Waist circumference risk indicator - adults

Important note: This is an archived metadata standard from the AIHW Knowledgebase. For current metadata standards and related information please access METeOR, the AIHW's Metadata Online Registry at http://meteor.aihw.gov.au

Identifying and Definitional Attributes

Data Dictionary:	NHDD		
Knowledgebase ID:	000851	Version number:	1
Metadata type:	DERIVED DATA ELEMENT		
Registration Authority:	NHIMG	Admin status:	SUPERSEDED
		Effective date:	01-MAR-05

Definition: The sex specific category of risk of metabolic complications associated with excess abdominal adiposity in Caucasians.

Context: Public health and health care:
Sex specific waist circumference risk indicator is used as an indicator of risk of metabolic complications associated with overweight and obesity including dyslipidaemia, glucose intolerance and hypertension. On a population basis there is a strong association between abdominal obesity and health risk.
Body fat distribution has emerged as an important predictor of obesity-related morbidity and mortality. Abdominal obesity, which is more common in men than women, has, in epidemiological studies, been closely associated with conditions such as coronary heart disease, stroke, non-insulin dependent diabetes mellitus and high blood pressure.
Waist circumference as an indicator of risk can be used:
- to indicate the prevalence of abdominal obesity and its sociodemographic distribution (problem identification);
- to evaluate health promotion and disease prevention programs (assessment of interventions);
- to monitor progress towards National public health policy;
- to ascertain determinants and consequences of abdominal obesity; and
- in nutrition and physical activity surveillance and long-term planning.

Waist circumference is a convenient and simple measurement that is unrelated to height, correlates closely with BMI and WHR and is an approximate index of intra-abdominal fat mass and total body fat.
Changes in waist circumference can reflect changes in risk factors for cardiovascular disease and other forms of chronic disease, even though the risks seem to vary in different populations.
Waist circumference as an indicator of overweight and obesity was

used in the International Diabetes Institute's Australian Diabetes, Obesity and Lifestyle study (AusDiab) in 1999 / 2000.

Relational and Representational Attributes

Datatype: Numeric

Representational form: CODE

Representation layout: N

Minimum Size: 1

Maximum Size: 1

Data Domain:

1	Not at risk (male waist circumference < 94 cm, female waist circumference < 80 cm)
2	Increased (male waist circumference >= 94 cm, female waist circumference >= 80 cm)
3	Substantially increased (male waist circumference >= 102 cm, female waist circumference >= 88 cm)
9	Not stated / inadequately described

Guide For Use: Waist circumference risk indicator - adults cannot be determined if Waist circumference measured has not been collected (i.e. is coded to 999.9) and / or sex is not stated (ie coded to 9).

Collection Methods: Waist circumference risk indicator should be derived after the data entry of waist circumference measured. It should be stored on the raw data set as a continuous variable and should not be aggregated or rounded.

Related metadata: is used in conjunction with Waist circumference - measured version 2
is used in conjunction with Sex version 3

Administrative Attributes

Source Document: Obesity: Preventing and Managing the Global Epidemic: Report of a WHO Expert Committee. Geneva: WHO, 2000 as described by Han TS et al (1995).

Source Organisation: World Health Organization

Comments: This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.
Recent evidence suggests that waist circumference may provide a more practical correlate of abdominal fat distribution and associated ill health.
The identification of risk using waist circumference is population-

specific and will depend on levels of obesity and other risk factors for cardiovascular disease and non-insulin dependant diabetes mellitus.

Populations differ in the level of risk associated with a particular waist circumference, so that globally applicable cut-off points cannot be developed. For example, complications associated with abdominal fat in black women and those of South Asian descent are markedly higher for a given level of BMI than in Europeans. Also, although women have almost the same absolute risk of coronary heart disease as men at the same Waist to hip ratio, they show increases in relative risk of coronary heart disease at lower waist circumferences than men. Thus, there is a need to develop sex-specific waist circumference cut-off points appropriate for different populations. Hence, the cut-off points used for this element are associated with obesity in Caucasians. This issue is being investigated further.

Cut-off points for children and adolescents are also being developed. Research shows that a high childhood BMI and high trunk skin fold values are predictive of abdominal obesity as an adult and waist circumference measures in childhood track well into adulthood.

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 data elements currently exist for Sex, Date of birth, Country of birth and Indigenous status and smoking. Data elements are being developed for physical activity.

Data Element Links

Information Model Entities linked to this Data Element

NHIM	Surveillance / monitoring event

Data Agreements which include this Data Element