

# Strength training isn't enough

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Older women gained noticeably stronger muscle mass from resistance training. But that wasn't enough to prevent falling.

Elderly women should also think about what they eat in order to avoid hip fractures and other injuries, according to Swedish sports scientist Emilie Strandberg.

In a new study, she selected 63 healthy and physically active women between 65 and 70 years old. The women were divided into three groups.

One group did resistance training twice a week. Another group did the same training, but also received a diet plan to follow, including lots of fish and shellfish, and at least 600 grams of fruit, berries and vegetables a day.

The third group was a control group that received no instructions to do anything differently.

## **Increased strength by 20 per cent**

After six months, the researcher observed some differences between the groups.

Both resistance training groups increased their maximum strength by 20 per cent. But the group that followed the diet plan also increased their explosive strength to a greater degree than the other strength training group. Explosive strength refers to the nervous system's ability to respond instantly and with maximum power.

Maintaining one's explosive muscle strength is important. We need it for movements that require a rapid power response, for example when you fall, says Strandberg.

Several studies have shown that older people manage better and enjoy a higher quality of life if they perform strength training. Hilde Lohne-Seiler at the Norwegian School of Sport Sciences (NIH) showed in a 2016 study that resistance training using equipment increased upper body strength by 25 per cent.

## **Inflammation from age 40**

Already in our 40s we begin to lose muscle mass at the rate of about one per cent per year. We still don't know much about why this happens.


Previous research at Örebro University in Sweden suggests a correlation between chronic inflammation in the blood and loss of muscle mass.

In a new study, the researchers found that this may be due to increased inflammation markers in the blood as we grow older. This makes us more susceptible to bone fractures and breaks, e.g. when we fall. The study is described on the Örebro University website.

Here too, Strandberg found a difference among those who did both strength training and modified their diet. These women had reduced inflammation – both in their blood and in their muscles.

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[Read the Norwegian version of this article at forskning.no.](#) [5]

 [Working out is no less important as you get older. New research from Sweden shows that strength training in combination with a healthy diet of fruits, vegetables and fish can help protect you against falls. \(Photo: wavebreakmedia / Shutterstock / NTB scanpix\)](#) [6]

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[Peter Edholm, Emilie Strandberg and Fawzi Kadi: Lower limb explosive strength capacity in elderly women: effects of resistance training and healthy diet, Journal of Applied Psychology, July 2017.](#) [10]

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January 15, 2018 - 06:20

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