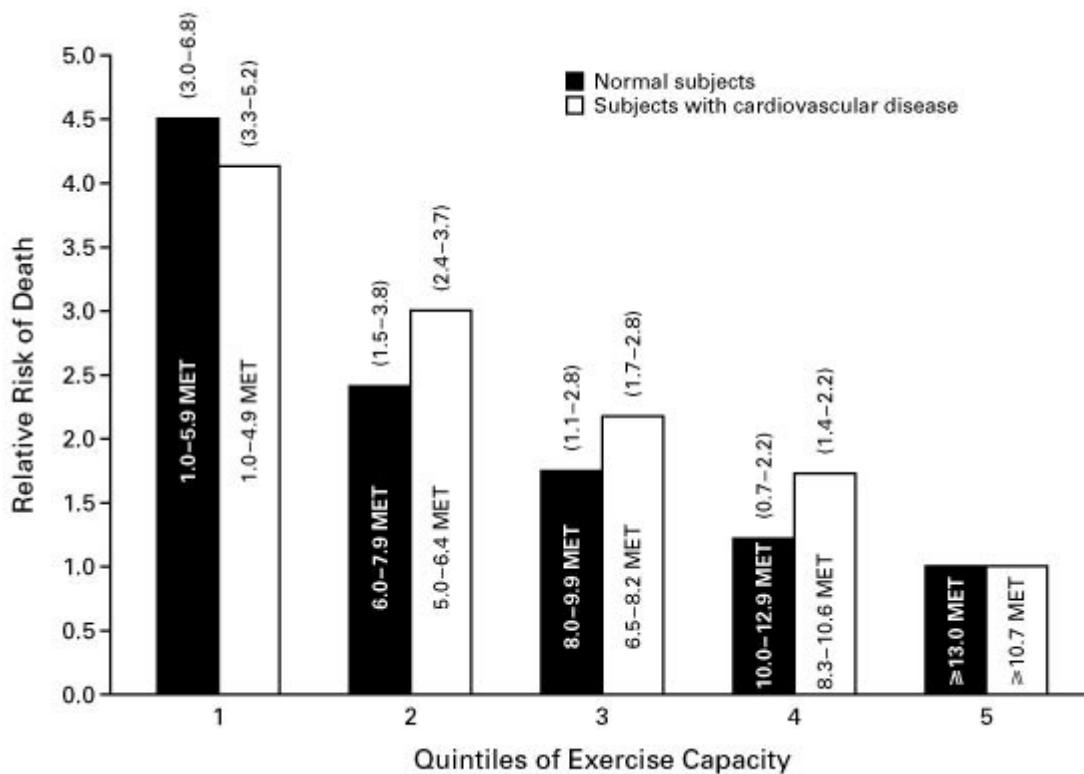
Exercise capacity is closely related to both aging and to health. Exercise capacity declines with age, and people with low exercise capacity have higher health risks. In fact, exercise capacity is the most important health risk factor. Fortunately there's some good news that means that older people can robustly increase their exercise capacity.

Exercise capacity and health

Exercise capacity is exactly what it sounds like, the amount of exercise someone is capable of doing. [It's closely related to V02max](#), the maximum oxygen uptake while doing exercise.

[A study published in the New England Journal of Medicine of men who were referred for exercise testing](#) divided the men according to quintiles (fifths) of exercise capacity, and then followed them over time.

“Exercise capacity is a more powerful predictor of mortality among men than other established risk factors for cardiovascular disease.” See chart below.



In normal men without cardiovascular disease, those with the lowest exercise capacity were 4.5 times as likely to die within the follow-up time than those with the highest exercise capacity.

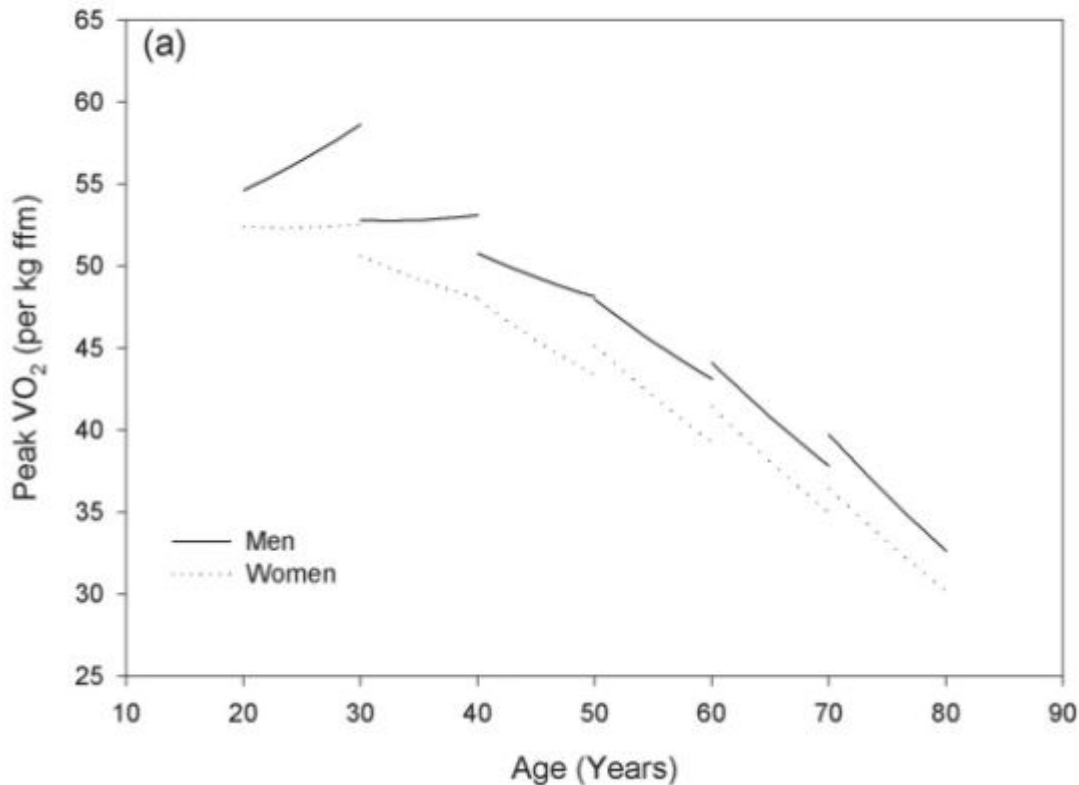
If exercise were a pill, doctors would prescribe it to everyone. There's no drug or supplement as powerful as exercise in promoting health.

Exercise capacity declines with age

If aging is an increasing tendency toward breakdown of biological systems and increasing tendency to ill health – which it is – then it stands to reason that exercise capacity declines with age – which it does. We could expect that declining exercise capacity and the tendency to ill health would be closely related, and they are.

[A study of several hundred people in the Baltimore Longitudinal Study of Aging](#) found not only a strong decline in exercise capacity with age, but that decline also *accelerates* with age. This held true even when adjusted for lean body mass, which also declines with age. See chart below.

Peak VO₂ / kg ffm (at age and gender adjusted means)



This decline in exercise capacity is a disaster for health. I know a man in his late seventies who gets winded from walking, and that may be typical for the average man that age who doesn't exercise and is overweight.

But is it inevitable?

Older people robustly respond to exercise

It's been thought that older people would not be able to respond to exercise training with as great an increase in exercise capacity as younger people. Turns out, that's not true, at least in the case of [high-intensity interval training \(HIIT\)](#).

[A study done in Norway](#) took 94 people, aged 20 to 83, and put them through a high-intensity interval training program. Against their hypothesis, age was not related to the amount of improvement in fitness.

Initial training status, which would be better formulated as initial fitness level, or initial exercise capacity, was related to improvement. In other words, those with the lowest level of fitness improved the most. Not surprising – newbie gains.

In this study, the older groups even showed a tendency towards higher maximum heart rates, which decline with age.

Therefore, the declining level of fitness seen in aging may be at least partly due to decreased physical activity, not an inevitable consequence of aging. To be sure, an older athlete can never compete at the highest levels

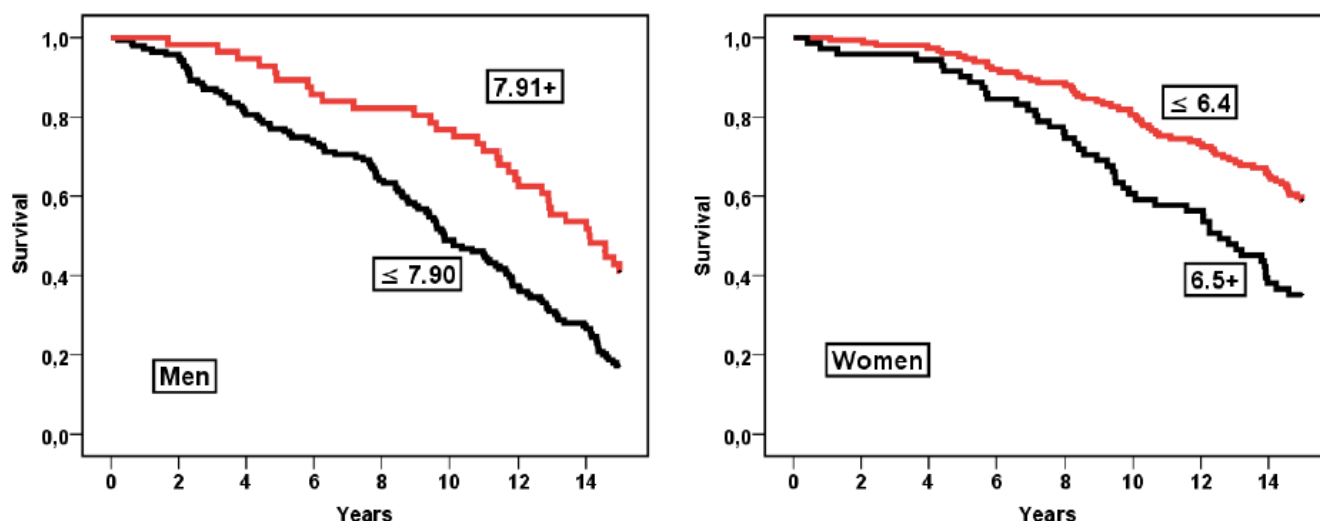
with a younger one, so aging does intrinsically affect our biology in a way that makes for lower maximum exercise capacity.

Exercise capacity, the most powerful determinant of health and longevity?

Men who have low exercise capacity have nearly a five-fold higher risk of death per period of time than men with a high exercise capacity. (See first chart above.)

I can't think of any other factor among nominally healthy people that shows such a large difference between low and high levels. Not cholesterol, LDL, or HDL. Not blood pressure. To be sure, these are related to exercise.

In fact, in men aged 75, exercise capacity was the most powerful predictor of survival until age 90. ([Source](#). For women, it was low white blood cell count.) See chart below.



The most interesting finding, especially among men, was the strong association between survival and results from the exercise test, including high exercise capacity as measured by MET, high HRR after 4 minutes recovery, and high systolic BP rise during exercise. **The prognostic importance of these factors greatly exceeded that of common prevalent diseases such as diabetes, hypertension, asthma, and angina pectoris/previous MI as well as that of conventional risk factors such as smoking, high BP, high level of TC, low level of HDL-c and obesity.** [Emphasis added]

Conclusion

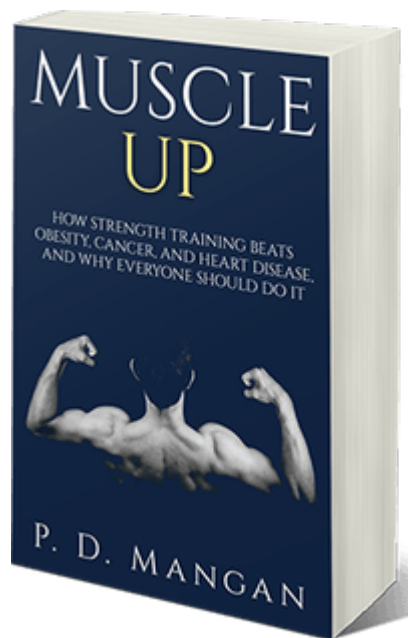
Exercise capacity is the most powerful health risk marker for men.

To get and remain healthy and to live a long life, exercise is a must. The higher your exercise capacity, the greater the odds of long life.

Exercise also gives you the best odds of feeling well, both mentally and physically.

Exercise should be a lifelong pursuit.

PS: For a great exercise program, including strength training and HIIT, see my book, [Muscle Up](#).



PPS: [Check out my Supplements Buying Guide for Men.](#)