**KEY:**

*video link: https://www.youtube.com/watch?v=MepXBJjsNxs&t=64s*

***Comprehension questions:***

1. **1.42** What are the statistics behind sugar intake in the USA?

2. **4.13** What is sugar comparable to and how does it affect us?

3. **6.56** How and by whom has been sugar defended throughout the times and how do studies differ?

4. **9.47** What does FDA want to do and what are the objections of various industries?

5. **End** What’s Oliver’s proposed solution?

# How Sugar Affects the Brain

# *video link: https://www.youtube.com/watch?v=lEXBxijQREo&t=2s*

***CAE reading and use of English*** *Part 3 – word formation*

To better understand why glucose and other forms of sugar in 1. **moderation** MODERATE are important to a healthy lifestyle, we need to first understand exactly how and why our bodies use this chemical as fuel. We know that the brain cannot function without glucose, but what do various forms of sugar do to our brain? Because the human brain is rich in neurons and nerve cells, it’s no surprise that it happens to demand the most use of glucose 2. **supplied** SUPPLIER energy.

Neurotransmitters, the parts of the brain that serve as chemical 3. **messengers** MESSAGE, are not produced when there is a lack of glucose. A lack of sugar means communication between these imperative cells breaks down, and 4. **cognitive** COGNITION function is impacted. It can also cause hypoglycaemia, a complication of diabetes caused by low glucose levels. Diets high in sugar also reduce the production of [brain- 5. **derived** DERIVATION neurotrophic factors or BDNF](https://ghr.nlm.nih.gov/gene/BDNF). BDNF assists in the connections between nerve cells also known as synapses. Without this key protein, growth, development, and communication between these nerve cells becomes 6. **impaired** IMPAIRMENT. When these synapses are unable to communicate properly, a decline in multiple neurological functions can be seen. [Further research has linked BDNF to 7. **degenerative** GENERATE disorders such as Alzheimer’s disease and dementia](https://pubmed.ncbi.nlm.nih.gov/17151862/).

Unhealthy levels of blood sugar have an 8. **adverse** ADVERSITY effect on the brain; excessive levels can lead to cognitive decline. According to the [Diabetes Research Institute](https://www.diabetesresearch.org/diabetes-statistics), over 34 million people are living with diabetes in the U.S. alone while [The World Health Organization (WHO)](https://www.who.int/news-room/fact-sheets/detail/diabetes) reports that over 422 million people worldwide live with this disease. How do diabetes and sugar consumption affect the brain you ask? [Research published by the Johns Hopkins Bloomberg School of Public Health in 2014](https://www.jhsph.edu/news/news-releases/2014/diabetes-in-midlife-linked-to-significant-cognitive-decline-20-years-later.html) found that the link to significant cognitive decline in middle-aged individuals living with diabetes was 9. **astounding** ASTOUND. The conclusion of their research shows that glucose metabolism and BDNF may go hand in hand.

DISCUSSION:

1. How healthy or unhealthy is sugar to you?

2. Is your sugar intake high and could you easily reduce it?

3. Should parents stop giving babies sweet things?

4. What are the healthy alternatives to sugar?

5. Is sugar addictive?