

Diet and Autism - Is there a relationship?

The Autism Families research team have recently begun a new collaboration with Professor Peter Clayton and his team at ICH to try to begin to unravel the possible link between diet and autism spectrum disorders.

It seems that the new 'hot topic' for autism is the relationship between autistic features and diet. Simply putting the words 'diet' and 'autism' into google comes up with 377,000 hits. Some articles tell you about the wonders of a gluten free diet or the benefits of a dairy-free diet. Other articles tell you that there is simply no relationship between nutrition and behaviour.

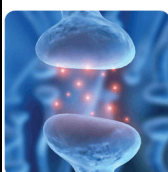
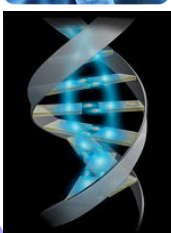
Currently, there is simply not enough rigorous, scientific research to be able to say precisely what is true and what is simply conjecture. So, we are putting our thinking caps on and throwing our thoughts into the mixing bowl.

Professor Peter Clayton works within the Paediatric Metabolic Disease & Hepatology Unit at ICH and the Metabolic Medicine department at GOSH. His team have noticed that some of their patients with metabolic disorders, who also have a diagnosis of autism have high levels of a chemical in the blood called pyridoxal phosphate.

Pyridoxal phosphate is the active form (that is the bit that does all the work) of vitamin B6, a vitamin that is found in foods such as meat, whole-grain products and nuts. Pyridoxal phosphate is involved in the manufacture of serotonin by the body.



We have known since 1961 that approximately one third of children with autism (at the severe end of the autistic spectrum) have increased levels of serotonin in their blood. Serotonin is a neurotransmitter in the brain, a chemical that helps nerve cells to communicate with one another.



Through transmitting signals between nerves, a number of functions in the human body are controlled including the appetite, sleep and behaviour.

Many people think that an abnormality of the serotonin system in the brain may be crucial in the development of autistic symptoms, however the reason for this is still not clear.

The current study is investigating the possibility that there is a link between a high level of pyridoxal phosphate and a high level of serotonin. If this link can be found, then it may be possible to alter an individual's behaviour or mood through increasing or decreasing levels of pyridoxal phosphate, or vitamin B6, in their diet.

We believe that this is a highly significant project, in the step forward in understanding autism. Many of the families we speak to already look to their children's diet to help manage challenging behaviour, this research aims to establish a strong scientific link between a specific area of diet and behaviour which may eventually lead to new forms of treatment.

Professor Peter Clayton's team are looking for children with autism and their families who are willing to take part in their research project. This would involve the whole family coming to Great Ormond Street Hospital and having a blood sample taken, parents would also be asked to complete a dietary record for their child and take part in an interview about their child's abilities.

If you are interested in taking part, please contact us either via email at interaction@ich.ucl.ac.uk, or by phone on 020 7829 8679 ext 8099 and we will send you further information about the study.