Part 5A-3 – Anger and Anxiety

Symptoms

Main possible contributing factors:

- Unrecognized pain or discomfort
- Magnesium deficiency
- Food intolerances/opioid effect
- Excess glutamate and need for GABA
- High histamine from food or inhalant allergies

Common sources of pain to consider include:

- Ear infection
- Sore throat
- Headache
- Constipation or gas
- Gastroesophageal reflux ("heartburn")
- Dental pain (e.g. toothache, abscess)
- Head pain secondary to gluten sensitivity

Magnesium

Magnesium has calming effects on the nervous system. When magnesium is deficient, the following symptoms can occur, contributing to anger and self-injurious behaviours:

- Constipation (can contribute to worsened behaviour because of physical discomfort as well as inadequate excretion of toxins)
- ADHD symptoms, including hyperactivity and inattention
- Sound or light sensitivity
- Mood dysregulation, depression, anxiety, emotional overreactions
- Irritability, aggression, impulsivity
- Neuromuscular excitability, easy startle, brisk reflexes
- Sleep disruption, nightmares, night terrors

Calcium

Calcium intake should be adequate when taking magnesium. Excess magnesium intake can lower calcium, and excess calcium intake can lower magnesium. It is important to have balance.

Elimination of Opioid Food Culprits and Digestive Enzymes

Food proteins, particularly those from milk (casein) and wheat (gluten), may be incompletely digested to peptides and enter the bloodstream from the intestine visa an abnormally permeable intestinal lining (referred toa as “leaky gut”). These partially digested protein peptides can potentially cross the blood-brain barrier, negatively affecting brain function, including contributing to mood and behaviour by several mechanisms:

- Blocking neurotransmitter messages
- Causing opiate-like doping effects from gluten 9gliadorphin), milk casein (casomorphin), and soy
- Triggering brain inflammation

Need for GABA and Vitamin B6

Glutamate is a transmitter with excitatory effects in the brain. Excitatory glutamate converts to the calming neurotransmitter, gamma-aminobutyric acid (GABA). The amount of glutamate can increase in the brain if there is inefficiency in vitamin B6.

High glutamate is found in additives such as MSG and aspartame, which are the most problematic sources, and also in processed foods, milk products, grains, peanuts, and meats.

The negative effects of glutamate in the brain are modulated by the calming amino acid and inhibitory neurotransmitter GABA, which may be helpful for treating symptoms such as anger, aggression, self-injurious behaviours and also anxiety, obsessive-compulsive symptoms, perseverative behaviours, irritability, sleep problems, and language delays.

Histamine Reduction

Histamine is a chemical that the body releases in allergic reactions and is usually associated with a runny nose, nasal congestion, postnasal drip, itchy eyes, or nose and skin rashes.

Histamine is also an excitatory neurotransmitter that, when elevated, can increase irritability, frustration, anger, and aggression. Individuals who already have elevated neuronal histamine are more sensitive to the behavioural effects of histamine-releasing reactions. Suspect histamin as contributing to your child’s symptoms if behavioural symptoms are worse during allergy seasons.

Anxiety, Perseverations, Obsessive-Compulsive Symptoms, and Repetitive Behaviours

Anxiety and the behaviours that may accompany anxiety are common coexisting problems in autism. People with autism are more likely to have obsessions, perseverative or "stuck" behaviours, and repetitive or stereotyped body movements.

Symptoms/signs that may be exhibited:

- Anxiety or fears
- Rituals such as lining up objects, needing to touch things symmetrically or do things in a certain order or in a certain way
- Perseverations or obsessions with certain tools, videos, movies, or topics
- Collecting or grouping certain toys or objects
- Hand flapping, finger flicking, toe walking, body rocking

Main possible nutritional contributing factors:

- Magnesium deficiency
- Need for taurine
- Excess glutamate and need for gamma-aminobutyric acid (GABA)
- Histamine from allergies

Magnesium and Taurine

Magnesium has calming effects on the nervous system. Low magnesium levels result in neuromuscular excitability. A deficiency can increase anxiety, obsessive-compulsive behaviours, perseverations, and repetitive behaviours. Magnesium is a common nutritional deficiency in both children with ADHD or autism and the general population.

Taurine is a sulfur-bearing amino acid that improves magnesium cellular uptake and utilization. It is also a calming amino acid that supports GABA, an inhibitory neurotransmitter.

Calcium

Calcium intake should be adequate when taking magnesium. Excess magnesium intake can lower calcium, and excess calcium intake can lower magnesium. It is important to have balance.

Serotonin Support

Serotonin is an important transmitter in the brain that affects mood, emotions, behaviour, appetite, cognition, and sleep. The amino acid tryptophan coverts to 5-HTP, which then converts to serotonin; serotonin then converts to melatonin. Magnesium, vitamin B3, and vitamin B6 are important in serotonin metabolism. Low levels of serotonin can result in anxiety, depression, mood disorders, irritability, obsessive-compulsive symptoms, repetitive movements, and sleep disorders.

High Glutamate and Need for GABA and Vitamin B6

Glutamate is a transmitter with excitatory effects in the brain. Excitatory glutamate converts to the calming neurotransmitter, GABA. Glutamate can increase in the brain if there is inefficiency in the glutamate decarboxylase enzyme or deficiency of vitamin B6, which is necessary for the enzyme to function.

High glutamate is found in additives such as MSG and aspartame, and also in processed foods, milk products, grains, peanuts, and meats.

Histamine Reduction

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When anxiety interferes with sleep and allergies are an issue, antihistamine medications can be used short term to reduce the sleep disruption from histamine. However, they can also interfere with REM sleep, the most restorative part of the sleep cycle. The antihistamine nutrients (quercetin, pantothenic acid, and vitamin C) do not interfere with the sleep cycle.