Author's response to reviews

Title: Development and validation of anthropometric equations to estimate appendicular muscle mass in elderly women.

Authors:

Piettra MG Pereira (piettra_galvao@hotmail.com)
Giselma A Silva (gisalcantara@gmail.com)
Santos M Gilberto Jr. (moreirasir@hotmail.com)
Édio L Petroski (petroski@cds.ufsc.br)
Amandio AR Geraldes (amandioargeraldes@gmail.com)

Version: 2 Date: 31 January 2013

Author's response to reviews:

The aging of the population in developed and developing countries is increasing worldwide, and will reach 2 billion people aged 60 years or older in 2050. This growing change in the demographic outlook implies the need to ensure the maintenance or improvement of the health condition of this population segment, so that health professionals are able to meet the specific needs of the older population.

With increasing age, body components undergo constant modifications, for example, increase and redistribution of body fat and decreased bone and muscle mass. In relation to the muscular component, the gradual and natural decline due to the aging process with consequent reduced strength is called Sarcopenia. Sarcopenia can greatly influence functional independence and mobility in older people.

Thus, sarcopenia has been considered an independent risk factor for the onset of functional impairments, physical disabilities, frailty, incidence of morbidities, decreased quality of life, social isolation and mortality from all causes. Thus, monitoring the skeletal muscle mass, especially the appendicular skeletal muscle mass, for being the largest portion of the muscle involved in ambulation and daily life activities, is necessary to develop strategies for maintaining health and functionality.

In this context, innocuous, affordable, operationally simple and accurate techniques to estimate the appendicular skeletal muscle mass in the elderly should be used in order to develop better and appropriate strategies for maintaining or improving the functional capacity of older adults due to its importance for their health and quality of life.

In this context, becomes necessary to verify the cross-validity of predictive equations used to estimate appendicular muscle mass and propose simple anthropometric equations for elderly women.