Setting the scene - current public health challenges

Professor Judy Buttriss
Director General
British Nutrition Foundation
Public health challenges - obesity

• Levels of overweight and obesity have been increasing in both adults and children

• 31% of boys and 29% of girls (2-15 years) are overweight or obese (Health Survey for England 2008).
  – 17% boys and 15% girls (2-15 years) are obese.

• Childhood obesity increases the chance of chronic diseases in later life.

• The majority of obese children will become obese adults. Current trends are already translating into an increased incidence of type 2 diabetes in obese teenagers.
Public health challenges - obesity

Almost a quarter of adults are now obese.

Percentages of overweight or obese adults by survey year (Health Survey for England 2008)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight BMI 25-30</td>
<td>38%</td>
<td>38.7%</td>
<td>38.8%</td>
<td>38.8%</td>
<td>36.9%</td>
</tr>
<tr>
<td>Obese BMI 30-40</td>
<td>14.9%</td>
<td>17.5%</td>
<td>21.2%</td>
<td>22.9%</td>
<td>24.5%</td>
</tr>
<tr>
<td>Total with BMI &gt;25</td>
<td>52.9%</td>
<td>56.2%</td>
<td>60%</td>
<td>61.7%</td>
<td>61.4%</td>
</tr>
</tbody>
</table>
Consequences of obesity in adults

- Associated with both increased morbidity and mortality.

- Risk factor for a range of chronic diseases:
  - cardiovascular disease (2-3 fold ↑ risk)
  - type 2 diabetes, hypertension (>3 fold ↑ risk)
  - some cancers e.g. colorectal, oesophageal, pancreatic, breast and endometrial cancer

- Increased likelihood of gallstones, osteoarthritis and high blood pressure (in turn increasing the risk of stroke).

- Increased risk of complications during pregnancy and birth.
Causes of obesity

• Causes of obesity are complex – both genetic and environmental factors come into play

• Environment is increasingly ‘obesogenic’ – access to plentiful food supply with no need for physical activity

• Changes in eating habits – increased availability of convenience foods, eating out more, takeaways

• Lifestyles increasingly sedentary – physical activity levels have fallen steeply over recent decades

• Social and psychological factors
Current intakes of fat and added sugars in children 4–18 years (NDNS 2008/9)

<table>
<thead>
<tr>
<th>Macronutrient</th>
<th>Recommended intake (% food energy)</th>
<th>Boys average intake (% food energy)</th>
<th>Girls average intake (% food energy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>35%</td>
<td>34.2%</td>
<td>35.4%</td>
</tr>
<tr>
<td>of which saturates</td>
<td>11%</td>
<td>13.0%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Added sugars (NMES)</td>
<td>11%</td>
<td>15.5%</td>
<td>14.8%</td>
</tr>
</tbody>
</table>
Current intakes of fat and added sugars in adults 19 - 64 years (NDNS 2008/9)

<table>
<thead>
<tr>
<th>Macronutrient</th>
<th>Recommended intake (% food energy)</th>
<th>Men average intake (% food energy)</th>
<th>Women average intake (% food energy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>35%</td>
<td>35.5%</td>
<td>34.7%</td>
</tr>
<tr>
<td>of which saturates</td>
<td>11%</td>
<td>13%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Added sugars (NMES)</td>
<td>11%</td>
<td>13%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>
Foods contributing to NMES intake (NDNS 2008/9; published 2010)

• Major sources of NMES were beverages; cereals & cereal products (biscuits, buns, cakes); sugar, preserves & confectionery.

• Soft drinks contributed 14% for toddlers, 19% for children (4-10 years), 32% for teenagers (11-18 years) and 16% for adults.

• Fruit juice contributed 17% for toddlers, 12% for younger children and 8-9% for teenagers and adults.

• Cereals and cereal products contributed around 25% for children and 20% for adults (3-way split for cereals, biscuits, cakes etc).

• Sugar, preserves and confectionery contributed around 25% for adults (sugar/preserves 15%, chocolate 8%, other sweets 1%) and slightly less (22%) for children (sugar/preserves 6-7%, chocolate 8%, other sweets 7-8%)
Current public health campaigns

Reducing saturates, added sugars and salt intake is the focus of a number of ongoing public health campaigns:

• Food Standards Agency’s saturated fat and energy intake campaign

• Department of Health’s Change4Life and Start4Life campaigns
Change4Life – sugar swaps

Change4Life advises:

• **Breakfast swap**
  Switch to lower sugar cereals or other breakfast options like fruit or toast

• **Drink swap**
  Switch from sugary drinks to ‘no added sugar’ drinks such as water, milk (ideally semi-skimmed milk), unsweetened fruit juice or even sugar-free fizzy drinks

• **Dessert swap**
  Switch from sugary desserts like chocolate, biscuits and cake to less sugary desserts, like yogurt or fruit.
Innate preference for sweet tasting foods

• The human desire for sweet taste is innate – infants and young children prefer foods that are both familiar and sweet.

• Throughout evolution - sweetness has been used as a guide to foods that provide energy and nutrients, whereas bitterness signals toxins and possible death.

• Sweetness preferences appear to be strongly influenced by age – higher in infancy and childhood.
Low-calorie sweeteners
- sweetness without the calories?

Potential health benefits of low calorie sweeteners:

• Calorie reduction and weight control
• Diabetes management
• Dental health
BNF survey on sweeteners

- BNF survey carried out by YouGov in March 2010

- 2017 consumers
  - 968 males
  - 1049 females

- We asked about intake of foods that commonly contain low calorie sweeteners.....

- Only 18% actually weren’t regularly consuming such products

- Yet, 53% said they did not eat any food or drinks containing low calorie sweeteners
### Why consumers use sweeteners – top 5 reasons

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To maintain/control weight</td>
<td>55%</td>
</tr>
<tr>
<td>To reduce the amount of sugar in my diet</td>
<td>54%</td>
</tr>
<tr>
<td>They are better for me than sugar sweetened foods/drinks</td>
<td>35%</td>
</tr>
<tr>
<td>They are better for my teeth</td>
<td>30%</td>
</tr>
<tr>
<td>They allow me to eat more of the foods I enjoy without extra calories</td>
<td>20%</td>
</tr>
</tbody>
</table>
Why consumers choose not to use them - top 5 reasons

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t like the taste</td>
<td>38%</td>
</tr>
<tr>
<td>I don’t like sweetened foods/drinks</td>
<td>33%</td>
</tr>
<tr>
<td>They are artificial</td>
<td>32%</td>
</tr>
<tr>
<td>I prefer foods/drinks sweetened with sugar</td>
<td>32%</td>
</tr>
<tr>
<td>I don’t think they are safe</td>
<td>15%</td>
</tr>
</tbody>
</table>
Concerns about safety amongst consumers

- Only 10% said they thought low calorie sweeteners are good for everyone
- 11% thought they are only safe for adults
- Only 3% thought they are good for children
- 31% said the amount consumed determined whether they are safe or not
- 23% said they want more information about safety
Most reliable sources of information about food - according to consumers

Percent

TV  FSA  GP  Nutritionist  Dietitian  HP  Friends & relatives  Shops  Labels  Internet  Newspapers

© 2010 The British Nutrition Foundation
Sweeteners in the press

On a diet? Then put away those sweeteners... because they may help you GAIN weight

Sweetener may increase obesity risk, says study

Diet drinks may make you gain weight

'Sweetener is Silent Killer'

© 2010 The British Nutrition Foundation
The science of low calorie sweeteners – separating fact from fiction

• The science behind our desire for sweet taste
• Low calorie sweeteners – what they are, what they do and how they work
• The safety of low calorie sweeteners
• How, where and why low calorie sweeteners can be used in food and drinks
• The role of sweeteners on appetite and satiety
• The role of sweeteners in weight control and diabetes management
• The America on the Move family study
• Panel discussion