Autism and Schizophrenia subgroup related to blockage by toxic exposures of enzymes processing gluten and casein, B.Windham (Ed), 2008

(affects at least 65% of autistic children (100) ) (overlaps with other mechanisms documented in (110) )

A direct mechanism involving mercury’s inhibition of cellular enzymatic processes by binding with the hydroxyl radical(SH) in amino acids appears to be a major part of the connection to allergic/immune reactive conditions(15-23,28,36,47,51,98). For example mercury has been found to strongly inhibit the activity of xanthine oxidase(16) and dipeptyl peptidase (DPP IV) which are required in the digestion of the wheat protein gluten or the milk protein casein (15,17,19,20,22a,24,-26,98, 105) - the same protein that is cluster differentiation antigen 26 (CD26) which helps T lymphocyte activation. CD26 or DPPIV is a cell surface glycoprotein that is very susceptible to inactivation by mercury binding to its cysteinyll domain. Mercury and other toxic metals also inhibit binding of opioid receptor agonists to opioid receptors, while magnesium stimulates binding to opioid receptors(15). Studies involving a large sample of patients with autism, schizophrenia, or mania found that over 90 % of those tested had high levels of the milk protein beta-casomorphine-7 in their blood and urine and defective enzymatic processes for digesting milk protein(24,25,27), and similarly for the corresponding enzyme needed to digest wheat gluten (24,26). Like casein, gluten breaks down into molecules with opioid traits, called gluteomorphine. As with caseomorphin, it too can retain biological activity if the enzymes needed to digest it are not functioning properly.

Proteins in bovine milk are a common source of bioactive peptides. The peptides are released by the digestion of caseins and whey proteins (105). In vitro the bioactive peptide beta-casomorphin 7 (BCM-7) is yielded by the successive gastrointestinal proteolytic digestion of bovine beta-casein variants A1 and B, but this was not seen in variant A2 or in goats milk. In hydrolysed milk with variant A1 of beta-casein, BCM-7 level is 4-fold higher than in A2 milk. Variants A1 and A2 of beta-casein are common among many dairy cattle breeds. A1 is the most frequent in Holstein-Friesian (0.310–0.660), Ayrshire (0.432–0.720) and Red (0.710) cattle. In contrast, a high frequency of A2 is observed in Guernsey (0.880–0.970) and Jersey (0.490–0.721) cattle(105). In children with autism, most of whom have been found to have been exposed to high levels of toxic metals through vaccines, mother’s dental amalgams, or other sources; higher levels of BCM-7 is found in the blood(24-26).

BCM-7 appears to play a significant role in the aetiology of human diseases(105). Epidemiological evidence from New Zealand claims that consumption of beta-casein A1 is associated with higher national mortality
rates from ischaemic heart disease. It appears that the populations that consume milk containing high levels of beta-casein A2 have a lower incidence of cardiovascular disease and type 1 diabetes. Beta-casomorphin-7 has opioid properties including immunosuppression, which account for the specificity of the relation between the consumption of some but not all beta-casein variants and diabetes incidence. BCM-7 has also been suggested as a possible cause of sudden infant death syndrome (SIDS). In addition, neurological disorders, such as autism and schizophrenia, appear to be associated with milk consumption and a higher level of BCM-7 (105).

The studies also found high levels of Ig A antigen specific antibodies for casein, lactalbumin and beta-lactoglobulin and IgG and IgM for casein. Beta-casomorphine-7 is a morphine like compound that results in neural disfunction (24,25), as well as being a direct histamine releaser in humans and inducing skin reactions (14,21,25c). Similarly many also had a corresponding form of gluten protein with similar effects(24,26). Elimination of milk and wheat products and sulfur foods from the diet has been found to improve the condition of ASD children (100,28,etc.). A double blind study using a potent opiate antagonist, naltrexone(NAL), produced significant reduction in autistic symptomology among the 56% most responsive to opioid effects(28). The behavioral improvements was accompanied by alterations in the distribution of the major lymphocyte subsets, with a significant increase in the T-helper-inducers and a significant reduction of the T-cytotoxic-suppressors and a normalization of the CD4/CD8 ratio. Studies have found mercury causes increased levels of the CD8 T-cytotoxic-suppressors(29). As noted previously, such populations of patients have also been found to have high levels of mercury and to recover after mercury detoxification (23,11,22a,30,40,96,100). As mercury levels are reduced the protein binding is reduced and improvement in the enzymatic process occurs(22a,11,96).


(22) Windham, B. Annotated Bibliography: Adverse health effects related to mercury and amalgam fillings and clinically documented recoveries after amalgam replacement. (over 3000 peer-reviewed references); www.flcv.com/amalg6.html

& (b) Prenatal and neonatal effects of mercury on infants, www.flcv.com/fetaln.html


Milk Linked to Autism, Schizophrenia
http://www.bzz1.com/coucowley/?page=page2
http://www.notmilk.com/zerodairy.html


(100) Results of treatment survey of 25,000 parents of autistic children, Autism Research Institute, www.autism.com/treatable/form34qr.htm


& rest in (110) www.flcv.com/kidshq.html

Bron: http://www.flcv.com/autismsgc.html