Nutritious & Delicious

HEALTH MATTERS!

WITH **GARY BAVERSTOCK**
NUTRITIONAL THERAPIST

Food and Mood

What you eat can have a dramatic effect on how you think, the mood you are in and your level of mental alertness, as well as impacting on your motivation and overall sense of wellbeing. This sheet will guide you on what to eat to help you achieve optimal mental health.

Vital brain nutrients

Carbohydrates – The Blood Sugar Connection

Carbohydrates provide glucose, an essential energy source for the brain that needs to be maintained within strict limits (by homeostasis). Dramatically fluctuating blood sugar levels, caused by refined carbohydrates and stimulants are known to affect mood, energy and concentration levels, and may also upset hormone balance, which may result in feelings of depression, apathy and fatigue as well as disruption of sleep patterns. Hence, restoring blood sugar balance is a vital part of achieving optimal mental health. Meals and snacks should contain complex carbohydrates - i.e. whole grains that contain not only complex sugars for energy, but crucially fibre that slows the rate of glucose absorption and provides essential nutrients. Choose: **brown rice, quinoa, oats, millet, amaranth and other wholegrains, pulses and some starchy vegetables.**

Beneficial fats: 60% of the brain is made from fat, most of which is soft polyunsaturated fat (PUFA), meaning its structure is supple. PUFAs help to maintain flexible, dynamic cell membranes that are able to transmit and receive information easily. Cholesterol and saturated fats are also important parts of a healthy brain and sufficient quantities are manufactured in the body without dietary sources. Fat provides energy for the brain as well. The best PUFAs to consume are omega-3 oils from **oily fish, nuts, seeds** and **dark leafy greens.** There are two key types of omega-3 fats, EPA and DHA and the evidence suggests that it's the EPA, which seems to be the most potent natural anti-depressant. Omega 6 fats are also beneficial but it is thought that enough is already present in our diets. **Supplementation of omega 3 fats is a good idea - choose a good quality omega 3 oil.** MCT fats like **virgin coconut oil** are good saturated fats that are utilised for energy by the brain.

Non-beneficial fats: Conversely, if your diet is full of trans or hydrogenated fats, or it is saturated fat heavy, they can actually displace the beneficial fats. These fats also create stiff cell membranes, which can impair subtle changes in shape that are essential for cell communication. These fats also impede the flow of oxygen and the flow of wastes away to and from the brain. Trans fats can accumulate especially in synapses, impacting all brain communication.

Protein: This is made from amino acids (AAs), the building blocks that are also used to form neurotransmitters (NTs) and support structures in neurons. The three key AAs are: **Tryptophan** – this is converted into another amino acid called 5-Hydroxy Tryptophan (5-HTP) and then to **Serotonin** – the brains 'happy' chemical. **Tyrosine** – is used to make dopamine that keep us motivated and active. **Glycine (or Betaine or Trimethylglycine)** – keeps the nervous system functioning efficiently. These AAs can be found in: **Lean white meat, peanuts, beans, tofu, eggs, nuts (especially almonds), cheese (especially cottage), avocados, milk & bananas.**

Amino acids are also reassembled into powerful antioxidants that are used to protect DNA and other cell components from damage. Proteins also form receptors, structures embedded in membranes that aid in cell communication.

Micronutrients: are needed in small amounts and include vitamins and minerals, although they are absolutely crucial for optimal brain health.

B Vitamins: Aid in producing energy for brain cells, and help to manufacture key NTs like serotonin and GABA, which aids in focus and concentration. **B-vitamins** are found in the **hull of wholegrains, lean meats, mushrooms, avocados & leafy green vegetables**.

Nutritious & Delicious

HEALTH MATTERS!

Vitamin E: This vitamin helps protect the functions of the brain and is one of the most potent anti-oxidants. There is a tremendous amount of activity in the brain where high levels of oxidation can occur. **Vitamin E** is found in **almonds, spinach, trout, sweet potatoes, avocados, sunflower seeds** and **butternut squash** etc.

Vitamin C (ascorbate): The highest concentrations of ascorbate in the body are found in the brain and neuroendocrine tissues, such as the adrenal gland, where most of the body's energy is used. Ascorbate is a regulator for over a dozen different neurochemicals and can reduce the risk of a stroke. **Vitamin C** is found in **oranges, red peppers, kale, Brussels sprouts, broccoli, strawberries, grapefruit, guava** and **kiwi** etc.

Zinc: This mineral is also involved in producing serotonin and GABA, as well as hundreds of other brain pathways and is used in the growth of dendrites and cell repair. It also aids in synaptic adhesion - the process of "cementing" a new connection between neurons. In addition, zinc is essential in the formation of memory, and is found abundantly in the hippocampus that is responsible for processing short-term and long-term memory. **Zinc** is found in **eggs, mushrooms, seeds, nuts, as well as red meat & green leafy vegetables.**

Calcium: This mineral is used to help maintain the electrical environment of the brain and to regulate nerve transmission. It can also help cleanse the brain by binding or displacing some harmful substances. Good sources of **calcium** include: **milk, cheese & other dairy foods, green leafy vegetables, such as broccoli, cabbage and okra (but not spinach), soya beans, nuts and seeds.**

Antioxidants: These are vital to maintain all body functions and to prevent (free radical) oxidative damage from toxins in the brain. **Choose brightly coloured fresh fruits and vegetables.**

Chromium: This mineral is vital for keeping your blood sugar level stable because insulin, which clears glucose from the blood, can't work properly without it. In fact it turns out that just supplying proper levels of chromium to people with atypical depression can make a big difference. Eat: **whole grains, lean meats, cheese, mushrooms, asparagus, green beans, potatoes, prunes, bananas & nuts.**

Other factors: Sunshine = Vitamin D: Known as the 'sunshine vitamin', around 90% of our vitamin D, a pro-hormone is synthesised in our skin by the action of sunlight. Vitamin D deficiency is increasingly being recognised as a common problem around the globe and may be implicated in depression, particularly if you feel worse in winter. **Consider supplementing this absolutely vital nutrient, as it is poorly available in the diet.**

Other factors: Hydration: One of the most fascinating aspects of neurons is that they store water in tiny balloon-like structures called vacuoles. Water is essential for optimal brain health and function. Water is necessary to maintain the tone of membranes for normal neurotransmission. It enhances circulation and aids in removing wastes. Water keeps the brain from overheating, which can cause cognitive decline and even damage. A lack of water can also make you feel tired, low in energy and unable to concentrate. **Aim to drink up to 1.5 litres of fluids of water per day, preferably from clear, un-carbonated water.**

Which foods affect moods? Although the precise cause-and-effect relationship between different foods and moods has yet to be fully understood, many people have found they can link eating (or not eating) certain foods with how they feel. The foods and drinks that most often cause problems are those containing **alcohol**, **sugar**, **caffeine**, **chocolate**, **wheat** (such as **bread**, **biscuits**, and **cakes etc**), **dairy products** (such as **cheese**), certain **artificial additives** (or **E numbers**) and **hydrogenated fats**. Other commonly eaten foods, such as **yeast**, **corn**, **eggs**, **oranges**, **soya** and **tomatoes**, may also cause symptoms for some people, sometimes.

Please Note: This handout should only be used as a guide to help inform you as to the diet and lifestyle modifications that **may** help to support optimal mental health. It **should not** be used as definitive guide to Optimal Mental Health. If you think you may have a mental health issue then please contact your medical doctor.