Obesity: defining ethnic specific thresholds and changing practice

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Figure 5: Prevalence of men and women living with obesity by England region (HSE, 2018)

Obesity prevalence is age standardised. 95% confidence intervals are shown: Adult (aged 16+) obesity: BMI ≥30kg/m²
Figure 9: Prevalence of adults living with obesity by deprivation, HSE, 2018

Obesity prevalence is age standardised. 95% confidence intervals are shown: Adult (aged 16+) obesity: BMI $\geq 30$kg/m$^2$. 
The image represents a Conceptual Framework on Determinants of Cardiovascular Disease (CVD). The framework is divided into three main categories: Structural, Intermediary, and Outcomes.

**Structural** factors include Social determinants and Drivers, such as Racism, Isolation, Education, and Deprivation.

**Intermediary** factors are further divided into Non-modifiable risk factors (e.g., Age, Sex, Ethnicity, Genes), Behavioural risk factors (e.g., Smoking, Alcohol misuse, Poor dietary quality, Physical inactivity), and Environmental risk factors (e.g., Air pollution).

**Physiological risk factors** include Cholesterol, HbA1c, Blood pressure, and Obesity.

**Diseases and Drugs** in this context include SLE.

The framework also includes connections to **COVID-19**, indicating potential interactions with the determinants of CVD.

**Outcomes** of CVD include Heart disease, Stroke, and TIA.
### Classification of body mass index (BMI)

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI (kg/m²)</th>
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<tbody>
<tr>
<td>Underweight</td>
<td>&lt; 18.5</td>
</tr>
<tr>
<td>Normal weight</td>
<td>18.5–24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0–29.9</td>
</tr>
<tr>
<td>Obesity class I</td>
<td>30.0–34.9</td>
</tr>
<tr>
<td>Obesity class II</td>
<td>35.0–39.9</td>
</tr>
<tr>
<td>Obesity class III</td>
<td>Above 40</td>
</tr>
</tbody>
</table>

27.5 kg/m² to define obesity in south Asian,¹,² Black³ and Chinese,¹,² populations to trigger lifestyle interventions

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To identify BMI cutoffs for overweight & obesity based on the risk of developing type 2 diabetes among adults from Black, south Asian, Chinese, and Arab populations in England equivalent to the standard overweight and obese BMI cutoffs established in White populations

- Population-based cohort study
- Electronic health records across primary care (CPRD)
- Linked to secondary care records (Hospital Episodes Statistics) from a network of general practitioner practices in England.
Age-adjusted and sex-adjusted BMI cutoffs in minority ethnic populations in England equivalent to a BMI cutoff of 30·0 kg/m² in White populations in relation to type 2 diabetes incidence.
Age-adjusted and sex-adjusted BMI cutoffs in minority ethnic subgroups in England equivalent to a BMI cutoff of 30·0 kg/m² in White populations in relation to type 2 diabetes incidence.
Figure 8.1: The full obesity system map with thematic clusters (see Section 4 for discussion). Figure highlights broader determinants of health such as drivers of food production and components of the physical activity environment.
Figure 8.5: Intervention options and impact will increase over generations.

**Generation 1** (current adults)  
**Generation 2** (current children)  
**Generation 3**  
**Generation 4**

**Impact rises:** combination of sustained approach and increase in options available ensures impact rises over time.

**Options increase:** range of interventions possible will increase as time progresses

Culture and values around food and activity shift over time?
FUTURE IS A SYSTEMS APPROACH

- Research not possible without having good data (Big Data) such as from General Practice, Hospitals, ONS, LA…

- Integrated Care System

- Others? Alternative?
THANK YOU