

Caffeine boosts power for elderly muscles

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A new study to be presented at the Society for Experimental Biology meeting on June 30 has shown that caffeine boosts power in older muscles, suggesting the stimulant could aid elderly people to maintain their strength, reducing the incidence of falls and injuries.

For adults in their prime, caffeine helps muscles to produce more force. But as we age, our muscles naturally change and become weaker.

Sports scientists at Coventry University looked for the first time at whether these age-related changes in muscle would alter the effect of caffeine. They found that caffeine continued to enhance [muscle performance](#) in two different muscles from mice, although it was less effective in older muscles.

Jason Tallis, the study's primary author, said: "Despite a reduced effect in the elderly, caffeine may still provide performance-enhancing benefits."

For adults in their prime, caffeine helps muscles to produce more force. But as we age, our muscles naturally change and become weaker. So, sports scientists at Coventry University looked for the first time at whether these age-related changes in muscle would alter the effect of caffeine.

Caffeine's effect was smallest for juvenile muscles, suggesting caffeine may not have an enhancing effect in developing muscles.

The decline in [muscle strength](#) that occurs as we age contributes to injuries and reduces quality of life. The process is not well understood, but it is clear that preserving [muscle tone](#) is key.

Tallis said: "With the importance of maintaining a physically active lifestyle to preserve health and [functional capacity](#), the performance-enhancing benefit of caffeine could prove beneficial in the [aging population](#)."

The researchers isolated muscles from mice ranging in age from juvenile to elderly, then tested

their performance before and after caffeine treatment. They looked at two different skeletal muscles, which are the muscles we can control voluntarily. The first was the diaphragm, a core muscle used for respiration; the second was a leg muscle called the extensor digitorum longus (EDL), used for locomotion.

Provided by Society for Experimental Biology

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