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What's Your Score on This Sit-to-Stand Longevity Test?

Analysis by Dr. Joseph Mercola | February 09, 2024

STORY AT-A-GLANCE

- The sitting-rising test (SRT) measures non-aerobic aspects of physical fitness, namely muscle strength and power, flexibility, balance and body composition
- To receive the highest score of 10, you must be able to not only sit and rise from the floor without any support but also do so without showing instability or loss of balance
- Higher SRT scores are linked to increased longevity and correlated strongly with participants' risk of death
- A composite score below 8 was associated with a two to five-fold higher death rate over the 6.3-year study period, while scores in the 8 to 10 range indicated a low risk of death
- It's likely that those who are capable of easily sitting and standing without assistance are also those who engage in regular physical activity and daily movement, which helps keep them agile and healthy

Your ability to sit on the floor and get back up again without using your hands, knees or other support may be a powerful indicator of longevity, especially if you're 50 or older. Known as the sitting-rising test (SRT), this deceptively simple task was developed in the 1990s as a means to evaluate the non-aerobic aspects of physical fitness, namely muscle strength and power, flexibility, balance and body composition.[1]

You can watch a demonstration of the SRT in the video above. Your score on this test, which can range from zero to 10, with 10 being a perfect score, is a predictor of all-

cause mortality. In fact, each unit increase in SRT score results in a 21% improvement in survival.[2]

What Is the Sitting-Rising Test?

The sitting-rising test is a straightforward method to assess musculoskeletal fitness. To try it, stand with bare feet on a flat, non-slippery surface. Wear loose clothing so as not to restrict your movement. Next, you'll sit on the ground and rise from the floor, without using extra support from your hands or knees if possible.

In one study, researchers instructed subjects to perform the SRT this way: "Without worrying about the speed of the movement, try to sit and then to rise from the floor, using the least support that you believe is needed."[3] To receive the highest score of 10, you must be able to not only sit and rise from the floor without any support but also do so without showing instability or loss of balance.

Each action — sitting and then rising — carries a maximum of five points. Points are lost in half-point intervals any time a hand, knee or other support is used. If you're unsteady on your feet, additional points are subtracted. As explained in a 2020 study published in the European Journal of Preventive Cardiology:

> *"The ability of sitting and rising from the floor is measured according to the number of supports needed to perform each of the movements and the presence or absence of instability when sitting and rising. The score for each of the actions ranges from a minimum of 0 to a maximum of 5, with half-point intervals.*
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> *Starting from 5, one point is subtracted for each support utilized, that is, for each hand, forearm, knee, or side of the leg used, and an additional 0.5 point is subtracted if the evaluator notices an unsteady execution (partial loss of balance) during the actions.*
>
> *In addition, if the subject places one hand on the knee in order to sit or rise, this is also considered as one support and, therefore, one point is subtracted.*

> *Crossing the legs for either sitting or rising from the floor is allowed if the sides of the subject's feet are not used for support."*

For example, if you put one hand on the floor for support to sit down, then use a knee and a hand to help you get up, you'll lose three points for a combined score of 7.

What's a Good SRT Score?

The closer to 10 the better. On average, SRT scores tend to decline with age. People who are 71 years old generally have SRT scores in the zero to 3 range, while those who are 59 may score in the 8- to 10-point range.[4] However, Dr. Claudio Gil Araujo, who developed the SRT test, told USA Today it's relatively rare for those over 50 to score a perfect 10, and those who do "should be proud."[5]

During more than 20 years of the routine use of the SRT test their clinic in Brazil, Araujo and colleagues wrote, "A score of 10 is the most frequently seen in men aged 16 to 25 years old and in women aged 16 to 40 years old. However, less than 8% of men and women aged > 55 years old achieved a composite score of 10."

"Older adults are likely to use hand support to overcome problems such as muscle weakness and poor balance. This is expected, as physical function, muscle strength, and postural stability decline with age. Adopting such compensatory techniques results in lower SRT scores," researchers explained in the Journal of Physical Therapy Science.[6]

This certainly isn't set in stone, however, particularly if you stay active throughout your life. Another study suggested a score of 7.8 may be a cut-off point that distinguishes healthy older adults from those with health conditions like chronic stroke. "A cut-off score of 7.8 can adequately differentiate healthy elderly subjects from those with more severe stroke-related impairments," the researchers explained.[7]

Araujo told USA Today he got the idea after observing older patients who passed aerobic tests but were largely sedentary:[8]

"Many of them are able to bike or to run on a treadmill, but if you asked them could you tie your shoes, it's pretty difficult to do that. We realized not only aerobic fitness is important. You also need other things for your life: strength, flexibility, balance."

Araujo and colleagues also collected sex and age reference scores from 6,141 adults, as noted in the graphic below.[9] "Ideally, men and women of all ages should aim to have a SRT score in the green or blue band, that is, equal to or above the median (P50) for his/her sex and age range," they noted.[10]

Your Ability to Sit and Rise Easily May Predict All-Cause Mortality

Araujo and colleagues conducted a 2012 study involving 2,002 adults aged 51 to 80 years. Higher SRT scores were linked to increased longevity and correlated strongly with participants' risk of death during the study period of 6.3 years. Specifically:[11]

- Those who scored 0 to 3 were 6.5 times more likely to die during the study than those who scored 8 to 10
- Those who scored 3.5 to 5.5 were 3.8 times more likely to die
- Those who scored 6 to 7.5 were 1.8 times more likely to die

Further, a composite score below 8 was associated with a two to five-fold higher death rate over the study period, while scores in the 8 to 10 range "indicated a particularly low

risk of death."[12]

"If a middle-aged or older man or woman can sit and rise from the floor using just one hand — or even better without the help of a hand — they are not only in the higher quartile of musculoskeletal fitness but their survival prognosis is probably better than that of those unable to do so," Araujo said in a 2012 news release. He continued:[13]

> *"It is well known that aerobic fitness is strongly related to survival, but our study also shows that maintaining high levels of body flexibility, muscle strength, power-to-body weight ratio and co-ordination are not only good for performing daily activities but have a favorable influence on life expectancy."*

Too Much Sitting Promotes Disease

Although the study didn't measure activity levels, it's likely that those who are capable of easily sitting and standing without assistance are also those who engage in regular physical activity and daily movement, which helps keep them agile and healthy. On the other hand, those who regularly sit for long periods may have a harder time performing the SRT.

Sitting and other forms of prolonged, uninterrupted sedentary time promote cardiometabolic disorders, obesity, depression and all-cause mortality in adults and in children is linked to obesity, anxiety and depressive symptoms.[14]

Increased musculoskeletal symptoms are also associated with prolonged sitting,[15] and being sedentary for long periods of time each day even appears to accelerate aging at the cellular level.

Among close to 1,500 older women included in one study, those who sat the longest were, on average, eight years older, biologically speaking, than women who moved around more often, with researchers concluding, "avoidance of a highly inactive lifestyle may provide health benefits at the cellular level."[16]

Another study found that excessive sitting increases lung cancer risk by 54%, uterine cancer risk by 66% and colon cancer risk by 30%.[17] Separate research, published in the American Journal of Preventive Medicine, further found that sitting for more than three hours a day causes 3.8% of all-cause deaths in the 54 countries surveyed.[18] Likely, those who spend the most time sitting and the least amount of time exercising are also those who may score lower on the sitting-rising test.

Incorporate Daily Movement Into Your Life

To counteract the ill effects of sitting and the declines in function that often occur with age, it's necessary to create a movement-rich environment. This involves not only exercise, which triggers mitochondrial biogenesis,[19] but also standing and moving as much as possible throughout your day.

Foundation exercises, developed by chiropractor Dr. Eric Goodman, can help counteract some of the damage caused by sitting and help build core strength. Foundation Training teaches your core muscles to work together through integrated chains of movement, which is how you're structurally designed to move, as opposed to compartmentalized movements like crunches.

These exercises are used by many professional and elite athletes but, more importantly, they address the root cause of lower back pain related to weakness and imbalance along your posterior chain of muscles. The video above demonstrates "The Founder," a key exercise that helps reinforce proper movement while strengthening the entire back of your body by dispersing your weight through the posterior chains.

As a result, your weight shifts back toward your heels and "untucks" your pelvis. By doing so, you lengthen your hip flexors, gaining length at the front of your body. The Founder is an excellent exercise that can help reverse the effects of frequent and prolonged sitting.

In the workplace, standing desks are also a good start. You can even stand on a wobble board to engage in more "active" standing, with added benefits for improving balance

and posture while working your core muscles and boosting coordination. An under-desk treadmill is another option. Sitting increases metabolic rate by only 5% compared to lying down, but walking, even at a slow pace, increases energy expenditure 100%.[20]

If you haven't already, I recommend trying the sitting-rising test for yourself. If your score is lower than you'd like, take action to move more, gain flexibility and balance, and strengthen your body. The more you try to incorporate standing and movement into your day, gradually you'll find that you don't automatically look for a chair the way you used to — and you'll likely score higher on the SRT in the process.

Sources and References

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