



Nutrition and Diet for Dyslexia (SLD)

What is Dyslexia?

Dyslexia is a type of specific learning difficulty (SLD) in which the person has difficulties with language and words. Other SLDs includes visual processing disorder, auditory processing disorder, dyspraxia, dyscalculia, dysgraphia and Attention Deficit Hyperactivity Disorder (ADHD) [1].

Dyslexia and Diet

The role of diet in SLD management is complex as the condition may be compounded with or without co-existing health issues and therefore a highly individualised approach is needed. It is useful for the child to undergo a [nutrition assessment](#) to determine if there are any underlying dietary issues which can impact on their attention, mood, irritability, energy levels and growth & development. Dietary issues that are not uncommon for children with SLDs include fussy eating, monotonous food choices, texture/taste sensitivities, food chemical intolerances, aromatic (smell) sensitivities and under/over-eating. Other health issues that could cause learning difficulties such as coeliac disease can also be detected in nutrition assessment [2].

“smart-oil” supplements in the form of capsule or from natural food source

Polyunsaturated fatty acids (PUFAs) are essential nutrients for humans, and some of which must be obtained from food. The term unsaturated refers to the presence of double bond in the fatty acid, which affects the state/stability at room temperature. PUFAs has more than one double bonds whereas monounsaturated fatty acids (MUFAs) has only one double bond and saturated fatty acids (SFAs) refers to the absence of double bond in the fatty acid. Two of the most interested PUFAs are Omega-3 (ω -3) and Omega-6 (ω -6) long-chain fatty acids (LC-PUFAs) the numbers 3 and 6 refer to position of the first double bond from the methyl end of the fatty acid. Both of the LC-PUFAs are structural and functional components of cell membranes. Two ω -3 LC-PUFAs, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) often referred to as “smart oil” owing to their vital role in brain development [3]. Both ω -3 and ω -6 LC-PUFAs are required in the development and maturation of neuronal structures, moreover, they are essential throughout the entire life span for maintaining normal brain and nervous system function[3]. Some children with SLDs have been found to be deficient in these PUFAs, and it is argued that supplementation of PUFAs may help these children improve their learning abilities [4]. However, a Cochrane review published in 2012 concluded that there is insufficient evidence to draw any conclusion about the use of PUFAs for children with SLDs and points out the need for well-designed randomised studies to support or refute the use of PUFAs supplements in this group of children [4].

Fish in our diet

Fish provides high quality proteins and several vitamins and minerals, and oily fish is a good natural source of omega-3 LC-PUFAs. To maintain general health, children should eat at least two to three serves (a serve is around 75g) of fish per week, preferably oily fish such as mackerel, salmon, canned tuna or sardines [5]. All fish contain mercury in various amounts as mercury is a naturally occurring element that is found in air, water and food, but the larger the fish the more mercury it tends to contain as it is higher up in the food chain. The consumption of fish that contain higher levels of

mercury include shark (commonly found in fish fingers as flakes), ray, swordfish, barramundi, gemfish, orange roughy, ling and southern bluefin tuna should be limited (or avoided) for young children as they are more vulnerable to mercury in food because their brain and nervous system are in the stage of rapid development and they eat more food per kilogram of body weight than adults resulting in relatively higher exposure to mercury [6].

Remember...

Dietary advice from well meaning, unqualified or non-evidenced based sources can be counter-productive to an individual's requirements. It can also be un-necessarily stressful or expensive for families and individuals. An Accredited Practising Dietitian (APD) is the only registered dietitians employed by hospitals and many of them work in private practices, they can provide you with expert individual nutrition advice or medical nutrition therapy on a range of health conditions. Visit the Dietitians Association Australia and use the link <http://daa.asn.au/for-the-public/find-an-apd/> to find an APD.

References

1. Better Health Channel, the State of Victoria, *Dyslexia*, 30th October, 2013, http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Dyslexia_explained
2. ADHD | LADS WA, 30th October, 2013, <http://www.ladswa.com.au/>
3. Richardson, A. J. and Montgomery, P. 2005, 'The Oxford-Durham study: a randomized, controlled trial of dietary supplementation with fatty acids in children with developmental coordination disorder', *Pediatrics*, vol. 115(5), pp. 1360-6.
4. The Cochrane Database Systemic Reviews (Tan et al), 2012, 'Polyunsaturated fatty acids (PUFAs) for children with specific learning disorders', <http://www.ncbi.nlm.nih.gov/pubmed/23235675>
5. National Medical Health and Medical Research Council website, 30th October, 2013, <http://www.eatforhealth.gov.au/food-essentials/five-food-groups/lean-meat-and-poultry-fish-eggs-tofu-nuts-and-seeds-and>
6. Food Standards Australia New Zealand (FSANZ), *FSANZ advice on fish consumption*, update, 30th October, 2013, <http://www.foodstandards.gov.au/consumer/chemicals/mercury/documents/mif%20brochure.pdf>

Sydney Dietetics runs [Kids Nutrition Workshop](#) regularly. All workshops are run by APDs. We run [weekend workshop](#) at Balmain, Sydney and we also run workshop as part of [after school care](#) and [vacation care](#). The workshop aims at increasing children's food literacy to empower them to make healthy food choices. For more information please visit our website.



Kids Nutrition Workshop

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