MOOD, ANXIETY, AND SERUM IGF-1 IN ELDERLY MEN GIVEN 24 WEEKS OF HIGH RESISTANCE EXERCISE\textsuperscript{1,2}

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Summary.—As aging advances, changes in mood and anxiety may imply greater risk of mood disorders, particularly anxiety and depression. Resistance exercise reduces anxiety and lessens risk of depression in the elderly, but little is known of the mechanisms involved. It was hypothesized that the human growth factor (IGF-1) may improve mood and anxiety in elderly participants given resistance training. 43 elderly men ages 65 to 75 years were randomly assigned to two groups, Control (n = 23) and high resistance Exercise (n = 20). After 24 wk., the Exercise group showed improved muscular strength and higher IGF-1 serum levels than the Control group, as indicated by mean scores on a visual analogue mood scale and the State-Trait Anxiety Inventory. Intensive resistance training was efficacious in improving mood, anxiety, and IGF-1 serum concentration in elderly individuals free of clinical mood disorders.

Elderly people tend to present with mood changes and are at greater risk of developing mood disorders and anxiety (van Gool, Kempen, Bosch, van Boxtel, Jolles, & van Eijk, 2007). Some 20% of the elderly population is affected by a mental health problem, dementia and depression being among the most prevalent (Abbott, White, Ross, Masaki, Curb, & Petrovitch, 2004). The U.S. National Comorbidity Survey Replication Sample (Kessler, Berglund, Demler, Jin, Koretz, Merikangas, et al., 2003) reported a 16% prevalence of depression in U.S. elderly men. Depression in this age group is often associated with cognitive and functional decline, lower quality of life, changes in body mass, negative attitudes, and low adherence to pharmaceutical interventions. Depression is more severe when associated with a sedentary lifestyle (van Gool, Kempen, Penninx, Deeg, Beekman, & van Eijk, 2003).

Researchers have found an inverse association between the engage-