

Body mass index and body composition in institutionalized older adults with malnutrition, sarcopenia and frailty

M Marques^{1,2}, A Faria³, M Cebola^{2,4}

¹Santa Casa da Misericórdia de Alvaiázere, Portugal

²Faculdade de Medicina da Universidade de Lisboa, Portugal

³ESTeSC - Coimbra Health School, Instituto Politécnico de Coimbra, Portugal

⁴H&TRC - Centro de Investigação em Saúde e Tecnologia, Escola Superior Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, Portugal

Introduction:

Malnutrition, sarcopenia and frailty are multifactorial and highly prevalent conditions among institutionalized older adults

Objectives:

The aim of this study was to assess body mass index and body composition in older adults, according to the diagnosis of malnutrition, sarcopenia and frailty

Methods:

Institutionalized older adults with 60 or more years old were included. Nutritional status (Mini Nutritional Assessment), sarcopenia (European Working Group Sarcopenia in Older People criteria) and frailty (Fried Phenotype) were assessed. Body composition was assessed through bioelectrical impedance

Results:

One-hundred and forty-six individuals, with a mean age of 83 years old and mainly females (63.3%) were included. Malnutrition was diagnosed in 26.2%, sarcopenia in 25.0% and frailty in 61.0%. Mean Body Mass Index (BMI) was 20.7, 25.8 and 26.6 kg/m² in malnourished, at risk and well-nourished individuals, respectively ($p=0.000$); 21.6 and 26.8 kg/m² in sarcopenic and non-sarcopenic individuals ($p=0.000$); and 24.3 and 27.7 kg/m² in fragile and robust individuals ($p=0.000$). Mean Fat Mass Index was 9.6 and 13.3 kg/m² in sarcopenic and non-sarcopenic individuals ($p=0.007$); and 10.3 and 16.0 kg/m² in fragile and robust individuals ($p=0.000$). Mean Free Fat Mass Index was 12.5, 14.9 and 17.0 kg/m² in malnourished, at risk and well-nourished individuals; 12.0 and 17.0 kg/m² in sarcopenic and non-sarcopenic individuals ($p=0.000$); and 14.7 and 17.1 kg/m² in fragile and robust individuals ($p=0.002$)

Conclusions:

BMI, free fat mass and fat mass were significantly lower in older adults with malnutrition, sarcopenia and frailty. BMI is a practical nutritional status marker, however it needs to be interpreted cautiously in older adults, as it seems that a lower value is associated with a worse prognosis and existing cutoffs may not apply. Nutritional screening and assessment of older adults is essential for a prompt intervention, in order to prevent and reverse these conditions