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LETTER TO THE EDITOR

COVID-19 QUARANTINE IN OLDER PEOPLE: THE NEED TO THINK ABOUT SARCOPENIA-RELATED PHENOTYPES

Dear Editor,

The coronavirus disease 2019 (COVID-19) has rapidly become the World Health Organization's leading priority and is imposing a wide range of public concerns (1). COVID-19 outbreak was recently declared a global pandemic that is substantially associated with hospitalization and mortality (2). Worldwide, quarantine and social distancing have been the first line measure to prevent the highly contagious virus from spreading further (3). Older age is the most important risk factor for COVID-19-related complications, with case-fatality rate ranging from 15 to 20% in octogenarians. Therefore, social distancing (and when possible isolation) has been specially emphasized in the older adults. While attempts to suppress human to human transmission are clearly warranted, prolonged home stay is expected to have adverse effects on other features of the individuals` health. For example, an abrupt reduction in physical activity patterns and increase in sedentary behaviors may lead to disuse-induced physical decline, which can be hazardous for older people who already present reduced functional reserve (4).

Sarcopenia has been introduced in the late 80s to describe the age-related decline in skeletal muscle mass, and the term has become widely used in geriatric and gerontological sciences. Sarcopenia prevalence and well documented association with adverse clinical outcomes (5) led to its recognition as a disease entity and institution of a particular ICD-10-CM code in 2016. The consistent body of evidence providing support for the concept that muscle strength and function are more clinically meaningful than is muscle mass per si, made worldwide known Sarcopenia working committees to incorporate strength and function measures into Sarcopenia phenotypes. Currently, Sarcopenia is defined by a progressive loss of skeletal muscle mass, strength and physical functioning, being associated with disability, poor quality of life and mortality (6, 7).

Recent reports strongly support that sedentary behavior is significantly associated to higher Sarcopenia rates (8). Home stay is usually associated with periods of muscle unloading, circumstance that lead to a rapid muscle atrophy and consequent decline in muscle strength. For an older individual who already have reduced muscle strength and function, even small reductions during periods of disuse may be enough to trigger the well-documented negative consequences of sarcopenia, namely an impaired functional capacity. It has been shown that even short-term periods of muscular disuse (<10 days) will lead to a reduction in muscle protein synthesis that translates into losses in fat-free mass, strength and physical function. Of note, this marked effect of muscular disuse alone on sarcopenia-related phenotypes may be even greater when combined with the psychological stress associated with COVID-19 quarantine.

Healthcare professionals must be aware of this potential effect of quarantine on skeletal muscle health. It is challenging, however, to deal with this scenario. Even though exercise and physical activity related societies have been recommending how to stay active during COVID-19 pandemic, specific guidelines for older individuals have been poorly addressed. Important questions should be considered in this regard: how to promote physical activity in persons 65 years and older during stay-at-home enforcements? How to deal with the wide heterogeneity of physical fitness among the older populations? Despite the answers for these and many necessary other questions, it is safe to say that broader policies for sarcopenia screening are warranted as soon as possible (4, 9). Moreover, it is crucial the implementation of dietary strategies, lifestyle changes and treatments that can restore muscle morphology and function (4). Recovery strategies should be initiated as early as possible given the fact that aged people exhibit lower ability to regain muscular loss following disuse. It is worth it to mention that resistance exercises effectiveness for muscle mass, strength, and function improvements in older people have been extensively recognized. Hence, resistance training should be an important component of needed public health promotion programs aiming to mitigate the effects of COVID-19 quarantine on skeletal muscle health.

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A. Bonadias Gadelha[1], R.M. Lima[2]
1. Department of Physical Education and Sports, Federal Institute of Education, Science and Technology Goiano, Urutaí, Goiás, Brazil; 2. University of Brasília, Brasília, Distrito Federal, Brazil

Corresponding Author: Ricardo M. Lima, College of Physical Education, University of Brasília, Asa Norte, Brasília/DF, Brazil, Zip code: 70910-900, Phone +55 61 981099444, ricardomoreno@unb.br

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