

Some Actions to Alleviate Symptoms of Autism

*Kaufui V Wong

College of Engineering, Mechanical and Aerospace Engineering Department, USA

Received: May 28, 2017; Published: June 08, 2017

*Corresponding author: Kaufui V. Wong, Professor, College of Engineering, Mechanical and Aerospace Engineering Department, Miami, Florida, USA

Abstract

A mini review has been performed regarding the causes of autism. There are genetic factors and environmental factors. With the objective of helping parents of autistic children, this work has presented many categories of foods which could help lessen autistic symptoms. There are also some types of foods which should be avoided; these include gluten, casein, soy, and refined sugar. Regular and proper exercise for the autistic children is fundamental, as it is for all humans. It is best to do one's best for the nutrition of children with autism, as well as to encourage them with a regimen of proper physical exercise.

Keywords: Measles; Mumps; Rubella; Vaccine; Peptide; Syndrome

Background

Of the causes related to autism, a popular one (that comes to mind, because of all the publicity) includes the mumps, measles and rubella vaccine. Apparently, the academic literature shows no causal relationship yet between mumps, measles and rubella vaccine with autism [1-3]. Reference [4] is a study about the theoretical aspects of autism. Autism is a neuro-developmental syndrome categorized by reduced communication skills, social challenges and repetitive behaviors. Depending on the health professional involved, weird or unusual behavior (which is not common among their peers) have also been included in the categorization. Several lines of reasoning suggest that genetic, environmental, and immunological factors may be significant in the production and development of the disease.

In reference [5], Sun and Cade discovered a peptide found in schizophrenia and autism, is a source of behavioral changes in lab animals. The findings in [6] include a table showing the genetic syndromes related with autism. Autism is not a single syndrome, but a spectrum of syndromes, the autism spectrum disorder (ASD). A table in [6] lists 10 candidate genes associated with autism. In addition, metabolic diseases related with autism have been tabulated.

Data about Autism

There seems to be controversy regarding the number of autism cases in the United States (U.S.). In reference [7], it is reported about a recent government survey which pegs the number as 1 in 45 of children from 3 to 17 who have ASD. Since the newer numbers come from a parent survey, they do not substitute the Center of Disease Control's (CDC's) 1 in 68 result as the official

estimate of autism in the U.S. However, the CDC has recognized that its estimate has significant restrictions. The CDC's result comes from an investigation of the medical and school records of 8-year-old children at monitoring sites across the U.S. It is obvious that it would not include children who are not receiving medical or special education services related to autism, many believed to be Hispanic or African American. The newer number of 1 in 45 does work out to be about 2 percent of the children, which is a rather high number. From reference [8], the first scientific evaluation of autism in Mexico pins the number at 1 in 115. While this figure is better than that in the U.S., it may be an underestimate. From [9], it is posited that China has millions of people who suffer from ASD.

Foods for Children with Autism

There are not exactly a lot of information on the Internet regarding cures/therapies for autism. Likewise, there is not much information regarding foods for children with autism. Reference [10] is a rare website dedicated to foods for children with autism. Research published by Autism Speaks, a world organization dedicated to help autistic people, indicate that a conventional group of biochemical ways (trans sulfuration, sulfation and methylation) tend to aggravate autism. These biochemical pathways are associated with "detoxification, heavy metal removal, digestion, immune function and gut integrity" [10].

Very common sources of food sensitivities include gluten, casein and soy. Common physical symptoms are infections (more common than normal), sleeping problems, non-localized pain/inflammation and the infamous 'brain fog'. These symptoms are often the result of microbe overgrowth and excessive toxins [10]. The objective is then

to return the gut to a healthier condition. Anti-inflammatory foods such as omega-3 rich seafoods like wild-caught salmon, sardines as well as flax seeds and walnuts should be consumed.

Pro and pre-biotics are foods which promote healthy gut bacteria; in so doing, they help to decrease gut inflammation. Pro-biotics are found in fermented foods such as kefir, fermented cod liver oil and cultured vegetables including sauerkraut and kimchi, and traditional Chinese preserved vegetables salted with clean salt, and without other preservatives. Foods rich in pre-biotics are also high in good soluble fiber which includes bananas, beans/legumes, peas, kefir/yogurt, garlic, leeks, onions, and asparagus.

Discussion and Conclusion

A mini review has been made about the causes of autism in children. It seems that autism in adults is a consequence of having autism in childhood. Many of the factors relevant to the disorder include genetic factors. The environmental factors are a problem area where parents of autistic children may have some control. To this end, this work has presented many categories of foods which could help reduce autistic symptoms in children (and possibly for autistic adults too). There are also some categories of foods which should be avoided; these include gluten, casein, soy, and refined sugar. There is no mention of regular and proper exercise for the autistic children, but that is fundamental for human health. It is best to do one's best for the nutrition of children with autism, as well as to encourage them with a schedule of regular physical exercise. Therapy with psychologists and other mental-health professionals is also recommended.

Acknowledgment

This paper is dedicated to all the autistic people in the world. Autistic children are helped through established mechanisms through the school systems of the U.S. Autistic adults need assistance too.

References

1. Taylor B, Miller E, Farrington C, Petropoulos MC, Favot-Mayaud I, et al. (1999) Autism and measles, mumps, and rubella vaccine: no epidemiological evidence for a causal association. *The Lancet* 353(9169): 2026-2069.
2. Madsen KM, Hviid A, Vestergaard M, Schendel D, Wohlfahrt J, et al. (2002) A population-based study of measles, mumps, and rubella vaccination and autism. *N Engl J Med* 2002(347): 1477-1482.
3. Taylor B, Miller E, Lingam R, Andrews N, Simmons A, et al. (2002) Measles, mumps, and rubella vaccination and bowel problems or developmental regression in children with autism: population study. *BMJ* 324(7334): 393-396.
4. Ratajczak HV (2011) Theoretical aspects of autism: Causes-A review. *Journal of immunotoxicology* 8(1): 68-79.
5. Sun Z, Cade JR (1999) A peptide found in schizophrenia and autism causes behavioral changes in rats. *Autism* 3(1): 85-95.
6. Benvenuto A, Moavero R, Alessandrelli R, Manzi B, Curatolo P (2009) Syndromic autism: causes and pathogenetic pathways. *World journal of pediatrics* 5(3): 169-76.
7. Autism Speaks (2015) New government survey pegs autism prevalence at 1 in 45.
8. Autism Speaks (2017) Autism Prevalence.
9. Autism Speaks (2000) Millions of People in China likely to have Autism.
10. Banks JS (2012) Foods for Children with Autism.



Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<http://biomedres.us/>