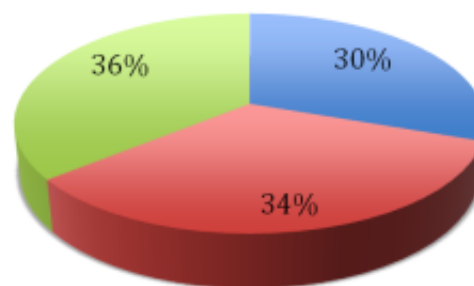


More sitting during a day increases the probability of developing the metabolic syndrome in older adults

We all would like to stay fit and independent for the rest of our lives. In order to live longer in good health we need to change or adjust our lifestyle. Scientists make an enormous effort by developing lifestyle interventions to make our lives happier and longer as we age. Physical activity is one of the most important components of our lifestyle that will keep us “away” from a doctor while aging. It has been shown in recent years, however, that not only high levels of physical activity help to keep our body and mind healthy, but also shorter time of daily sitting. It has been shown that older adults spend very large parts of their days sitting e.g. watching TV and/or using a computer. Interestingly, some studies reported that even regular daily physical activity may not be enough to keep us healthy while spending long hours sitting e.g. 10-13 hours per day. High levels of sitting time can increase a risk for problems with our glucose levels in blood, high cholesterol and other fats levels, body weight (obesity), blood pressure etc.

Metabolic Syndrome is More Frequent Among Those Who Sit More

■ Least Sitting Time ■ Medium Sitting Time ■ Most Sitting Time



These problems (components) may co-exist together (at least two) and are called the metabolic syndrome. The metabolic syndrome may lead to type 2 diabetes, heart attack, mobility disability and even early death. For example, scientific studies report an association between sitting time and lower risk for the metabolic syndrome and its components in young and middle-age adults. To date, there is a lack of scientific studies on the association between an amount of sitting time and the metabolic syndrome among older adults. We have attempted to investigate this association between the measured sitting time (using hip-worn step and acceleration counters) with the metabolic syndrome and its components in a large sample of older adults (1198 persons) with mobility limitations. Their average age was around 78 years and all the participants were enrolled in the Lifestyle Interventions and Independence for Elders (LIFE) study. Participants were divided into 3 groups according to percentage of daily sitting time. Participants in the highest sitting time group had also higher probability of developing the metabolic syndrome in comparison with participants in the lowest sitting time group. Participants in the highest sitting time group had larger waist circumference and lower levels of high-density lipoprotein (good cholesterol) than participants in the lowest sedentary time tertile. All these differences were strong enough (statistically

significant) to draw conclusions from our results. In conclusion, the amount of daily sitting time was strongly related to a higher probability of developing the metabolic syndrome. These results were based on measured amounts of sitting time by step and acceleration meters, which gave more reliable results than self-reported data in other studies. Moreover, we have observed that the longer daily sitting time, the higher probability of developing the metabolic syndrome. This suggests that sitting time may represent an important risk factor for the development of the metabolic syndrome in older adults with high probability for mobility disability. The future lifestyle interventions should aim increasing physical activity levels, but also to reduce the time of sitting during a day.

Publication

[Sedentary time is associated with the metabolic syndrome in older adults with mobility limitations - The LIFE Study.](#)

Mankowski RT, Aubertin-Leheudre M, Beavers DP, Botosaneanu A, Buford TW, Church T, Glynn NW, King AC, Liu C, Manini TM, Marsh AP, McDermott M, Nocera JR, Pahor M, Strotmeyer ES, Anton SD; LIFE Research Group
Exp Gerontol. 2015 Oct