

The improvement of some autistic people on secretin has been nothing short of miraculous. No one knows exactly how secretin, which is active in the brain on many levels, is working to bring about behavioral changes.

One thing is clear; autistic people have some very strange compounds in their urine that do not appear in the urine of normal people. One such compound is dermorphin, a very powerful mu-opioid agonist that is known to decrease gastric acid secretion. One theory as to the apparent "secretin deficiency" seen in many autistic patients is that the pH of the contents in the upper duodenum never gets low enough (not enough Hydrochloric acid) to cause the mucosal cells to release secretin.

Many autistic people have been found to have low levels of amino acids, even though their diet is sufficient to support normal levels. There are break-down products of proteins that cannot be broken down completely because the enzyme that cleaves certain peptide bonds is either missing or inactivated. Gluten and casein are two of the proteins from which these opioids can be produced due to incomplete digestion.

A strict gluten-free and casein-free diet does in reality appear to be essential in avoiding further damage by these opioid peptides. It does appear also that early institution of the diet is critical if one has a chance of recovery via dietary means.

There is therefore very strong indication that improvement of the digestive process could be very beneficial. The following program deserves serious consideration. Also normal thyroid function is very important.

Increase the hydrochloric acid contents of the stomach. Strong acid chyme is needed to release secretin in the duodenum.

Supplement enteric coated alkaline salts. Bicarbonates are essential to activate the pancreatic enzymes.

Avoid fluids during eating so as not to dilute the HCl.

Supplement glutathione as low levels have been demonstrated in autism.

Other supplements include **zinc**, **selenium**, **vitamin E Ascorbyl Palmitate** and **Omega-3 (FISHOL E.C.)**