

Nutritional Considerations for Autistic Populations

Blood Sugar Regulation

As part of the Nutrition and Autism support series this help-sheet looks at the role of blood sugar regulation and in particular, the impact on children within Autistic populations. For any child (and for us adults) managing a stable blood sugar level is beneficial for mood and behaviour. Dips can cause increased levels of the stress hormone cortisol, increasing feelings of fear/anxiousness.

Children can often favour sugary foods, particularly those who may have a limited range of foods that they are willing to eat. We understand it can therefore be difficult to 'break the sugar cycle' but let's look at a few reasons why we should try to: -

The biology of Sugar

When we eat foods that are high in sugar, they are potentially also high in fats and refined carbohydrates. When faced with this heady mix of ingredients a chain of events occurs in our body.

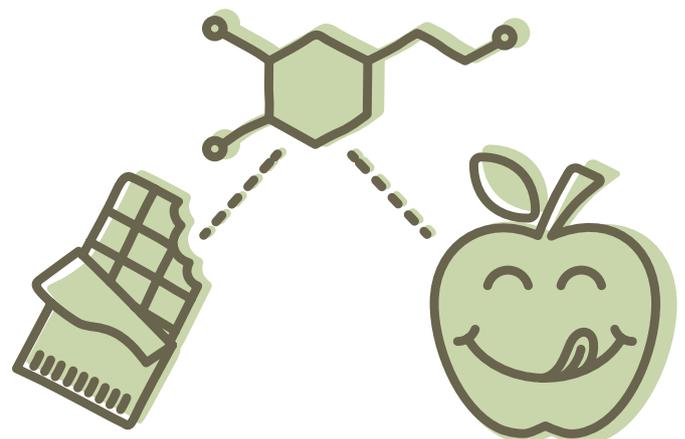
- These foods are visually pleasing so are likely to be chosen over others
- They are highly palatable – meaning you can consume a lot without feeling full (they biologically do not trigger Leptin, the fullness hormone that tells you to stop!)
- They are 'empty calories' when these foods are chosen over whole foods a host of nutrients are left out. Generally high sugar,

high fat foods do not contain vitamins, minerals, essential fatty acids or any phytochemicals all of which support our health

- They produce a dopamine response. Dopamine is a neurotransmitter (one of our brains chemical messengers). Whilst it is linked with pleasure, it is also part of the reward centre of our brain this pleasure and reward aspect is linked to sugar addiction.

The Dopamine Response

Sugar activates the pleasure and reward centre of your brain, meaning that when you eat something sugary you release dopamine. You get a temporary 'pleasure response' but because it is also the centre of the brain associated with addiction you may find sugary foods addictive this means that once the initial 'hit' has worn off you crave some more.



As you eat more sugary foods you don't however get the same pleasurable feeling, if you had one biscuit initially the second time you may need two biscuits to get the same dopamine response, meaning that you need to eat more and more sugar to get the same dopamine response. Sugar acts in the same way as drugs - the more sugar you have the less dopamine released so you end up needing more to get the same 'hit'

The Blood Sugar Crash

These foods are 'simple' meaning they release their energy quickly into the bloodstream, this is what causes the blood-sugar to spike. Unlike foods that give a sustained release of energy (whole foods, proteins etc), this spike is closely followed by a crash. When our blood sugar levels drop, our mood usually does too. As we haven't had any 'real energy' we can feel hungry again very suddenly leading to shaking, irritability, lethargy, inability to concentrate etc.



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The Stress Response

Being on a blood-sugar roller coaster means our hormones and therefore emotions do the same thing. Many foods can help us to feel calm and in control of our emotions and these all support a stable blood-sugar level via a gradual release of energy (complex carbs, proteins etc). Sugary foods unfortunately have the opposite effect yet stimulate addictive tendencies towards the consumption of these foods this is why we promote foods that support a child's emotional well-being alongside their physical health.