The Role of Androgens and Estrogens on Healthy Aging and Longevity

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- Received September 23, 2011.
- Accepted January 24, 2012.

Abstract

Aging is associated with a loss of sex hormone in both men (andropause) and women (menopause). In men, reductions in testosterone can trigger declines in muscle mass, bone mass, and in physical function. In women, the impact of the loss of sex hormones, such as estradiol, on bone is well elucidated, but evidence is limited on whether the loss of estradiol negatively affects muscle mass and physical function. However, deficiencies in multiple anabolic hormones have been shown to predict health status and longevity in older persons. Thus, consideration should be given as to whether targeted hormone replacement therapies may prove effective at treating clinical conditions, such as age-related sarcopenia, cancer cachexia, and/or acute or chronic illnesses. If initiated carefully in the appropriate clinical population, hormone replacement therapies in men and women may prevent and reverse muscle and bone loss and functional declines and perhaps promote healthy aging and longevity

http://biomedgerontology.oxfordjournals.org/content/67/11/1140