Adult—body mass index (self-reported), ratio NN[N].N[N]

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Identifying and definitional attributes

Metadata item type:	Data Element
Short name:	Body mass index—adult (self-reported)
METEOR identifier:	270086
Registration status:	Health, Standard 01/03/2005 National Health Performance Authority (retired), Retired 01/07/2016
Definition:	A measure of an adult's weight (body mass) relative to height used to assess the extent of weight deficit or excess where at least one of the measures is self reported.
Data Element Concept:	Adult—body mass index
Value Domain:	Ratio NN[N].N[N]

Value domain attributes

Representational attributes

Representation class:	Ratio	
Data type:	Number	
Format:	NN[N].N[N]	
Maximum character length:	5	
	Value	**Meaning**
Supplementary values:	888.8	Unknown
	999.9	Not reported

Data element attributes

Collection and usage attributes

Collection methods:	NN.N for BMI calculated from either self-reported height and/or self-reported weight. BMI calculated from measured height and weight should be distinguished from BMI calculated from self-reported height and/or weight. When either self-reported height or self-reported weight is used in the calculation, BMI should be recorded as self-reported BMI. Self-reported or parentally reported height and weight for children and adolescents should be used cautiously if at all. BMI should be derived after the data entry of weight and height. It should be stored on the raw data set as a continuous variable and should not be aggregated or rounded.
Comments:	This metadata item applies to persons aged 2 years or older. It is recommended for use in population surveys and health care settings for adults and population surveys only for children and adolescents. It is recommended that calculated BMI for children and adolescents be compared with a suitable growth reference such as the United States Centers for Disease Control 2000 BMI- for-age chart be used for in health care settings such as hospitals, clinics and in general practice. A BMI greater than the 85th percentile would be classified as overweight, while a BMI greater than the 95th percentile would be classified as obese. These percentiles

are arbitrary and do not relate to morbidity as the BMI cut-points do in adults.

BMI is relatively easy to determine, and has been validated against more direct measures of adiposity such as Magnetic Resonance Imaging and Dual X-ray Absorptiometry.

BMI is a low cost technique, with low respondent and investigator burden. In addition, it offers low inter-observer and intra-observer error, therefore offering good reliability.

Overweight and obesity, as defined by the World Health Organisation (WHO) for the interpretation of BMI (WHO 2000), are exceedingly common in Australia and their prevalence is increasing.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health metadata items currently exist for sex, date of birth, country of birth, Indigenous status and smoking. Metadata items are being developed for physical activity.

Presentation of data:

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

Body mass index can be calculated from measured height and weight, or self-reported height and weight, however for children and adolescents, self-reported or parentally reported data should be used cautiously if at all.

For adults, body mass index tends to be underestimated when based on self-reported, rather than measured, height and weight. This is due to the fact that, on average, height tends to be overestimated and weight tends to be underestimated when self-reported by respondents.

There are many individuals for whom BMI is an inappropriate measure of body fatness. These are individuals whose high body mass is due to excess muscle rather than fat (e.g. body builders or others in whom the level of physical activity promotes an increase in muscle mass); or in those with osteoporosis who will have a lower than usual BMI; or those who have a different body build (e.g. individuals with unusually long or short legs or a different body fat distribution) (WHO Expert Committee 1995).

This is particularly important when assessing individuals but should also be taken into account in interpreting data from populations in which there are sub-groups with genetic or environmental differences in body build, composition, skeletal proportions or body fat distribution. As such, both BMI and a measure of fat distribution (waist circumference or waist: hip ratio) are important in calculating the risk of obesity comorbidities.

Epidemiological research shows that there is a strong association between BMI and health risk. Excess adipose tissue in adults is associated with excess morbidity and mortality from conditions such as hypertension, unfavourable blood lipid concentrations, diabetes mellitus, coronary heart disease, some cancers, gall bladder disease, and osteoarthritis. It may also lead to social and economic disadvantage as well as psychosocial problems. It is a major public health issue in most industrialised societies.

Thinness (low BMI) is also an indicator of health risk, often being associated with general illness, anorexia, cigarette smoking, drug addiction and alcoholism. Low BMI is consistently associated with increased risk of osteoporosis and fractures in the elderly.

Source and reference attributes

Submitting organisation: The Commonwealth Department of Health and Ageing based on the work of the consortium to develop an Australian standard definition of child/adolescent overweight and obesity; based at the Children Hospital at Westmead.

Origin: Obesity: Preventing and Managing the Global Epidemic. Report of a WHO Consultation. 2000. World Health Organization.

Relational attributes

Related metadata references:

Is formed using Person—height (measured), total centimetres NN[N].N
Health, Standard 01/03/2005
Tasmanian Health, Standard 15/11/2023

Is formed using Person—height (self-reported), total centimetres NN[N]
Health, Standard 01/03/2005
Tasmanian Health, Standard 20/12/2016

Is formed using Person—weight (measured), total kilograms N[NN].N
Health, Superseded 12/12/2018

Is formed using Person—weight (self-reported), total kilograms NN[N]
Health, Standard 14/07/2005
Tasmanian Health, Standard 20/12/2016

Is re-engineered from Body mass index, version 2, Derived DE, NHDD, NHIMG, Superseded 01/03/2005.pdf (25.7 KB)
No registration status

See also Person—body mass index (classification), code N[.N]
Health, Standard 01/03/2005
Indigenous, Standard 13/03/2015

Implementation in Indicators:

Used as Numerator
National Health Performance Authority, Healthy Communities: Percentage of adults who are overweight or obese, 2011–12
National Health Performance Authority (retired), Retired 01/07/2016