

## Other benefits of strength training

- it improves muscle mass, and the strength of muscles and bones;
- it improves your balance and reduces the risk of falls;
- it counteracts the loss of muscle mass and strength typical of aging (also called: sarcopenia)

**If you are sedentary or you have chronic health problems or disability, before starting strength training, always ask your doctor to know if you need to avoid some types of exercises, which exercises are better for you, and what the optimal frequency and intensity of training is**

### Useful insights

- The U.S. National Institute of Aging (NIA) website <https://www.nia.nih.gov/>
- The 2018 "Physical activity guidelines for Americans 2nd edition"  
[https://health.gov/paguidelines/second-edition/pdf/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf](https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf)
- The World Health Organization recommendations (WHO)  
[https://www.who.int/dietphysicalactivity/factsheet\\_olderadults/en/](https://www.who.int/dietphysicalactivity/factsheet_olderadults/en/)

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# Strength training in older people

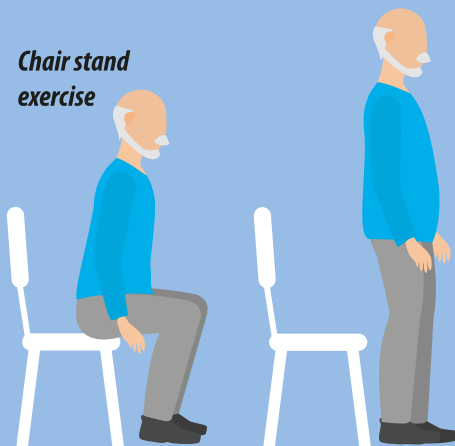
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## What is strength training?

Strength training includes a series of exercises aimed at maintaining or increasing your muscle strength and resistance. It can be performed using tools that create resistance, such as:

- weights to do arm curls or wrist curls. Arm curling can be also performed with an elastic band under the feet in sitting position to obtain resistance,
- ankle weights to strengthen leg muscles. In sitting position, stretch out your leg bringing it in front of you (see picture), or
- a small ball held in the hand to improve your hand grip.

You can also perform exercises without these tools e.g. belly exercises, squats (for knees and hips), and chair stand exercises (see picture). These are just a few examples among the many other strength exercises. Strength exercises can be performed at home while you are watching television or listening to the music, or at the gym with other peers.



## Is strength training recommended for older adults?

People often think that physical and strength exercises only serve young people who aim to increase muscle mass and have a sculpted body. This is not true. Performing this type of physical activity is recommended at all ages, and especially for older people who really need an adequate strength of their muscles. Of course, the intensity and types of exercises may be different for older people. Strength is important for movements, for carrying out daily life activities like raising the shopping bag or lifting grandchildren, as well as for the maintenance of independence and for a good quality of life. The 2018 “Physical activity guidelines for Americans 2nd edition” developed by the U.S. Department of Health and Human Services, suggest:

- Multicomponent exercise (i.e. strength exercise + balance exercise + aerobic exercise) for older people as the best type of exercise.
- Specifically, moderate-high intensity strength exercise is recommended at least 2 times a week. The intensity of an exercise can be determined by the self-perceived effort, describing it with a scale that goes from 0 (no effort) to 10 (maximal effort). A score of 5-6 define the moderate intensity, whereas a score of 7 and up defines high intensity.
- The exercise should involve the major muscle groups (i.e. legs, hips, chest, back, belly, shoulders and arms).
- For strength training, each exercise should be repeated 8-12 times (this is called “set”), and 2-3 sets can be more effective, separated by a rest interval. The rule is to exercise until it would be difficult to perform another repetition.