

Gelatin supplements, good for your joints?

December 20 2016, by Andy Fell

A new study from Keith Baar's Functional Molecular Biology Laboratory at the UC Davis College of Biological Sciences and the Australian Institute of Sport suggests that consuming a gelatin supplement, plus a burst of intensive exercise, can help build ligaments, tendons and bones. The study is published in the January issue of the *American Journal of Clinical Nutrition*.

Connective tissue and bone injuries are common in both athletes and the elderly, and interfere with peoples' ability (and enthusiasm) for exercise, whether they are an elite athlete or just trying to lose weight and maintain fitness and flexibility. Steps that can prevent injury and enhance recovery are therefore of great interest.

Obviously, it's difficult to assess the direct effect of a supplement on tissues without opening up someone's knee. But Baar's laboratory has been developing techniques to grow artificial ligaments in the laboratory. They used their lab-dish ligaments as a stand-in for the real thing.

Gelatin, Vitamin C and Exercise

Baar, Greg Shaw at the Australian Institute of Sport, and colleagues enrolled eight health young men in a trial of a gelatin supplement enhanced with vitamin C. The volunteers drank the supplement and had blood taken, and after one hour performed a short (five minute) bout of high-impact exercise (skipping).

The researchers tested the blood for [amino acids](#) that could build up the

collagen protein that composes tendons, ligaments, and bones. They also tested blood samples for their effect on Baar's lab-grown ligaments at UC Davis.

The gelatin supplement increased blood levels of amino acids and markers linked to collagen synthesis, and improved the mechanics of the engineered lab-grown [ligaments](#), they found.

"These data suggest that adding gelatin and vitamin C to an intermittent [exercise](#) program could play a beneficial role in injury prevention and tissue repair," the researchers wrote.

More information: Vitamin C–enriched gelatin supplementation before intermittent activity augments collagen synthesis, *American Journal of Clinical Nutrition*, [ajcn.nutrition.org/content/ear ...
.116.138594.abstract](https://ajcn.nutrition.org/content/ear...116.138594.abstract)

Provided by UC Davis

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