

Does sugar make kids hyperactive?



It is popular opinion that sugar causes hyperactivity, particularly in children.

Over the years, there have been many articles casting sugar as a villain and advising parents to steer clear. When children are 'bouncing off the walls' at birthday parties it must be because of all the sugary things they have eaten like soft drink and cake, right? Wrong! Studies show that sugar does not cause hyperactivity or have adverse effects on the learning abilities of children. Let's take a look at why this myth has persisted and the possible real causes of hyperactivity.

DID YOU KNOW?

Sugar does not cause a child to have bad behaviour.

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.



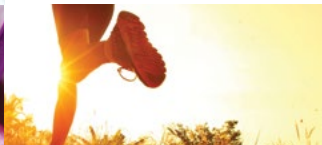
Why does the reality from research differ from expectations?

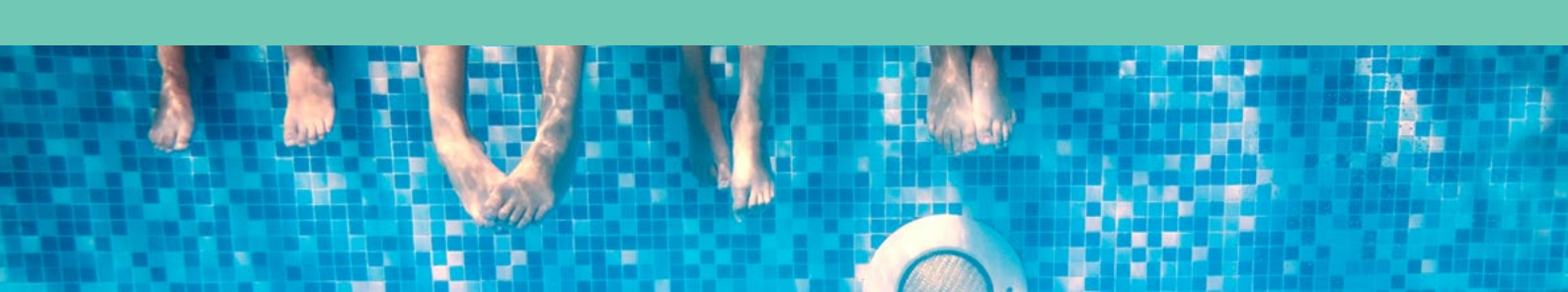
The most common explanation as to why parents believe that their children's behaviour is affected by sugar is that sugar is consumed in situations that are celebratory, rewarding and exciting. Children naturally become more boisterous and energetic in situations such as birthday parties or at Christmas – 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. Negative media hype may also be driving this belief.



Why was sugar targeted?

It wasn't just parents, but scientific researchers also noticed some changes in children's behaviour when sugar was consumed. However, in these studies researchers merely observed effects and did not explore all the possible causes of behavioural problems. In later studies, when no-one involved, including the researchers, parents or children, knew whether the children were 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. Sugar provides energy, like other carbohydrates, but it does not cause bad behaviour.





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. Sugar is not of major concern and neither are highly-processed foods which are often blamed. Every child reacts differently and can react to different foods. At the end of the day it is a very individual response.

The Australian Government's peak research organisation, the National Health and Medical Research Council, recognises there is no 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 as part of their normal development, 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%. Australia has very limited data on the clinical diagnosis of ADHD, however it has been found to be more common in males than females.

Research studies do not point to sugar as a cause of ADHD or as making the symptoms worse.

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

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

Sugar does not cause ADHD

- Doctors don't know exactly what causes ADHD – it is a complex condition.
- Sugar is not among the key factors linked to ADHD.

Sugar can be enjoyed in moderation as part of a child's healthy, balanced diet and active life

- Let our kids be kids!

**Information based on an overview of the scientific evidence.
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. National Institute of Mental Health. Attention Deficit Hyperactivity Disorder [Internet]. Bethesda, MD: NIMH; [cited Oct 2016]. Available from: www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml.
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

**More info available at
www.allaboutsugars.com**

This resource has been developed by the Australian Sugar Industry Alliance and aims to provide science based information on sugars and health.

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