

Poor taste

Teacher resources contents page



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Hint:

If you print out pages 2 – 7 of this document double sided there will be one section per sheet of paper.



Introduction

Humans are, as a species getting fatter. People are eating more and exercising less. The evidence for this is visible all around us and is often in the media.

Through a mixture of structured group and class discussions students will examine some of the many ideas behind the rise in the occurrence of obesity and consider possible ways of combating it.

All the resources required to run this activity are downloadable from the Question of Taste website, they include:

1. Teacher resources
 - Aims and objectives sheet (this sheet) – Includes an introduction to the resources learning outcomes and curriculum links
 - Lesson plan – Instructions and advice on one way to use the resources
 - Background information – Includes some background information on the topic covered and links to further reading
2. Power point presentation – Can be used by teachers to introduce the topic and structure the lesson
3. Student resources
 - Continuum question cards – A selection of cards written to stimulate debate
 - Continuum end cards – Cards to set up the sliding scale
 - Policy cards – A set of suggested policy ideas to help stimulate debate

Learning Outcomes

Knowledge and understanding

- Students will learn about the causes and effects of obesity and how they interact
- Students will consider how our actions can have an effect on our lives and health, and the future consequences of our decisions
- By discussing different policies students will learn about the many ideas suggested to combat obesity
- By choosing their policies to combat obesity students will gain an insight to the financial restraints that authorities are placed under

Attitudes and values

- By discussing the causes of obesity students will think about how other people view obesity and how it affects their lives
- In their discussion of ways to combat obesity students will consider the social and ethical implications of large scale public health initiatives

Skills

- Through group discussion students will develop their listening and talking skills
- By coming to a consensus in group decisions students will develop their ability to work in a team with others

National Curriculum links

AQA

Biology

3.1 Biology and disease

- 3.1.1 Lifestyle

Design and Technology: Food Technology

3.1 Materials, components and applications

- 3.1.1 Lifestyle
- 3.1.2 Health

General Studies

3.1 Thinking, analytical and communication skills

Critical Thinking

3.1 Critical thinking foundation unit

- 3.1.1d Dialogue

OCR

Biology

3.2 Molecules, biodiversity, food and health

- 2.2.1 Diet and food production

Home economics (food, nutrition and health)

3.1 Society and health - health

General Studies

3.4 Thinking and analytical skills

Edexcel

Biology

Unit 1 Lifestyle, transport, genes and health

- 1.3 Lifestyle and health

Food technology

Unit 3 – Food products, nutrition and product development

- 3.4.1 Human nutrition and diet
- 3.4.5 Contemporary issues

Introduction

In this activity students will work in groups with a facilitator/leader to place idea cards on a continuum between agree and disagree. Students will need to come to an agreement about where cards are to be placed.

Equipment list

- Presentation for teacher to introduce activity
- One set of continuum question cards per group
- One set of continuum end cards per group
- One set of policy cards per group

Instructions

Introduction (10 minutes)

- Introduce the topic of obesity, the causes and effects. A presentation is available to download
- Split the students up into groups containing up to 10 students

Task One (15 minutes)

- Give each group a set of continuum end cards and ask them to place them at either end of the table
- Give each group a set of the continuum question cards and ask each student to take a card
- Ask the students to read their cards out one at a time
- After each student has read their card ask the group to discuss whether or not they agree with the statement. They can then place the card at the appropriate point between agree and disagree

Task Two (10 minutes)

- Once task 1 is complete hand out the policy cards
- Ask the students to read out the policies and their associated cost
- The groups have a budget of £40 million to spend
- Note that the costs of suggested policies and the amount the students have been given to spend are arbitrary amounts. They are intended to force the students to make choices, rather than representing real world situations
- Get the groups to decide on which policies they would like to use

Feedback (10 minutes)

- Ask each group to report back on which policies they chose and why
- See if the group can come up with their own ideas for combating obesity

Suggested questions

Below are a number of questions that you might find useful for facilitating/stimulating group discussion

- If our weight is controlled by our genetics is it really our fault if we are over weight?
- Is it right for the government to tell people what to eat?
- Is a parent letting their child become obese a form of child abuse?
- Should school meals be used to ensure students get a healthy diet, even if this means tax payers subsidising it?
- If our genetics and sense of taste were the only things to blame for our weight wouldn't more of us be obese?

Extension activity

Ask students to devise their own policies for combating the increase in obesity rates.

- Ask each student to come up with an idea, and then ask them to share that idea in a pair selecting the one they think is best
- Next, ask each pair to join another pair and share their ideas, again selecting the one they think is best
- This cascade can continue until each table/group has one idea and these can then be shared with the rest of the class
- Students can also be asked to research the potential cost of their policy or the type of policies that are suggested in the handouts

What is obesity?

Overweight or Obese

- Overweight and obese are medical conditions in which individuals have a body fat percentage which is too high, this can lead to health problems
- One of the most common methods for working out if an individual is of a healthy weight or not is to use the body mass index (BMI)
- A person's BMI is their weight in kilos divided by their height in metres squared
- A healthy BMI is between 18.5 and 25; a BMI over 25 suggests someone is overweight, over 30 indicates obesity while over 40 is classified as morbidly obese
- Other measures of obesity include waist-hip ratio and body fat percentage

Obesity and health

- Obesity is one of the leading causes of preventable death in the western world
- It is estimated that 111,909-365,000 people die each year in the USA from a condition linked to obesity
- On average the life expectancy of an obese individual will be reduced by 6-7 years, but this reduction becomes 20 years if the individual is morbidly obese
- As well as being responsible for thousands of deaths a year, obesity is linked to numerous illnesses and conditions that have adverse effects on quality of life
- A suite of conditions collectively called the metabolic syndrome have been identified as being linked to obesity, and studies suggest that as many as 25% of the population of the USA may be affected (Ford, Giles and Dietz 2002)
- A report produced in 2008 suggested that the cost of treating obesity in the UK was £4.2 billion in 2007 and that this could potentially rise to £6.3 billion by 2015

Causes of obesity

Background

The most commonly cited causes of obesity are eating too much and doing too little exercise. This combination of factors can in part be attributed to changes in the way humans live.

- In the evolutionary past food has often been in short supply
- Our ancestors would also have lived very active lives
- In the modern world food is, in the western world at least, readily available
- We tend to lead much more sedentary lives even when compared to humans living just a few generations ago
- In particular convenience food is also readily available, and cheap, and contains far more calories and fat than the foods that previous generations consumed

Food selection and obesity

The food that people choose to eat will also have an effect on their health. It has been suggested that this selection is in part controlled by our sense of taste. In the evolutionary past the generalisation could be made that sweet and salty food was beneficial while bitter food was not

- Sweet foods are normally high in sugars (calories) and if eaten in excess may lead to obesity
- Most people enjoy the sensation of eating sweet foods so will often seek them out
- Many green vegetables have a bitter taste and it has been suggested that people, in particular children, who have a strong bitter taste ability avoid them

Other causes of obesity

While changes in lifestyle and taste controlled food preferences have a role to play in obesity they are probably not the only causes. Many people for example like sweet food such as chocolate but aren't overweight. Other suggested cause includes (from Keith SW, Redden DT, Katzmarzyk PT, *et al.* (2006)):

- Parental BMI – children are more likely to be obese if one or both parents are, though whether this is genetic or environmental is unknown
- Lack of sleep
- Reduction in number of smokers
- Certain environmental pollutants

Combating obesity

The main ways to manage obesity are controlled diet and physical exercise. Diet programs can result in short term weight loss but in order to keep the weight off a more structured regime is needed, with support and advice available.

If dieting and exercise do not work then there are other ways to manage obesity.

Drugs:

- There are currently a number of drugs available which have been approved by medical bodies for use in weight loss
- These work in a variety of ways but will normally either reduce the amount of fat that is absorbed in the intestine or suppress appetite
- Many of these drugs work in the short term and reduce weight, but there is little data available on long term success or side affects

Surgery:

- As with all surgery there are substantial risks involved
- The two most common forms of surgery involve either reducing the size of the stomach, thereby reducing the amount of food consumed, or reducing the length of the intestine that food will be in contact with
- Those patients who undergo surgery do seem to lose weight, but surgery may not alter eating patterns or lack of physical activity

Further reading

Studies and reports

- Department of Health obesity report
<http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Obesity/index.htm>
- WHO obesity facts
<http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/>
- Obesity – NHS information sheet
<http://www.nhs.uk/Conditions/Obesity/Pages/Introduction.aspx>
- Number of deaths caused by obesity in USA
<http://jama.ama-assn.org/cgi/content/full/282/16/1530>
- Other causes of obesity
<http://www.nature.com/ijo/journal/v30/n11/full/0803326a.html>
- FDA approved anti-obesity drugs
<http://win.niddk.nih.gov/publications/prescription.htm#fdameds>
- Genetic link to food preference
http://www.sciencedaily.com/videos/2005/0508-the_taste_gene.htm

Newspaper reports

- Seven obese children placed in care
www.telegraph.co.uk/health/3277298/seven-obese-children-placed-in-care.html
- Mother's anger as obese boy, 8, faces care order
www.guardian.co.uk/uk/2007/feb/26/health.children
- Parents think their overweight children are normal size
www.telegraph.co.uk/health/dietandfitness/5291684/parents-think-their-overweight-children-are-normal-size.html
- Obese patients denied operations
<http://news.bbc.co.uk/1/hi/england/suffolk/4462310.stm>