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**Last Word on Title Page**

**Title**

Last Word on Viewpoint – Rejuvenation of the term Sarcopenia

**Running head**

Last Word on Viewpoint – Rejuvenation of the term Sarcopenia

**Authors**

Jacob Bülow MD<sup>1</sup>, Stanley J. Ulijaszek PhD<sup>2</sup>, Lars Holm PhD<sup>3,4</sup>

**Author affiliations**

<sup>1</sup>Institute of Sports Medicine Copenhagen, Department of Orthopedic Surgery M, Bispebjerg Hospital, Copenhagen, Denmark

<sup>2</sup>Institute of Social and Cultural Anthropology, University of Oxford, United Kingdom

<sup>3</sup>Dept. of Biomedical Sciences, University of Copenhagen, Denmark

<sup>4</sup>School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, United Kingdom

**Corresponding Author**

Jacob Bülow

Mailing address:

Institute of Sports Medicine Copenhagen M81,

Bispebjerg Hospital (Building 8, level 1),

Nielsine Nielsens Vej 11

2400 Copenhagen NV

Denmark

Tel: +45 38 63 53 98

e-mail: jacob.bulow@live.dk

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## 48    **Last Word on Viewpoint – Rejuvenation of the term Sarcopenia**

49    We thank all the commentators for their very valued observations. One of the main purposes of our  
50    Viewpoint is to initiate debate concerning the phenomenon of Sarcopenia. About half of the commentators  
51    agree with our suggestion on returning to the original definition, but emphasizing the importance of  
52    acknowledging other important factors which contribute to impairment of muscle strength and function, and  
53    subsequently to impaired physical capabilities. In general, these commentators suggest that these factors be  
54    named and considered separately to loss of muscle mass. Conversely, the other half of commentators favor  
55    the clinical usefulness of the present definition of Sarcopenia and are comfortable with the multivalent nature  
56    of this definition.

57    We completely acknowledge the clinical relevance of decreased physical capability, with its consequences  
58    for the individual as well as for society. However, in our view, combining various phenomena into one  
59    definition without a clear idea of how to separate them makes it impossible to focus on single factors. For  
60    example, it is well known that disuse of the body in general by any cause results in a deterioration of almost  
61    every organ system in the body (1). If a “syndrome” or “disease” is defined by a decrease in physical  
62    function (for example measured by gait speed), it would not be possible to distinguish between cause and  
63    effect. This distinction is irrelevant if the treatment of the decline in physical function is the same, regardless.  
64    However, this is not the case for Sarcopenia. If declining muscle mass is not the cause of the loss of physical  
65    function, treatment focusing on increasing muscle size would be of no value if the purpose of the treatment  
66    were to restore physical function. One could object to this argument since the current primary treatment for  
67    Sarcopenia is either physical activity or resistance training. But physical activity and resistance training  
68    affects the organism as a whole, and it is impossible to conclude anything specific about *why* such treatment  
69    works.

70    Returning to the original definition of Sarcopenia would most likely require the invention of an umbrella-  
71    term that encapsulates all other phenomena and factors that contribute to age-related loss of muscle mass,  
72    strength and physical capabilities, as was suggested in the commentary by Musci and co-workers. Adoption  
73    of such an umbrella term would make space for the study of these individual phenomena and factors, and  
74    place them in relation to clinically relevant outcomes.

75    We therefore continue to argue that a return to the original definition of sarcopenia is in everybody’s interest.  
76    We completely agree with the concerns about further confusion regarding the term sarcopenia, but we are of  
77    the impression that such confusion would be only temporary, that both the scientific and clinical societies  
78    would adjust and take benefit from such change.

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80    1.     **Bortz W.** Disuse and Aging, 2009. *Journals Gerontol Ser A Biol Sci Med Sci* 65A: 382–385, 2010.

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