Factors Associated With Poor Physical Function in Middle Aged Positive People

March 14, 2013

Impaired physical function in middle aged people living with HIV are associated with low levels of muscle mass, bone mineral density and insulin levels—the same factors typically linked to frailty in elderly people in the general population. Publishing their findings in the online edition of the Journal of Acquired Immune Deficiency Syndromes, researchers examined 30 “low-functioning” people with HIV and a control group of 48 high-functioning HIV-positive individuals matched for age, gender and length of time since diagnosis with the virus. The aim was to study the connection between body composition and functional impairment, about which there is little knowledge.

The cohort had a mean age of 53 years old and a mean CD4 level of 600; in addition, 96 percent of the participants had an undetectable viral load. All were taking antiretrovirals (ARVs). There was no major difference between the low- and high-functioning groups in their CD4 levels, the duration of their infection or the type of ARVs they took.

Lower T-scores at the hip increased the odds of low functioning by a factor of 3.8, and low T-scores in the lumbar spine did so by a factor of 2.3. Lower bone mineral density in the hip increased the odds of low functioning by a factor of 2.4, and such measurements in the lumbar spine did so by a factor of 2.1. Lower insulin-like growth hormone (IGF-1) increased the odds of low functioning five-fold, and IGF-1 binding protein 3 increased the odds 3.3-fold. Neither fat mass nor vitamin D levels increased the likelihood of low functional status. Those in the study with low physical function were 2.5 times more likely to have low levels of lean muscle mass than those in the high functioning group.

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