

Optimal BMI cut-off values for predicting diabetes, hypertension and hypercholesterolaemia in a multi-ethnic population.

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Source

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Abstract

OBJECTIVE:

To determine the optimal cut-offs of BMI for Malaysian adults.

DESIGN:

Population-based, cross-sectional study. Receiver operating characteristic curves were used to determine the cut-off values of BMI with optimum sensitivity and specificity for the detection of three cardiovascular risk factors: diabetes mellitus, hypertension and hypercholesterolaemia. Gender-specific logistic regression analyses were used to examine the association between BMI and these cardiovascular risk factors.

SETTING:

All fourteen states in Malaysia.

SUBJECTS:

Malaysian adults aged ≥ 18 years (n 32 703) who participated in the Third National Health and Morbidity Survey in 2006.

RESULTS:

The optimal BMI cut-off value for predicting the presence of diabetes mellitus, hypertension, hypercholesterolaemia or at least one of these cardiovascular risk factors varied from 23.3 to 24.1 kg/m² for men and from 24.0 to 25.4 kg/m² for women. In men and women, the odds ratio for having diabetes mellitus, hypertension, hypercholesterolaemia or at least one cardiovascular risk factor increased significantly as BMI cut-off point increased.

CONCLUSIONS:

Our findings indicate that BMI cut-offs of 23.0 kg/m² in men and 24.0 kg/m² in women are appropriate for classification of overweight. We suggest that these cut-offs can be used by health professionals to identify individuals for cardiovascular risk screening and weight management programmes.

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