Person—hip circumference (measured), total centimetres NN[N].N

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Person—hip circumference (measured), total centimetres NN[N].N

Identifying and definitional attributes

Metadata item type:	Data Element
Short name:	Hip circumference (measured)
METEOR identifier:	270366
Registration status:	Health!, Standard 01/03/2005
Definition:	An adult's hip circumference at the level of maximum posterior extension of the buttocks measured in centimetres.

Data element concept attributes

Identifying and definitional attributes

Data element concept:	Person—hip circumference
METEOR identifier:	269796
Registration status:	Health!, Standard 01/03/2005
Definition:	A person's hip circumference measured at the level of maximum posterior extension of the buttocks. In order to ensure consistency in measurement, the measurement protocol described under Data Collection Methods should be used.
Context:	Public health and health care
Object class:	Person
Property:	Hip circumference

Value domain attributes

Identifying and definitional attributes

Value domain:	Total centimetres NN[N].N
METEOR identifier:	270714
Registration status:	Health!, Standard 01/03/2005 Tasmanian Health, Standard 20/12/2016
Definition:	Total number of centimetres.

Representational attributes

Representation class:	Total	
Data type:	Number	
Format:	NN[N].N	
Maximum character length:	4	
	Value	**Meaning**
Supplementary values:	999.9	Not measured
Unit of measure:	Centimetre (cm)	

Data element attributes

Collection and usage attributes

Guide for use: As there are no cut-off points for waist-to-hip ratio for children and adolescents, it is not necessary to collect this metadata item for those aged under 18 years.

Collection methods:

The measurement protocol described below is that recommended by the *World Health Organization (WHO Expert Committee 1995).*

Measurement protocol:

The data collection form should allow for up to three measurements of hip circumference to be recorded in centimetres to 1 decimal place. The data collection form should also have the capacity to record any reasons for the non-collection of hip circumference data.

The measurement of hip circumference requires a narrow (< 7 mm wide), flexible, inelastic tape measure. The kind of tape used should be described and reported. The graduations on the tape measure should be at 0.1 cm intervals and the tape should have the capacity to measure up to 200 cm. Measurement intervals and labels should be clearly readable under all conditions of use of the tape measure.

The subject should wear only non-restrictive briefs or underwear, a light smock over underwear or light clothing. Belts and heavy outer clothing should be removed. Hip measurement should be taken over one layer of light clothing only.

The subject stands erect with arms at the sides, feet together and the gluteal muscles relaxed. The measurer sits at the side of the subject so that the level of maximum posterior extension of the buttocks can be seen. An inelastic tape is placed around the buttocks in a horizontal plane. To ensure contiguity of the two parts of the tape from which the circumference is to be determined, the cross-handed technique of measurement, as described by Norton et al. (1996), should be used. Ideally an assistant will check the position of the tape on the opposite side of the subject's body. The tape is in contact with the skin but does not compress the soft tissues. Fatty aprons should be excluded from the hip circumference measurement.

The measurement is recorded to the nearest 0.1 cm. Take a repeat measurement and record it to the nearest 0.1 cm. If the two measurements disagree by more than 1 cm, then take a third measurement.

All raw measurements should be recorded on the data collection form. If practical, it is preferable to enter the raw data into the database as this enables intra-observer and, where relevant, inter-observer errors to be assessed. The subject's measured hip circumference is subsequently calculated as the mean of the two observations, or the mean of the two closest measurements if a third is taken, and recorded on the form. If only a mean value is entered into the database then the data collection forms should be retained.

It may be necessary to round the mean value to the nearest 0.1 cm. If so, rounding should be to the nearest even digit to reduce systematic over reporting. For example, a mean value of 102.25 cm would be rounded to 102.2 cm, while a mean value of 102.35 cm would be rounded to 102.4 cm.

Validation and quality control measures:

Steel tapes should be checked against a 1-metre engineer's rule every 12 months. If tapes other than steel are used they should be checked daily against a steel rule.

Within- and, if relevant, between-observer variability should be reported. They can be assessed by the same (within-) or different (between-) observers repeating the measurement, on the same subjects, under standard conditions after a short time interval. The standard deviation of replicate measurements (technical error of measurement (Pederson & Gore 1996)) between observers should not exceed 2% and be less than 1.5% within observers.

Extreme values at the lower and upper end of the distribution of measured hip circumference should be checked both during data collection and after data entry. Individuals should not be excluded on the basis of true biological difference.

Last digit preference, and preference or avoidance of certain values, should be analysed in the total sample and (if relevant) by observer, survey site and over time if the survey period is long.

Comments:

This metadata item applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

Its main use is to enable the calculation of adult waist-to-hip ratio which requires the measurement of hip circumference and waist circumference.

More recently it has emerged that waist circumference alone, or in combination with other metabolic measures, is a better indicator of risk and reduces the errors in waist-to-hip ratio measurements.

Waist-to-hip ratio is therefore no longer a commonly used measure.

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.

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. However 5-year age groups are not generally suitable for children and adolescents. 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.

For some reporting purposes, it may be desirable to present hip circumference data in categories. It is recommended that 5 cm groupings be used for this purpose. Hip circumference data should not be rounded before categorisation.

Relational attributes

Related metadata references:

Is used in the formation of Adult—waist-to-hip ratio, N.NN
Health!, Standard 01/03/2005

Is re-engineered from Hip circumference - measured, version 2, DE, NHDD, NHIMG, Superseded 01/03/2005.pdf (23.1 KB)
No registration status