

An anti-frailty pill for seniors?

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Researchers at the University of Virginia Health System report that a daily single oral dose of an investigational drug, MK-677, increased muscle mass in the arms and legs of healthy older adults without serious side effects, suggesting that it may prove safe and effective in reducing age-related frailty.

Published in the November 4, 2008 issue of *Annals of Internal Medicine*, the study showed that levels of growth hormone (GH) and of insulin-like growth factor I (IGF- I) in seniors who took MK-677 increased to those found in healthy young adults. The drug restored 20 percent of muscle mass loss associated with normal aging.

"Our study opens the door to the possibility of developing treatments that avert the frailty of aging," explains Dr. Michael O. Thorner, a nationally recognized researcher of growth hormone regulation and a professor of internal medicine and neurosurgery at UVA. "The search for anti-frailty medications has become increasingly important because the average American is expected to live into his or her 80s, and most seniors want to stay strong enough to remain independent as they age."

Funded by the National Institutes of Health, the two-year, double-blind, placebo-controlled, modified-crossover study involved 65 men and women ranging in age from 60 to 81.

The study drug, MK-677, mimics the action of ghrelin, a peptide that stimulates the growth hormone secretagogue receptor (GHSR). Drug developers are focusing on GHSR because it plays an important role in

the regulation of growth hormone and appetite. They think it may prove to be an excellent treatment target for metabolic disorders such as those related to body weight and body composition.

According to Dr. Thorner, the UVA research was a "proof-of-concept" study that sets the stage for a larger and longer clinical trial to determine whether MK-677 is effective in people who are frail and to assess its long term safety

Source: University of Virginia Health System

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