Junk Food Addiction

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Sweets, crisps, chips, and chocolate - we all love them. We also know that they are not the healthiest of food choices, so why do we crave them so much?

Junk food

Junk food, which is also known as processed food, is food that is high in sugar and/or saturated fat but low in vitamins, minerals, and fibre.

It is perfectly possible to eat some junk food and remain healthy but eating too much and on a regular basis can lead to health problems.

Fat and sugar are high in energy. If you take in more energy than you use up in exercise, your body will store the left-over energy as fat. An increase of fat on your body causes you to put on weight, which can lead to being very overweight (obese). This puts extra weight on your joints, which can lead to a disease called arthritis. Being overweight also increases the risk of becoming very ill if you catch COVID-19.

A diet high in fat is also linked to diseases such as heart disease, cancer, and fatty liver disease.

You know that eating sugar is bad for your teeth – it can cause tooth decay. A diet high in sugar can also cause a disease called type 2 diabetes.

The NHS spends a lot of money treating people who have illnesses because they eat too much junk food. The government want to reduce this, so they can spend the money on other things. The problem is that junk food tastes really delicious! Also, it is often cheaper, and easier to prepare than other, healthier foods. It is little surprise that many people in the UK eat more junk food than is healthy.

Addicted to junk

Scientists have found out that eating junk food may affect your brain.

When you eat delicious food, your brain releases a chemical called dopamine (DOH-puh-meen). This makes you feel happy - your brain is designed to reward you for eating food! This was useful for our ancestors when there wasn't much food around. It made them continue to hunt for food so they would survive. But it's not something we need for our survival now as we no longer have to hunt for food.

Research shows some foods, particularly those high in fat and sugar (as many junk foods are), cause more dopamine to be released than other foods. This is because foods high in sugar and fat are high in energy – so you get the most energy for the least effort.

So, it is no wonder the foods many people crave are sweet, fatty treats like chocolate, ice-cream, cakes, and biscuits.

What the government is doing about the problem

Back in 2018 the government introduced a tax on sugary drinks. This means companies that make these drinks have to pay the government some extra money, depending on how much sugar is in their drinks. So, to avoid paying it many companies decided to make their drinks less sugary.

Some people want to see this repeated for other sugary foods, like cakes and biscuits – what do you think?

Your brain starts to make dopamine when you are looking at, smelling, hearing, or thinking about food. So, watching food on TV makes you want to eat it.

So, the next idea by the government is to only show TV adverts for junk food between 9pm and 5:30am. They hope that this means that fewer children will see adverts for junk food and crave it less.

Why try and target children?

Your brain is still developing and won't be fully mature until you are about 25. This means that you get more pleasure than adult brains do from rewarding behaviours such as eating junk food – it is much easier for young people to get addicted to junk food.

Also, scientists think that eating junk food may be more harmful to children's brains than adults.

In one experiment scientists used teenage mice. One group of mice ate a diet very high in fat and a second group ate a healthy diet. As to be expected, the mice eating high-fat food put on body fat and gained weight. But that was not all. These mice also performed worse on memory tests than the mice that ate a healthy diet.

Another study used human children. The scientists asked a group of children how much of their diet was junk food and how they felt. The scientists found that there was a link to how much junk food the children were eating and how happy they were – they decided that junk food might cause depression.

So, there is a lot of evidence to show that a diet high in junk food is not healthy for body or mind. The problem is – our brains are designed to make us want to eat it. The answer is to eat a little junk food, but make sure most of our diet is nutritious food. This way both our body and brain will be kept happy and healthy.

Worksheet

1. Explain what junk food is and give some examples.

2. Read through the experiment using teenage mice again. Write down:
a) What the scientists were trying to find out.
b) Their conclusion (what they found out)
c) Some people argue that the conclusion might not apply to human teenagers. Suggest why they think this.

3. What is your opinion – do you think that the government's idea for only showing advertisements for junk food between 9pm and 5:30am will work to reduce the amount of junk food children eat?

4. Come up with some other ideas that you think will reduce the amount of junk food people of all ages eat.

Curriculum links

KS2

Working scientifically: reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations.

identifying scientific evidence that has been used to support or refute ideas or arguments.

Animals including humans: recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

KS3

Working scientifically: interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions.

Nutrition and digestion: the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases.