

<b>Paper Category:</b>	Prevention and Public Health
<b>Paper Title:</b> (Arial Font; 14 Pt Size)	<b>Population Specific Cut-offs for and Prevalence of Low Muscle Mass in South Asia: A Multicenter, Population-Based Study</b>
<b>Abstract Body:</b> (Arial Font; 12Pt Size)	<ul style="list-style-type: none"> <li>• Background</li> <li>• Objectives</li> <li>• Method</li> <li>• Results</li> <li>• Discussions and Conclusions</li> </ul>

(Maximum word limit - 300 words)

### **Background**

South Asians are known to have different body composition compared with other ethnic groups. However, gender-specific cut-offs for Low muscle mass (LMM) are not available for South Asian population, and prevalence and risk factors of LMM remain poorly understood.

### **Objectives**

This study aimed to fill these gaps, using a large, community-based sample of South Asian adults.

### **Method**

Data of 160,264 participants of South Asia Biobank study, aged 18 to 80 years, was analysed. Cut-off values for LMM, defined as appendicular muscle mass index (AMI) adjusted for height ( $AMI_{Height}$ ) and BMI ( $AMI_{BMI}$ ), measured by Bioelectrical Impedance Analysis (BIA), were derived using a value two standard deviations below the mean of the young healthy reference group (14677 males, 26240 females), as recommended by the Asian Working Group on Sarcopenia.

### **Results**

The cut-off values of  $AMI_{Height}$  were  $<7.0 \text{ kg/m}^2$  and  $<4.3 \text{ kg/m}^2$  for males and females, respectively, whereas the cut-off values of  $AMI_{BMI}$  were  $<0.74$  and  $<0.40$  for males and females, respectively. Using the  $AMI_{Height}$  cut-offs, the prevalence of LMM was 5.3%, 9.0%, 17% and 35.2 % in males and 1.3%, 2.2%, 4%, 7.7% in females, aged 41-50, 51-60, 61-70, and 71-80 years respectively, while using  $AMI_{BMI}$  cut-offs yielded a prevalence of 5.7%, 8.1%, 10.6% and 16.1% in males and 1.7%, 2.6%, 3.7% and 5.5 % in females, of the same age groups, respectively. BMI was the strongest predictor, with opposite direction of association for  $AMI_{Height}$  versus  $AMI_{BMI}$  defined LMM. Being physically active was associated with lower odds of LMM.

### **Discussion and conclusions**

The LMM cut-offs, derived in our study, for South Asians, especially females, are lower as compared to other populations. Being the first and largest population-based study of its kind in the region, the results of this study will pave the way for future research in South Asia.

Date of Submission: 15<sup>th</sup> August, 2023

Total number of words: 298

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