

# In the consultation room

## Waist and BMI in ethnic minorities

Jill Hill

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### About this series

The aim of the “In the consultation room” series is to provide readers with brief, practical reviews of key aspects of diabetes care that should be covered in the clinic setting. A brief set of questions at the end allows readers to test their knowledge.

### Author’s introduction

For those of you who had been looking forward to specific guidelines for cut-off points for BMI and waist measurements for South Asian and other minority ethnic groups from NICE, the recently published public health guidance (PH46; NICE, 2013) on this area may be a disappointment. Increased BMI and waist circumference is associated with a corresponding increased risk of developing cardiovascular disease and type 2 diabetes. The equivalent risk of developing these conditions, however, occurs at lower cut-off points in certain populations. Who are these populations? Who needs to know about identifying them? Are we recording ethnicity and BMI? What action should we take with people in these categories? The following article considers the practical implications of the NICE guideline.

There is an associated increased risk of a number of long-term conditions such as type 2 diabetes, myocardial infarction and stroke as BMI and waist circumference increases. Since the World Health Organization (2004) published cut-off points for BMI for the white European population in 2004 and identified that these may not be appropriate for the South Asian population, it has been recognised that some groups have equivalent risk of developing cardiovascular disease and type 2 diabetes to Europeans at a lower BMI. As the 2011 census showed that 14% of the UK population were classified as black, Asian or from another minority ethnic group, recognising who these vulnerable populations are is important for organising health services (Office for National Statistics, 2011).

### What are the cut-off points for BMI and waist circumference?

Unfortunately, the evidence to give specific cut-off points for BMI and waist circumference for individual ethnic minority groups is still not available. NICE therefore recommends that the BMI cut-off point of 23 kg/m<sup>2</sup> used for South Asian and Chinese populations recommended in the NICE public health guidance *Preventing type 2 diabetes – risk identification and intervention for individuals*

at high risk (PH38; NICE, 2012) should be extended to all high-risk ethnic minority groups.

### Who are the high risk ethnic minority groups?

The NICE guidance PH46 defines the populations which need to be identified as at high risk as immigrants or descendants from the following groups:

- South Asian (Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka).
- African-Caribbean.
- Black African.
- Chinese, Taiwan, Singapore, Hong Kong.
- Middle Eastern (Egypt, Iran, Iraq, Lebanon, Syria, Yemen, United Arab Emirates, Qatar, Jordan, Kuwait and Oman).

### Assessment and action

Healthcare professionals need to be aware of the disproportionate risk of disease in these populations when assessing weight. Ethnicity and BMI should be recorded and trigger action at lower cut-off points than those used for white Europeans.

PH38 guidance recommends a staged approach to identifying people at risk starting with the use of a validated risk-assessment tool or self-assessment questionnaire. This should

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be offered to people from high-risk ethnic minority groups who are aged 25–39 years, rather than 40 years or older as recommended in white European groups. However, if they have a BMI of greater than 23 kg/m<sup>2</sup>, there is no need for this first stage: they should have either a fasting plasma blood glucose or HbA<sub>1c</sub>.

An HbA<sub>1c</sub> of less than 42 mmol/mol (6.0%) or fasting plasma glucose of less than 5.5 mmol/L is classified as moderate risk. Such people should be given brief lifestyle advice and have their risk assessed every 3 years.

An HbA<sub>1c</sub> of between 42 and 47 mmol/mol (6.0% and 6.5%) or fasting plasma glucose between 5.5 and 6.9 mmol/L is classified as high risk of developing diabetes. The BMI

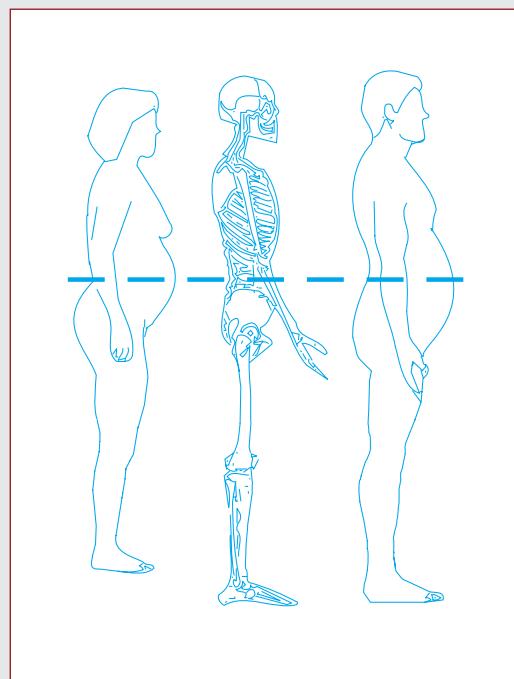


Figure 1. Measuring-tape position for waist circumference in adults (source: National Heart, Lung, and Blood Institute; National Institutes of Health; US Department of Health and Human Services [reproduced with permission]). To measure waist circumference, locate the upper hip bone and the top of the right iliac crest. Place a measuring tape in a horizontal plane around the abdomen at the level of the iliac crest. Before reading the tape measure, ensure that the tape is snug, but does not compress the skin, and is parallel to the floor. The measurement is made at the end of a normal expiration.

and HbA<sub>1c</sub> of these individuals should be checked annually and they should be offered quality-assured, evidence-based, intensive lifestyle education and support to delay or even prevent the development of type 2 diabetes.

### Who needs to know?

Raising awareness of the need for lifestyle interventions at a lower BMI in these populations needs to be done sensitively so that people do not feel stigmatised or feel they are being classified as overweight or obese at a lower BMI than someone from the white European population. Ideally, a population approach to communicating awareness of increased risk and availability of local obesity prevention initiatives should be achieved through local networks, culturally specific media and traditional sources of information such as mosques and other places of worship. ■

### Author's conclusion

Although there are still no clear cut-off points from NICE for BMI and waist circumference in South Asian, black and ethnic minority groups, there is clear evidence that these populations are at equivalent risk of CVD and diabetes at lower BMI levels than white European populations. They should therefore be identified, made aware of their risk in a sensitive way, and offered culturally-appropriate health promotion advice and support at lower BMI levels than white Europeans.

NICE (2012) *Preventing type 2 diabetes – risk identification and interventions for individuals at high risk* (PH38). NICE, London. Available at: [www.nice.org.uk/PH38](http://www.nice.org.uk/PH38) (accessed 01.10.13)

NICE (2013) *Assessing body mass index and waist circumference thresholds for intervening to prevent ill health and premature death among adults from black, Asian and other minority ethnic groups in the UK* (PH46). NICE, London. Available at: [www.nice.org.uk/PH46](http://www.nice.org.uk/PH46) (accessed 01.10.13)

Office for National Statistics (2011) *Statistical bulletin: population estimates by ethnic group 2002-2009*. ONS, London

World Health Organization (2004) Appropriate body mass index for the Asian population and its implications for policy and intervention strategies. *Lancet* **363**: 157–63

### Questions to test your knowledge

The answers are not necessarily found in this article.

1. NICE PH46 recommends a waist circumference cut-off of 90 cm for South Asian men and 80 cm for South Asian women.  
True or false?
2. Compared with white Europeans, South Asian people living in England have a higher percentage of body fat at a given BMI.  
True or false?
3. Excess body fat contributes 58% of type 2 diabetes, 21% of heart disease and 8–42% of certain cancers.  
True or false?
4. All ethnic minority groups should be offered an annual blood glucose test to screen for diabetes once they reach the age of 40 years.  
True or false?
5. People with an HbA<sub>1c</sub> of between 42 and 47 mmol/mol (6.0% and 6.5%) should be offered brief lifestyle advice and a repeat blood test every 3 years.  
True or false?

Answers: 1 – false; 2 – true; 3 – true; 4 – false; 5 – false.