

Soy protein early in life may help prevent bone loss in adulthood

October 14 2016

Move over milk, soy protein early in life might be what's needed for strong, healthy bones in adulthood. New research, published online in *The FASEB Journal*, reports that early dietary nutrition heavy in soy protein isolate can protect against serious bone loss during adulthood. This also is the first time that scientists have used an animal model to show concrete evidence of a protective effect of an early-life soy protein isolate diet on adult bone loss.

"Appropriate early-life nutrition can optimize peak bone mass," said Jin-Ran Chen, M.D., Ph.D., a researcher involved in the work from the Skeletal Development Laboratory at Arkansas Children's Nutrition Center at the University of Arkansas for Medical Sciences in Little Rock, Arkansas. "Consumption of soy foods has a variety of health benefits, including amelioration of [bone loss](#) during adulthood."

To make their discovery, Chen and colleagues used a very young female rat model. One group of rats was fed a [soy protein](#) isolate diet for 30 days (from postnatal day 24 to 55), and then was switched to a regular standard rodent diet until 6 months of age. The rats were altered to mimic postmenopausal bone loss in women to determine the amount of bone loss. The second group of rats was fed a regular standard rodent diet throughout life. This group was also altered to mimic postmenopausal bone loss and analyzed to determine bone loss. The researchers found that the first group of rats compared to the second group of rats.

"The centuries-old mantra that children need milk to 'grow strong bones' remains true, but here we have evidence that the protein components of soy 'milk' have key osteogenic effects," said Thoru Pederson, Ph.D., Editor-in-Chief of *The FASEB Journal*. "This finding could ultimately have major pediatric health impacts throughout various parts of the world."

More information: J.-R. Chen et al, Dietary factors during early life program bone formation in female rats, *The FASEB Journal* (2016).
[DOI: 10.1096/fj.201600703R](https://doi.org/10.1096/fj.201600703R)

Provided by Federation of American Societies for Experimental Biology

Citation: Soy protein early in life may help prevent bone loss in adulthood (2016, October 14)
retrieved 6 May 2024 from
<https://medicalxpress.com/news/2016-10-soy-protein-early-life-bone.html>

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