

## **Autism and Gastrointestinal Issues**

This article is written from personal experience and whilst the long term management of the patient's gastrointestinal system has been formulated with experience, this may not be a solution to every child suffering long term constipation.

It is also not to be considered as a Medical solution, your own Health Professionals should be consulted for advice.

Much has been written on the association of mild diffuse brain abnormalities e.g. Autism with gastrointestinal conditions, and when it is considered that the gastrointestinal tract – the enteric nervous system, and, the brain- the central nervous system, whilst acting as separate entities, are connected and interrelated, the solution to the problem becomes clearer.

A common association with the onset of Autistic Spectrum disorders is the development of gastric disorders and other adverse reactions as a result of intake of foodstuffs. The intake of nutrients necessary for the survival of the organ can have such a negative effect on the organ when the nervous system is compromised by an adverse effect.

The manifestation of adverse effects, are usually, selective and restrictive diet (children with ASD often refuse food), constipation, and diarrhea. Individuals on the Autism spectrum are known to be sensitive to foods such as wheat (gluten) and all dairy products (casein).

The sensitivity associated with peptoid response in ASD, is not an allergic reaction with antigen response, but a toxic response.

Adverse effect includes dysregulation of enzymes such as cholecystokinin (CCK) and can lead to conditions such as, anorexia, obesity.

Childhood obesity a condition associated with Prader-Willi syndrome involves deletion of regions q11-q13 from chromosome 15

[The etiology of abnormal brain development is discussed elsewhere in web site [www.theautismcentre.co.uk](http://www.theautismcentre.co.uk)]

It is speculated that peptoids, opioid- like molecules, may be associated with the symptoms of autism, and that peptoids may be involved through neuroendocrinimmunological processes involved in the pruning of the CNS cells which occurs in utero and in the early years of infancy.

To understand the mechanisms involved to cause the symptoms of autism it is necessary to be aware of the presence of the second brain, better known as the Enteric Nervous System, and its effect on the Central Nervous System.

Gershon in his book "The Second Brain", recognises that the Enteric Nervous System (ENS) provides a window into the brain. This "second" brain is found in the tissue of the esophagus, stomach, small intestine and colon, collectively known as the gut. Previously thought of

as simply relay ganglia, the ENS, is now considered to be a complex brain and provided that the vagus nerve is intact, continuous messaging between the brain and the gut is carried out.

Within the ENS lies a complex collection of microcircuitry driven by more neurotransmitters and neuromodulators than found anywhere in the peripheral nervous system. Inside the ENS is nearly every chemical needed for brain function, serotonin, dopamine, glutamate, nitric oxide, neuropeptides, immune components, enkephalines, and enzymes. According to Kane, children with ASD, show complicated Glycemic Index aberration along with their CNS disturbance, and the impact on the second brain has to be taken into account.

Central Nervous System disturbance in Autism Spectrum Disorder has a principal effect on the regulation of all the brain chemicals, in particular one of the enzymes, cholecystokinin (CCK). CCK acts as a neuropeptide in the ENS affecting the intestine, pancreas and gallbladder. CCK acts as hormone, by regulating pancreatic enzyme secretion, gall bladder contraction, gastric emptying, plays an important role in insulin release, both by binding to receptors on B cells and neural regulation of insulin. CCK stimulates the action of secretin on pancreatic bicarbonate secretion, helps in the regulation of gastric emptying and stimulates intestinal activity.

CCK is the most abundant neurotransmitter acting in the brain, CCK-8, the octapeptide form found in the brain plays an important modulatory role in regulating GABAergic neuronal activity stimulating speech. This neuropeptide CCK is implicated in the regulation of food intake, and the sensation of satiety by the relationship with dopaminergic (DA) neurons from the mesencephalon projecting to the limbic forebrain and the ventromedial hypothalamus. CCK-DA containing pathways are related to neuropsychopathologies.

The patient was born preterm with a low birth weight, assisted by the use of forceps, to an older mother.

The patient missed a key milestone in its first year not crawling on hands and knees progressing directly to walking prior to its first anniversary. Issues about the condition of the patient were aroused at 18 months when all speech stopped and unusual behavioural traits were observed.

The patient was given a diagnosis of autism at the age of 4.

Gastrointestinal problems were in place from a very early age and toileting management was an issue. Motions were irregular diarrhoea and constipation being observed, faecal mass often being yellow.

Only after considering the patients diet, was foodstuffs containing casein, added refined white sugar, omitted from her diet, did the condition improve.

Even so faces continued to contain undigested food and as a result of reading medical papers discussing the benefits obtained by administering secretin to autistic children, was administration of homeopathic secretin found to be of assistance to the patient. Toileting became regular and predictable at which point secretin was removed from the programme.

The gastrointestinal issue reappeared after some years, at which point homeopathic secretin was reintroduced, regularity returned until the patient was affected by influenza.

Constipation returned after the influenza subsided and mega rectum along with the small intestine and the large bowel full of impacted faeces confirmed by radiography examination. After many months of enemas, suppositories, mega-doses of laxatives, homeopathy was introduced in the form of Nux Vom giving 2 drops twice a day, after 4 days, the system cleared. The patient's diet has again been modified, supplemented by the use of digestive enzymes, probiotics and high uptake magnesium containing compounds to stabilize the system. In addition pelvic floor exercises are done on a daily basis to strengthen abdominal muscles to assist the pelvic floor muscles in order to regain sphincter control.

The patient is now passing motions every day with small exceptions of once every two days.

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October 2009