

The sugar and hyperactivity myth



The idea that sugar causes behavioral problems, particularly in children, has been debunked over the years by many scientific research papers and reports. Let's take a look at why this myth has persisted, considering the serious issue of ADHD and hyperactivity.

DID YOU KNOW?

Sugar does not cause a child to have bad behaviour.

Research shows parents' beliefs and expectations may influence how they perceive their child's behaviour.

Sugar could actually improve memory and mood. The exact mechanism is not yet well-understood, but some research suggests that eating sugar may improve brain function by helping to maintain steady levels of blood glucose (and therefore steady supplies of energy) to the brain.



Why does the reality differ from expectations?

The most common explanation as to why parents believe that their children's behaviour is affected by sugar is that sugar is consumed in situations that are celebratory, rewarding and exciting. Children naturally become more boisterous and energetic in situations such as birthday parties or at Christmas – and adults sometimes do, too! If parents expect the child to be hyperactive, chances are they will perceive ways that their child will live up to this. Research studies now back this up.



Why the focus on sugar?

Scientific researchers had noticed some changes in children's behaviour when sugar was consumed. However, in these studies the researchers just observed effects and did not explore all the possible causes of behavioural problems. In later studies, when neither the researcher, parents or children knew whether the child was consuming sugar or artificial sweetener, no differences in behaviour were observed. This is because nobody was influenced by background knowledge when assessing the children. It seems that there are no real adverse physiological effects of sugar on children's behaviour. Instead it was a perceived effect.





Can children be 'sensitive' to sugar?

A small number of children are intolerant to sugar but this is linked to specific problems digesting sugar and a missing molecule in the intestine (sucrase enzyme). Those with behavioural problems are more likely to be advised to remove foods like dairy, wheat, chocolate, oranges, grapes and pineapple from their diet, as these are usually the most problematic. Every child reacts differently and can react to different foods. At the end of the day it is a very individual response.

There is no scientific evidence of a direct link between sugar intake and hyperactivity.



What's the role of sugar in Attention Deficit Hyperactivity Disorder (ADHD)?

ADHD is a brain disorder characterised by ongoing patterns of inattention and/or hyperactivity and/or impulsivity that interferes with a child's normal functioning and development. All children and adolescents may display active, impulsive and inattentive behaviour but this doesn't mean they have ADHD. Often the perceived frequency is a lot higher than the actual. International studies have estimated a prevalence of around 5-7%. There is very limited data on the clinical diagnosis of ADHD, however it has been found to be more common in males than females.

It is the extent and impact of these behaviours on a child's day-to-day function that will indicate whether ADHD might be present.

It is unknown what exactly causes ADHD. It is a very serious and

complex condition and most likely caused by a combination of factors. It is thought that genetic influences as well as environmental factors have a role to play. The following have also been associated with a higher risk of developing ADHD:

- Cigarette smoking and alcohol use during pregnancy
- Higher levels of lead present in preschool children
- Complications during pregnancy or delivery (e.g. low birth weight)

Diagnosis of ADHD is difficult and treatment usually involves a combination of medication, behavioural therapy, and education to help manage symptoms.

THE SHORT AND SWEET OF IT

Sugar is not responsible for bad behaviour in children

1. This is a belief which has been observed in children but not played out in a real physiological response.
2. Parent's may blame sugar but extensive research proves that sugar does not cause hyperactivity or adversely affect learning abilities of children.

Limiting your child's sugar consumption is in line with advice from dietary guidelines for a healthy diet, however it will not prevent ADHD or other behavioral problems.

For individual health advice see a qualified health professional.

Further Reading

1. National Health and Medical Research Council. Australian Dietary Guidelines. Canberra, ACT; 2013
2. Mental Health Foundation NZ. ADHD in children. <https://www.mentalhealth.org.nz/get-help/a-z/resource/9/adhd-in-children>
3. Benton D. Sucrose and behavioural problems. *Crit Rev Food Sci Nutr* 2008; 48, 385-401.
4. Wolraich ML, Wilson OB, White JW. The effect of sugar on behaviour or cognition in children. *JAMA* 1995; 274; 20:1617-21.
5. Benton D and Nabb S. Carbohydrate, memory and mood. *Nutr Rev* 2003; 61: S61-7.
6. National Health and Medical Research Council. Clinical Practice Points on the diagnosis, assessment and management ADHD in children and adolescents. Commonwealth of Australia, 2012



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