

**Do Now**

# Sugar, processed food and disease; what's the link?

Rachel LOVES donuts. She and her friends always buy them when they go out shopping. Except, today she doesn't feel like it.

'What's up, misery guts?' Rachel's friends ask her.

'I read that donuts are literally the worst thing you can eat if you want to stay healthy.' She replied. I don't know if it's true though.'

**Discuss: Why would donuts be the worst food product we can consume?**



Explain briefly what we mean by 'lifestyle diseases'.

*I think lifestyle diseases are . . .*

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## Learning outcomes:

Describe the potential dangers of a diet with high levels of sugar and processed food.

Explain how poor diet can help cause lifestyle diseases.

**Inflammation** – inflammation is the body's immune system's response to an irritant.

**Processed food** – A processed food is any food that has been altered in some way during preparation.

**Lifestyle diseases** - any medical disorder or condition thought to be produced or exacerbated by aspects of a person's lifestyle, such as diet and level of physical activity.

# The Donut of Doom:



Oh my glaze...



Unfortunately for Rachel, she was quite right about donuts.

A good general rule of thumb for if a food is processed or ultra-processed is, could you make it at home, or does the ingredients list contain chemicals you wouldn't find in an average family kitchen?

The good news is, you can make home-made donuts, but the bad news is, the ones Rachel has been buying from the supermarket contain the following ingredients.....


*Enriched Wheat Flour (Wheat Flour, Niacin, Reduced Iron, Thiamine Mononitrate, Riboflavin, Folic Acid), Water, Palm Oil, Soybean Oil, Sugar. Contains 2% or Less of Each of the Following: Yeast, Soy Lecithin, Hydrogenated Soybean Oil, Salt, Mono and Diglycerides, Wheat Gluten, Calcium Sulfate, Monocalcium Phosphate, BHT, Dried Milk Powder, Egg Yolks, Cellulose Gum, Calcium Propionate (To Maintain Freshness), Ammonium Sulfate, Ascorbic Acid, Dicalcium Phosphate, Sorbitan Monostearate, Tocopherols, Tricalcium Phosphate, Diammonium Phosphate); Glaze (Sugar, Water, Corn Starch, Palm Oil, Calcium Sulfate And/Or Calcium Carbonate, Agar, Dextrose, Natural and Artificial Flavors, Salt, Disodium Phosphate, Locust Bean Gum And/Or Mono and Diglycerides)*

Let's test our knowledge so far. Are we describing processed food, ultra-processed food or good ole' whole foods?



Whole Foods	Processed Foods	Ultra-processed foods
<p><b>Major cause of obesity</b></p>	<p><b>Should make up the majority of our diet.</b></p> <p><b>Engineered for maximum taste</b></p>	<p><b>Major cause of diabetes</b></p> <p><b>Often contain high-fructose corn syrup</b></p> <p><b>Flavoured yoghurts are in this category</b></p>
<p><b>Ok in moderation, but not every day.</b></p>	<p><b>More likely to contain fibre</b></p>	<p><b>Instant noodles are in this category</b></p> <p><b>Walnuts are in this category.</b></p>

Decide whether the statements are talking about processed food, ultra-processed foods or whole-foods. Some may be applicable to more than one. Explain your decision for each choice in your books.

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## Sugar – why such a big issue?

1. What can sugar do to your appearance if you eat too much of it over time?
2. How can too much sugar affect your skin?
3. What percentage increased risk do you have of developing diabetes if
4. you have a very sugary drink every day?
5. Which cancers have been linked to high sugar consumption in some cases?
6. What does sugar destroy in your mouth?
7. What nutrients can be found in sugar? What about fruit?
8. What is leptin?
9. What does sugar consumption do to leptin?
10. How does sugar affect insulin?



<https://www.youtube.com/watch?v=JEA-G9m9S0Y>

**Watch the clips and complete the questions in your booklet.**

## Sugar – why such a big issue?

**What can sugar do to your appearance if you eat too much of it over time?**  
**It can make you look older than you are and give you wrinkles.**

**How can too much sugar affect your skin?**  
**It is more likely that you will suffer from acne.**

**What percentage increased risk do you have of developing diabetes if you have a very sugary drink every day?**  
**83% increase.**

**Which cancers have been linked to high sugar consumption in some cases?**  
**Breast and colon cancer**

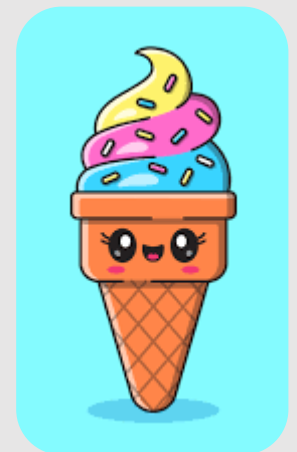
**What does sugar destroy in your mouth?**  
**Your healthy mouth bacteria**

**What nutrients can be found in sugar? What about fruit?**  
**Refined sugar (in sweets) have none. Fruit has plenty and is great in moderation.**

**What is leptin?**  
**The hormone which tells our brains if we are full or not**

**What does sugar consumption do to leptin?**  
**Stops it from reaching the brain and telling us that we are full, so we keep eating.**

**How does sugar affect insulin?**  
**It disrupts it, meaning we don't burn the fat we already have.**



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## **Useful, legitimate and appropriate helplines and charities:**

**Young Minds.** Child and adolescent mental health charity for teens struggling with any subject. Call: 0808 802 5544

**Teen Line | Teens Support hotline - Connect, talk, get help!** Teen Line's highly trained teen listeners provide support, resources and hope to any teen who is struggling.

**SANE.** National out-of-hours mental health charity offering emotional support, guidance and information. Call: 0300 304 7000 (4.30pm to 10.30pm)

**<https://www.nutrition.org.uk/life-stages/teenagers/healthy-lifestyles-for-teenagers/top-healthy-eating-tips-for-teenagers/>**

A site full of healthy eating and meal ideas for teenagers and young people

## Reporting a Concern at Thornden School

- It is important to us that all of you feel safe, happy and belong at Thornden.
- We also know that sometimes it is not as easy as simply telling a member of staff
- It could be:
  - A friend you are worried about
  - Someone being unkind to you
  - Something you have heard and think we should know

### How can you report anything you are worried about?

- Speak to a member of staff or parent / carer
- Visit the Well Being Den or Head of Year area
- On Satchel each week you will be sent a link to a form to share any worries you have
- On our school website homepage there is a 'Report a Concern' link.
- In the Student Bulletin there is a 'Report a Concern' link
- On all school desktops there is a 'Report a Concern' logo to click and report anything

# Need Support? You're Not Alone

If anything in today's lesson has affected you, or you want to talk to someone, there is help available.



## **Mental Health & Low Mood**

YoungMinds – <https://www.youngminds.org.uk>

Kooth – <https://www.kooth.com>

Mind – <https://www.mind.org.uk>

## **Talk to Someone**

Your Tutor or Head of Year – We're here to help.

Wellbeing Team and School Nurse

Report a Concern on Satchel

Safeguarding Team with the Purple lanyards

## **Healthy Lifestyle**

NHS Every Mind Matters – <https://www.nhs.uk/every-mind-matters>

Change4Life – <https://www.nhs.uk/change4life>

## **Apps That Can Help**

Calm – For mindfulness and sleep.

Headspace – Meditation and stress relief.

Clear Fear – Manage anxiety (designed for young people)

MeeTwo – Anonymously talk to other teens, moderated by experts.

## **Eating Concerns**

Beat Eating Disorders –

<https://www.beateatingdisorders.org.uk>

NHS Live Well – Eating Disorders –

<https://www.nhs.uk/mental-health/conditions/eating-disorders/>