

DISCLAIMER

The information contained within this document does not constitute medical advice or diagnosis and is intended for education and information purposes only. It was current at the time of publication and every effort is made to keep the document up to date.

The information contained herein includes both psychological and non psychological interventions. The delivery of psychological services requires a medical referral whilst non psychological services do not.

Each person is an individual and has a unique psychological profile, biochemistry, developmental and social history. As such, advice will not be given over the internet and recommendations and interventions within this website cannot be taken as a substitute for a thorough medical or allied health professional assessment or diagnosis.

Date Document Updated : March 2005

Nutrition

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INTRODUCTION

Nutrition is the study of the food and liquid requirements of human beings for normal physiologic function, including energy, need, maintenance, growth, activity, reproduction, and lactation.¹ Nutritional science is the evidence-based application of the study of the relationship between diet and optimal health and wellbeing.

In today's fast paced life style, 'fast foods' have become an accepted trend and with that trend, a whole plethora of 'disease' processes which were rare in our grandparent's time have emerged with life-threatening consequences.

Most fast / convenience food contains additives and / or trans-fats (trans fatty acids are the altered chemical structure of unsaturated fatty acids in dietary oils after they have been modified from their natural cis-fatty acid state - i.e.: heating).

Trans fatty acids increase weight, promote 'bad' cholesterol (LDL) and, over time, cause a slowing of the conduction of electrical impulses in the axonal sheath of neurons within the brain giving rise to increased risk of cardiac, neuropsychological and other serious conditions.

Gluten and casein proteins found in wheat, rye, barley and oats and dairy products respectively, have been shown to be toxic to the gut and brain in susceptible individuals. Gluten is hydrolysed in the digestive system to yield a peptide alpha-gliadin, a well established intestinal irritant.^{2,3} To all individuals. Casein is converted to Beta-casomorphin-7, which is capable of crossing the blood-brain barrier⁴ and binds to opioid receptors.^{5, 6} Both gluten and casein are implicated in a wide range of disorders including: Diabetes^{7, 8}, Ischaemic Heart Disease^{7, 9} and Neurological Disorders.^{10, 11}

Food additives commonly utilised in processed foods in Australia have been shown to directly cause inattention and behavioural problems as well as cancer to name but a few ailments. (See the [Food Standards Australia and New Zealand](#) website for a list of numbers corresponding to the types of additives and the [Health And Environment](#) website for more information on the physiological effects of those additives complete with references). Our water supply is also suspect, so see in the Further Reading section of this paper the article on ['Water, your body's preferred beverage'](#) for more information.

We truly are what eat, drink and breathe!!!!

Nutrients are the building blocks of human physiology and play a key role in a person's health and wellbeing. Current medical literature increasingly bears out the fundamental role of good nutrition in health-optimisation and the prevention and treatment of many common conditions.

Aspects of nutrition to be taken into consideration when investigating causes of any condition include such factors as:

- The person's external environment, taking into account their particular allergies, sensitivities, toxicities etc.
- As well as their internal environment. The level of that individual's ability to detoxify, the condition of the Gastro Intestinal (GI) tract, gut flora balance (good vs. bad bacteria), the integrity of their intestinal wall (inflammation and leaky gut syndrome in particular as this will reflect their capacity for nutrient absorption and potential of toxins to cross the blood-brain barrier inviting neurological problems)
- And of course the integrity of the immune system.

Common clinical presentations of childhood complaints such as earaches, runny noses, tummy aches and / or inattentiveness may be due to underlying undiagnosed metabolic, immune or gut problems. These can lead to more serious neurological, learning or behavioural disorders.

An increasing body of evidence now points to the role of the gut in optimal brain function and behaviour.

Some recently published books highlighting the gut-brain connection in Autism, ADHD, Learning Disabilities, Schizophrenia, Dyspraxia, Anxiety, Depression, and Dyslexia include:

- "Gut and Psychology Syndrome (GAPS)" Dr Natasha Campbell-McBride, neurologist and nutritionist
- "Children with Starving Brains" by Dr Jaquelyn McCandless, psychiatrist and neurologist
- "Is Your Child's Brain Starving", by Dr. Michael R. Lyon, M.D.
- "They Are What You Feed Them", by Dr. Alex Richardson, Senior Research Fellow, Department of Physiology, Anatomy and Genetics, University of Oxford; and Founder / Director of FAB (Food And Behaviour) Research.
- "Natural Healing For Schizophrenia - and other mental disorders" by Eva Edelman
- "The Encyclopedia of Clinical Nutrition, Volume 1 - The Nervous System" by Henry Osieki
- "Nutritional Influences on Mental Illness" by Melvyn Werbach. M.D.

Many children and adults with undiagnosed food allergies and intolerances respond profoundly to dietary modification and / or supplementation of specific nutrients with improvements in health, behaviour and immune strength. Symptoms of [Autism Spectrum Disorders](#), [Attention Deficit / Hyperactivity Disorder](#) etc. may in most children be improved with sound, evidence based nutritional intervention with a decreased reliance on prescription medication.

FURTHER READING SUGGESTIONS

- Water, Your body's preferred beverage
- Food Allergies
- Autism
- Attention Deficit Disorder (ADD) & Attention Deficit Hyperactivity Disorder (ADHD)

For more information or to make an appointment please contact us on (02) 9637 9998 during business hours.

LINKS

PLEASE NOTE :

Learning Discoveries offers the links below as a convenience to our clients and the users of this website. However, we do not control third party websites and we are not responsible for the websites content.

- **Food Standards Australia and New Zealand**

<http://www.foodstandards.gov.au/>

A bi-national Government agency, where its main responsibility is to develop and administer the Australia New Zealand Food Standards Code (the Code), which lists requirements for foods such as additives, food safety, labelling and GM foods.

- **The Australian College of Nutritional and Environmental Medicine (ACNEM)**

http://www.acnem.org/modules/mastop_publish/

The premier Australian body offering post-graduate study of nutritional medicine to medical and allied health professionals.

- **True Food Guide by Greenpeace Australia**

<http://www.truefood.org.au/truefoodguide/>

Australia currently has limited labelling laws for genetically engineered (GE) foods. That's where the Truefood Guide comes in handy. The Guide rates food brands and products as Green (GE-free) and Red (may contain GE ingredients).

This is essential reading for all people especially those with young children, and those who experience developmental, learning, behavioural or psychiatric disorders.

- **Food and Behaviour Research, Dr Alex Richardson**

Senior Research Fellow, Centre for Evidence-Based Intervention, University of Oxford; Visiting Research Fellow, Dept of Physiology, Anatomy and Genetics, University of Oxford; Founder Director of Food and Behaviour Research

http://www.fabresearch.org/view_item.aspx?item_id=473

Food and Behaviour Research (FAB Research) is a charitable organisation dedicated both to advancing scientific research into the links between nutrition and human behaviour and to making the findings from such research available to the widest possible audience.

- **The GFCF Diet Autism Diet Resource**

<http://www.gfcfdiet.com/>

Assisting Parents and Individuals with information about The GFCF Diet Dietary Intervention may be that one piece of "the puzzle" which helps a child with ASD toward the road for recovery.

REFERENCES

1. Stedmans Medical Dictionary, Lipincot, Williams and Wilkins, NY, 2000
2. Clemente MG, De Virgiliis S, Kang JS, etal: Early effects of gliadin on enterocyte intracellular signalling involved in intestinal barrier function, Gut 52: 218-223, 2003.
3. Giovanni C, Mataresse P, Scazzocchio B, etal: Wheat gliadin induces apoptosis of intestinal cells via autocrine mechanism involving Fas-Fas ligand pathway, FEBS Lett 540: 117-124, 2003.
4. Banks WA, Kastin AJ, 1987, Saturable transport of peptides across the blood-brain barrier. Lif Sci 14:41(11); 1319-38.
5. Paroli E, Opiod peptides from food (the exorphins). Wld. Rev. Nutr. Diet. 1988 ; 55; 58-97.
6. Teschemacher H. Casein-derived opioid peptides: physiological significance. Adv. Biosci. 1987, 65; 41-48.
7. Laugesen M, Elliott, R. 2003. Ischaemic Heart disease, Type 1 diabetes, and cow's milk A1 Beta-Casein. The New Zealand Medical Journal, V116(1168).
8. Bigisdottir B E, Hill J P, Harris D P, Thorsdotter M. 2002. Variation in consumption of cows milk proteins and lower incidence of Type 1 diabetes in Icelan vs 4 other Nordic countries. Diab. Nur. Metab. 15: 240-245.
9. McLachlan C N S. 2001. Beta-Casein A1, ischaemic heart disease mortality, and other illnesses. Med. hyp. 56(2), 262-272.
10. Sun Z, Cade R. 2003. Findings in normal rats following administration of gliadomorphin-7 (GD-7). Peptides Feb; 24(2): 321-3.
11. Chabance B. etal. 1998. Casein peptide release and passage in the blood after consumption of milk or yoghurt. Biochimie 80(2), pp 155-165.