1 Guidance title

Assessing body mass index and waist circumference thresholds for intervening to prevent cardiovascular disease, type 2 diabetes and hypertension among adults from black and minority ethnic groups in the UK

1.1 Short title

Body mass index and waist circumference thresholds for intervening to prevent ill health among black and minority ethnic groups

2 Background

a) The National Institute for Health and Clinical Excellence (NICE) has been asked by the Department of Health (DH) to assess the body mass index (BMI) and waist circumference thresholds for intervening to prevent ill health among adults from black and minority ethnic groups in the UK.

b) This guidance will support a number of related policy documents including:

- ‘Change4Life’ (DH 2010a)
- ‘Equity and excellence: liberating the NHS’ (DH 2010b)
- ‘Healthy lives, healthy people: a call to action on obesity in England’ (DH 2011)
- ‘Healthy lives, healthy people: our strategy for public health in England’ (DH 2010c)
• ‘Six years on: delivering the diabetes national service framework’ (DH 2010d).

c) This guidance will provide recommendations for good practice based on the best available evidence. It is aimed at commissioners, managers and practitioners with public health as part of their remit working within the NHS, local authorities and the wider public, private, voluntary and community sectors. It may also be of interest to people from black and minority ethnic groups and other members of the public.

This guidance will be developed using the NICE public health intervention process.
3 The need for guidance

a) Excess body weight may be assessed using body mass index (BMI) (defined as weight in kilograms divided by the square of height in metres) and a ‘raised’ waist circumference. Adults with a BMI of 30 kg/m² or more are described as obese and those with a BMI from 25 to 30 kg/m² as overweight. A ‘raised’ waist circumference is defined as above 102 cm for men and above 88 cm for women. These cut-off points correspond to the risk threshold for a range of chronic diseases and mortality among Europeans (World Health Organization 1998). However, they do not account for the wide variation in body fat distribution – and may not correspond to the same degree of associated health risk – for different populations (World Health Organization 2000). A recent report stresses, ‘there is no straightforward relationship between obesity and ethnicity, with a complex interplay of factors affecting health in minority ethnic communities in the UK’. It adds that the validity of using current definitions of obesity for non-white ethnic groups is debatable (National Obesity Observatory 2011).

b) Between 2005 and 2008, 9.3% of all babies born in the UK were of Asian descent (defined as ‘Bangladeshi, Indian, Pakistani and any other Asian background’) and 5.3% were of black descent (defined as ‘African, Caribbean and any other black background’) (Office for National Statistics 2011a). According to mid-2009 population estimates, 6.62 million people in the UK belong to a black or minority ethnic group, representing 12.1% of the total population. Indians were the largest minority ethnic group, followed by people of Pakistani descent, those of mixed ethnic background and people of, black African, black Caribbean and Chinese descent (Office for National Statistics 2011b). Nearly half (48%) of the total black and minority ethnic population now live in the London region, where they comprise 29% of all residents (White 2002).
c) Excess body fat contributes to around 58% of cases of type 2 diabetes, 21% of heart disease, and between 8% and 42% of certain cancers (breast, colon and endometrial) (DH 2007). However, the point at which the level of body fat becomes risky to health varies between ethnic groups. Compared to Europeans, people of South Asian descent (defined as people of Pakistani, Bangladeshi and Indian origin) living in England tend to have a higher percentage of body fat at a given BMI. They also tend to have more features of the metabolic syndrome (for example, higher triglycerides and lower high-density lipoproteins in females and higher serum glucose in males) at a given waist circumference (NICE obesity guidance). While the prevalence of obesity tends to be no higher among South Asian groups in the UK, rates of myocardial infarctions are higher at an earlier age. In addition, the prevalence of diabetes is up to six times higher, tends to develop at a younger age and disease progression is faster (Khunti et al. 2009). People of Chinese and black descent are more at risk of stroke (National Obesity Observatory 2011).

d) In the UK, type 2 diabetes is more prevalent among Black Caribbean, Indian, Pakistani and Bangladeshi men aged 35–54 than the general population. With the exception of black African men, it is also more prevalent among those aged 55 and over from these groups. Among women, type 2 diabetes is more common among Indian, Pakistani and Bangladeshi groups (aged 35 and over) and black Caribbean women (aged 55 and over) (NHS Information Centre 2005). They also tend to progress from impaired glucose tolerance (IGT) to diabetes much more quickly than average (more than twice the rate of white populations) (Ramachandran et al. 2006).

e) In response to a World Health Organization report (2004), the NHS Health Checks programme uses a BMI of 27.5 kg/m² as the trigger for preventive action among people of South Asian origin. Neither
the World Health Organization paper (2004) or the NICE obesity guidance considered there to be sufficient evidence to set separate cut-off points for the waist circumference of people of South Asian origin. However, a lower cut-off point for BMI and waist circumference has subsequently been proposed in the International Diabetes Federation statement on type 2 diabetes prevention (Alberti et al. 2007). It is worth noting that one BMI and waist circumference cut-off point may not be appropriate for all black and minority ethnic groups.

4 The guidance

Public health guidance will be developed according to NICE processes and methods. For details see section 5.

This document defines exactly what this guidance will (and will not) examine, and what the guidance developers will consider. The scope is based on a referral from the DH (see appendix A).

4.1 Who is the focus?

4.1.1 Groups that will be covered

Adults aged 18 years and over from black and minority ethnic groups living in the UK.

4.1.2 Groups that will not be covered

Under-18s and pregnant women from black and minority ethnic groups and the general population living in the UK.

4.2 Activities

4.2.1 Activities/measures that will be covered

Assessment of body mass index (BMI) and waist circumference cut-off points for the risk of health problems among adults from black and minority ethnic groups in the UK. These may be calculated by using large-scale epidemiological studies to assess the risk of mortality generally and relevant
health conditions linked to obesity. Examples include: cardiovascular disease, hyperlipidaemia, hypertension and type 2 diabetes.

4.2.2 *Activities/measures that will not be covered*

Prevention or management of obesity and related conditions among adults from black and minority ethnic groups.

4.3 *Key questions and outcomes*

Below are the overarching questions that will be addressed, along with some of the outcomes that would be considered as evidence of effectiveness:

**Questions:**

1. What are the most appropriate body mass index (BMI) cut-off points to indicate that adults from different black and minority ethnic groups living in the UK are overweight or obese and in need of public health or clinical action (for example, pharmacotherapy or bariatric surgery)?

2. What are the most appropriate cut-off points to define a high waist circumference among adults from different black and minority ethnic groups living in the UK and the need for public health or clinical action (for example, pharmacotherapy or bariatric surgery)?

3. How effective is it to use BMI and waist circumference to assess the risk of, for example, cardiovascular disease, hyperlipidaemia, hypertension and type 2 diabetes among adults from black and minority ethnic groups living in the UK?

**Expected outcomes:**

Anthropometric measures such as BMI or waist circumference and the associated risk of mortality, cardiovascular disease, hyperlipidaemia, hypertension and type 2 diabetes.
4.4 **Status of this document**

This is the draft scope, released for consultation on 23 January 2012 until 20 February 2012. Following consultation, the final version of the scope will be available at the NICE website in April 2012.

5 **Further information**

The public health guidance development process and methods are described in ‘The NICE public health guidance development process: An overview for stakeholders including public health practitioners, policy makers and the public (second edition, 2009)’ and ‘Methods for development of NICE public health guidance (second edition, 2009)’.

6 **Related NICE guidance**

**Published**


*Weight management before, during and after pregnancy*. NICE public health guidance 27 (2010).


**Under development**

Preventing type 2 diabetes: risk identification and interventions for individuals at high risk. NICE public health guidance (publication expected May 2012).

Overweight and obese adults: lifestyle weight management services. NICE public health guidance (publication expected October 2013).
Appendix A Referral from the Department of Health

The Department of Health asked NICE to:

'Assess BMI and waist circumference in adults in black and minority ethnic groups in the UK [in relation to the risk of health problems]'.
Appendix B Potential considerations

It is anticipated that the Public Health Interventions Advisory Committee (PHIAC) will consider the following issues:

- Any trade-offs between equity and efficiency.
- Any factors that prevent – or support – effective implementation.
- Any adverse or unintended effects.
- Current practice.
Appendix C References


Department of Health (2007) Health risk and costs of obesity [online]


Department of Health (2010a) Change4Life [online]

Department of Health (2010b) Equity and excellence: liberating the NHS. London: The Stationery Office


Department of Health (2010d) Six years on: delivering the diabetes national service framework. London: Department of Health


