

Slow exercise (not fast) is better for menopausal women

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It's an inevitable truth: as we get older, our muscles deteriorate and we become weaker. Not only can this be an immensely frustrating change, but it can also have many other, more serious implications. We become clumsier and begin to have more falls, often resulting in broken bones or even more severe injuries. There is wide interest in this phenomenon, but to date, the majority of research has focussed on therapies for older patients with advanced symptoms. Now one study, led by Dr Alexandra Sanger from the University of Salzburg, is taking a new approach: scientists are examining the effects of different exercise regimes in menopausal women, with the aim of developing new strategies for delaying and reducing the initial onset of age related muscle deterioration. Results will be presented on Monday 7th July at the Society for Experimental Biology's Annual Meeting in Marseille [Poster Session A5].

Dr Sanger's research group has investigated two particular methods of physical training. Hypertrophy resistance training is a traditional approach designed to induce muscle growth whereas 'SuperSlow®' is a more recently devised system which involves much slower movement and fewer repetitions of exercises, and was originally introduced especially for beginners and for rehabilitation. "Our results indicate that both methods increase muscle mass at the expense of connective and fatty tissue, but contrary to expectations, the SuperSlow® method appears to have the greatest effect," reveals Dr Sanger. "These findings will be used to design specific exercise programmes for everyday use to reduce the risk of injury and thus significantly contribute to a better

quality of life in old age."

The study focussed on groups of menopausal women aged 45-55 years, the age group in which muscle deterioration first starts to become apparent. Groups undertook supervised regimes over 12 weeks, based on each of the training methods. To see what effect the exercise had, thigh muscle biopsies were taken at the beginning and end of the regimes, and microscopically analysed to look for changes in the ratio of muscle to fatty and connective tissue, the blood supply to the muscle, and particularly for differences in the muscle cells themselves. "The results of our experiments have significantly improved our understanding of how muscles respond to different forms of exercise," asserts Dr Sänger. "We believe that the changes that this new insight can bring to current training systems will have a considerable effect on the lives of both menopausal and older women," she concludes.

Source: Society for Experimental Biology

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