

Keeping in good shape in old age is harder for women, study finds

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Women aged 65-plus find it harder than men of the same age to preserve muscle — which probably impacts on their ability to stay as strong and fit, according to new research.

For the first time, scientists have shown that it is more difficult for women to replace muscle that is lost naturally as they get older — because of key differences in the way their bodies react to food.

In a paper published in the Public Library of Science (PLoS) One, experts at Washington University School of Medicine in St Louis, Missouri, USA and The University of Nottingham, UK discovered that post-menopausal women were less able to respond to food to build muscle mass whereas men of the same age (65-80 years old) were able to store protein in muscle. The change is probably the result of hormonal changes with the menopause — a possible culprit being that of the hormone oestrogen which is already known to be needed in women and men to help maintain bone mass.

The researchers say their findings fit in with other preliminary results showing that women are less able to respond to build muscle after resistance exercise — lifting weights in the gym. Younger men and women who have not reached the menopause do not seem to show any differences.

But all is not lost. The new results underline the importance for older women of eating plenty of protein such as eggs, fish, chicken and lean

red meat, in conjunction with resistance exercise.

Maintaining muscle is crucial in reducing the risk of falls — one of the major causes of premature death in elderly people. From the age of 50 onwards, people lose up to 0.4 per cent of muscle mass every year making them less mobile, more prone to fractures and at higher risk of a potentially life-threatening fall.

Half of all elderly people who suffer a serious fall die within two years. But it is thought the number of falls could be reduced if muscle mass could be more effectively maintained so that hips and knees remain strong and well supported.

Up until now, scientists have found no differences between men and women in muscle protein synthesis — the process by which the body builds muscle. But the latest research has found that in their mid- to late-60s, the female body's response to food and exercise starts to decline. Women are particularly at risk of muscle loss because they tend to have less muscle and more fat than men in early and middle age — so they are nearer to the 'danger' threshold of becoming frail when they reach their 50s and 60s.

Michael Rennie, Professor of Clinical Physiology at The University of Nottingham, said: "Nobody has ever discovered any mechanistic differences between men and women in muscle loss before. This is a significant finding for the maintenance of better health in old age and reducing demands on the National Health Service.

"Rather than eating more, older people should focus on eating a higher proportion of protein in their everyday diet. In conjunction with resistance exercise, this should help to reduce the loss of muscle mass over time. There is also a case for the beneficial hormonal effect of limited HRT, although this has to be balanced against the other risks

associated with such treatment.”

Source: University of Nottingham

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