

Food For Thought

Do you know what your Brain is made of, or the food it requires to stay healthy?

It's the most important organ in the body, applying central control over all our other organs and systems, by sending chemical messengers throughout the body via the nervous system. Yet, how many of us know what our brain is made of? We asked, **Ciara Beaugé, BA (hons) Psychology, Dip NT. mNTOI**, a director of the Nutritional Therapists of Ireland (NTOI), who specialises in mental health, eating disorders and digestive issues, to simplify and educate us on the matter (no pun intended).

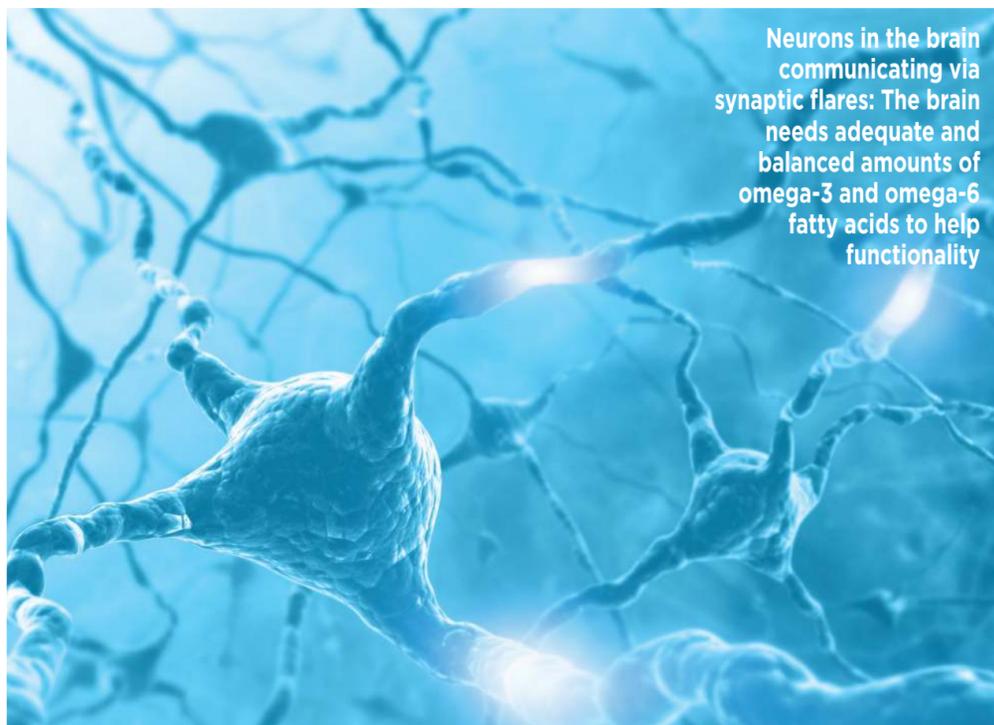
"The human brain is 60% fat, the most abundant of which are the omega-3 and omega-6 essential fatty acids. These are the prime structural components of our brain cell membranes

constitutes 20% of the total fatty acids in the cerebral cortex, the outermost layer of the brain responsible for sophisticated information processing like memory and attention.

"A problem we face today is that our modern western diet contains too much omega-6 from seed oils (corn, sunflower and sesame oils) used in processed foods and too little omega-3 from fish."

(cell wall)," Ciara explains. The omega-3 fatty acid, Docosahexaenoic acid (DHA), which we acquire from eating fish,

Ciara continues, "The brain sends chemical messengers called Neurotransmitters throughout the body from cell to cell, telling each organ how to work. These cells need adequate and balanced amounts of omega-3 and omega-6 fatty acids. The ratio today can be as bad as 25:1 omega-6



Neurons in the brain communicating via synaptic flares: The brain needs adequate and balanced amounts of omega-3 and omega-6 fatty acids to help functionality

"Available from Sam McCauly Chemists, Mulligan's Pharmacies, The HealthStore, Quay Co-op and all leading independent pharmacies and healthstores."

to omega-3 consumption. Basically, we need lots more fish and far less chips!"

The omega-6 exception; a cause of confusion.

"There is one type of omega-6 (named GLA or Gamma Linolenic Acid) that does require supplementation because GLA is found in few dietary sources, such as borage and evening primrose oils." GLA promotes the production of beneficial prostaglandins, supporting brain function and mood, and works best when taken along with the EPA and DHA from fish and fish oil.

Brain Communication – omega-3 fatty acids are essential for the fluid transmission of brain signals.

"At the risk of over simplification, the majority of the fatty acids that form our cell membranes need to be the omega-3 fatty acid, DHA. If so, the Neurotransmitters (messengers) such as serotonin and dopamine, which greatly affect our mood and behaviour, can continuously pass through one cell membrane and into another, unimpeded until it gets to where it needs to go. However, if there's inadequate omega-3 and too much omega-6 forming the cell membrane, the messenger cannot get

through the membrane and doesn't get to where it needs to go." Several diseases are associated with this dysfunction, including Parkinson's disease, schizophrenia, attention deficit hyperactivity disorder (ADHD) and restless legs syndrome.

Why it's so important that we educate ourselves and our children about our brain and its needs.

An already huge body of global research is increasingly showing that low levels of DHA have been linked to depression, bipolar disorder, attention deficit disorder, schizophrenia, memory loss, autism, general learning difficulties and bad moods. "If we do not feed our cell membranes enough preformed omega-

3 DHA (fish and fish oil), the messages can get blocked and that causes problems." A total of 300,000 Irish people suffer from

"Arctic cod (rather than Atlantic cod) is a great source of omega-3s, EPA and especially DHA"

depression (7.7% of the population). Today, one in five young Irish adults experience mental health issues and 10% of our adolescents (13-19yrs) have a major depressive disorder. The Irish suicide rate has doubled since the early 1980s; the suicide rate among teenage girls is now higher in Ireland than any EU state, while the rate among young Irish males is the second highest. "It would be ridiculous to blame nutritional deficiency alone. There are certainly many influencing factors, such as substance abuse, a stressful lifestyle, genetics, etc. Each individual should assess if and how these influences affect their life, however, we do know that nourishing the brain with its key building block, omega-3 DHA, is essential for proper brain development and function."

How much omega-3 fatty acid is enough, and what is the safest and most effective source?

"The World Health Organisation recommends 500mg of combined EPA and DHA daily, to avoid deficiency. The American Psychiatric Association recommends as much as 1 to 4 grams daily for high-intensity support." The amount each individual needs to consume to achieve balance depends on several factors, including the amount of omega-6 (processed foods) they consume.

Unfortunately, many people just will not eat fish regularly and sometimes they are instructed not to—during pregnancy for example, because of concerns about toxins such as heavy metals, PCBs and dioxins.

However, pregnancy is when a woman needs DHA the most, for the proper development of the foetus's brain and the maintenance of the mother's (who supplies the foetus). In either situation, I would recommend a high quality fish oil or cod liver oil." **Nordic Naturals** offer the only 100% Arctic cod liver oil on the market without any fish body oils or synthetic vitamins or additives; only pure Arctic cod (Skrei), which has the highest DHA, vitamin A, and vitamin D content of any cod species. No other brand can honestly make the same claim.

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