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*Ann Geriatr Med Res.* 2022 Mar;26(1):49-57. doi: 10.4235/agmr.22.0012. Epub 2022 Mar 25.

## What is the Optimal Body Mass Index Range for Older Adults?

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PMID: 35368193 PMID: [PMC8984168](#) DOI: [10.4235/agmr.22.0012](#)

### Abstract

**Background:** Obesity is pathophysiologically complex in older adults compared to that in young and middle-aged adults. The aim of the present study was to determine the appropriate body mass index (BMI) range based on geriatric evaluation parameters in which complications can be minimized in older adults.

**Methods:** A total of 1,051 older adult patients who underwent comprehensive geriatric assessment were included. The patients' demographic characteristics, comorbid diseases, number of drugs, BMI, basic and instrumental activities of daily living (BADL and IADL), Tinetti balance and walking scale, Mini Nutritional Assessment, Geriatric Depression Scale-15, Mini-Mental State Examination, Time Up and Go test, and handgrip strength measurement were extracted from patient records.

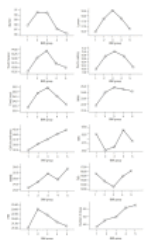
**Results:** Of the patients who took part, 73% were female, and the mean age was  $77.22 \pm 7.10$  years. The most negative results were observed in those with a BMI  $\leq 25$  kg/m<sup>2</sup> and in those with a BMI  $\geq 35$  kg/m<sup>2</sup>. Receiver operating characteristic (ROC) analysis of the optimum BMI cutoff levels to detect the desirable values of geriatric assessment parameters was found to be 31-32 and 27-28 kg/m<sup>2</sup> for female and male, respectively.

**Conclusion:** Older adults with BMI  $\leq 25$  and  $\geq 35$  kg/m<sup>2</sup> were at a higher risk of a decrease in functional capacity, and experienced gait and balance problems, fall risk, decrease in muscle strength, and malnutrition. Data from this study suggest that the optimum range of BMI levels for older adults is 31-32 and 27-28 kg/m<sup>2</sup> for female and male, respectively.

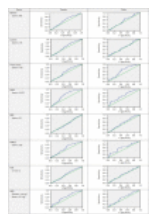
**Keywords:** Aged; Body mass index; Geriatric assessment; Obesity.

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### Figures



**Fig. 1.** Evaluation of the relationship between...



**Fig. 2.** ROC analysis of BMI cutoff...

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