

Nutrition

Why good nutrition?

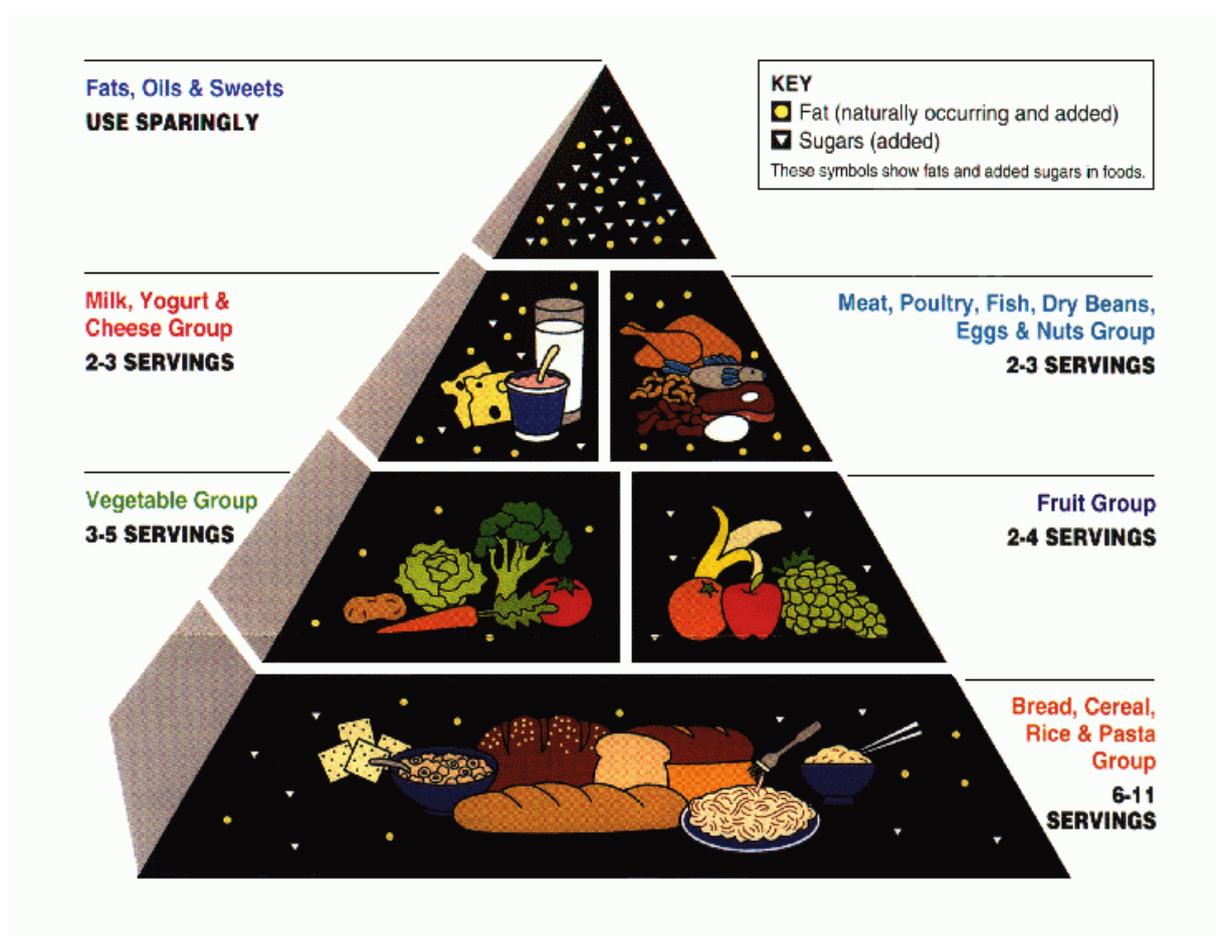
This is a 'motherhood' question that needs no answer. Everyone knows that good food is essential for a healthy body. But good food is also a key to having a healthy mind.

Research has established that the brain gets first call on the nutrients in the food a person eats: the brain constitutes about two per cent of body weight but requires about 20 per cent of a person's total calorie intake to function properly.

Essential nutrients such as protein, carbohydrates, lecithin and vitamin B1 **enhance the registering, retention and memory of information.** Foods such as dairy products, bread, cereals, seafood, poultry, meat, fruit and vegetables contain these.

To ensure maximum mental skills and memory it's necessary for a person to have a balanced nutritional intake as suggested in the healthy food pyramid.

Here's a pretty simple version of that pyramid.





More on food and brain function

Our bodies need sufficient levels of thiamine (vitamin B1), folate (vitamin B9) and vitamin B12 to prevent memory and concentration problems. Other nutrients—choline, iodine, manganese, folic acid and B group vitamins—are great for memory.

Choline, found in eggs, wheat germ, broccoli, cauliflower, lecithin and fish, is the precursor molecule for the neurotransmitter acetylcholine which is essential for good memory function.

Stress and food

Nutrition is even more important at stressful times, like around exams.

Visits to fast food outlets do not enhance brain function. The more highly processed any food is—most fast foods are highly processed—the less nutritional value it is likely to have.

"Garbage in, garbage out."

Anon

Food versus vitamin supplements

Vitamin supplements are no substitute for good nutrition and no answer to missing regular meals. An orange will always be better than a vitamin C tablet. The tablet might contain vitamin C, but an orange contains vitamin C, fibre, beta-carotene and other minerals.

Drinking

There's debate about the amount of water a person needs to drink each day. The important thing is that **we need to keep our brains hydrated**; the dehydrated brain doesn't function well and increases the likelihood of confusion.

Avoid plastic bottled water: it's a money-making scam and environmentally unsustainable. The Australian Consumers' Association has consistently found Victorian tap water as pure as bottled water and containing more minerals than bottled 'mineral' water.

NOSSAL WELLBEING NOTES



Sugary drinks are a paradox: they quench thirst in the short term, but sugar dehydrates the body and increases longer-term thirst. **Only water actually hydrates the body and brain.**

Sudden falls in energy also occur with sugar-rich foods; the quick burst of energy is not sustained. Low glycaemic index (GI) foods, complex carbohydrates and proteins keep energy levels stable.

Caffeine drinks like red Bull have their attractions and their purpose—they give you a ‘buzz’. But caffeine is a stimulant, not a nutrient. These drinks can make you jittery, and the ‘come-down’ can leave a person feeling de-energised. Water and fruit juice are preferable options.

Exercise is a nutrient too



Exercise is crucial. **Exercise increases the oxygen intake and blood circulation, nourishing the brain and aiding its performance.** Exercise needn't be high impact: walk the dog, swim, play basketball or soccer with friends. Vary it: don't get bored with the same activity. Half an hour a day is what we should aim for.

“Physical fitness is not only one of the most important keys to a healthy body. It is the basis of dynamic and creative intellectual activity.” John F Kennedy

When and how we eat

When we eat and how often also affect our alertness. Eating regularly keeps the nutrient and energy levels stable and reduces the need to snack on empty calorie foods such as biscuits, cakes and lollies.

Three big meals a day can slow people down and cause drowsiness. Food with high fat content induces sleep.

Five or six smaller well-balanced meals a day can be a great strategy around exam times. This prevents drowsiness and keeps the brain consistently and constantly nourished.

“I wasn't feeling well in the first half. I felt down, man. I had three slices of pizza before the game and the food took me down.” Leroy Loggins

NOSSAL WELLBEING NOTES

Breakfast

Breakfast is the most important meal of the day. It kick-starts the body's metabolism and sets up the brain—memory and attention—for the day ahead.

No matter what advertisers tell you, a protein drink in a box is not a breakfast; neither is a cup of coffee or tea or can of Coke. A choc-chip muesli bar is a confection, not breakfast. Nonetheless, they are all better than nothing at all for breakfast.

At the very least **breakfast is a bowl of cereal, high-fibre (muesli, porridge), and some fruit or fruit juice, freshly squeezed**, not out of a carton or plastic bottle. A food containing protein (eggs, dairy, meat or beans) on multi-grain or wholemeal toast is a great start to the 'brain-day'.

Students who eat breakfast perform better on spatial memory tests and stay calmer than non-breakfasters. They come to school in a more positive mood to begin with.



Super brain foods

Recent research has looked at 'super brain foods', foods that contain an abundance of various elements which help to stimulate optimal brain function.



Salmon, and oily fish like mackerel, tuna and sardines, contain the super brain food omega-3 fatty acids DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid). Both are necessary for brain growth, function and memory. This sort of fish should be eaten at least twice a week.

Berries, especially blueberries, are full of flavonoids which boost memory. The darker the colour of the berry, the better they are. They are also full of antioxidants which assist in the body's healing processes. And they contain cells called microglia which remove and recycle toxic proteins from the nervous system.



Add berries to your breakfast cereal or in yoghurt as a snack.

NOSSAL WELLBEING NOTES



Eggs are full of protein, vitamin B12, iron, vitamin E, selenium and choline. The virtues of choline have already been spoken about. Choline can also be found in liver, soy beans, lecithin and fish.

Try eggs poached or scrambled on a whole-grain muffin.

Certain nuts are good brain food:

almonds, walnuts (they look like little brains) and pecans. They contain 'good' fatty acids, especially **walnuts**, contain antioxidants that prevent damage and aging, and lecithin which increases speed of transmission between brain cells.

Almonds contain phenylalanine. It boosts mood and brain power. They're rich in memory-boosters and arginine which calms the brain. **Pecans** are loaded with choline.

Nuts are the perfect snack to have on exam days, especially combined with dried apricots, dates, cranberries, bananas, pumpkin seeds, sunflower seeds and a sprinkling of dark chocolate chips.



Seeds may be small but pumpkin, flax and sunflower seeds are packed full of brain nutrients.

Pumpkin seeds contain carotenoids and omega-3 fats which are good brain-building components, and zinc which improves memory retention and function.

Flax seeds contain the good fatty acid alpha linolenic acid that aids the function of the cerebral cortex, enhancing cognitive function and efficiency.

Sunflower seeds contain the mood-regulating chemical serotonin, are high in thiamine and vitamin E (antioxidant), great for improving memory and protecting against brain damage.

Dark green vegetables like broccoli, spinach, Brussels sprouts and lettuce prevent and in some cases reverse memory loss due to their high folic acid content. They contain carotenoids, vitamin C, magnesium, potassium and fibre, all fantastic for our overall health.

Go for a nice healthy green-vegie stir-fry instead of a carbohydrate and fat-laden meal.

NOSSAL WELLBEING NOTES



Avocados contain monounsaturated fat which promotes good circulation and blood flow, especially to the brain.

Use avocado as an alternative spread to margarine on a multigrain salad roll.

Not everyone's cuppa, but **green tea** contains catechines that help us relax mentally. They also increase sensory alertness. Green tea is full of the antioxidant polyphenol that boosts dopamine production, generating positive mood and warding off brain degeneration.

Carbonated sugary drinks can't do this.



Yoghurt, especially natural Greek yoghurt, not the sugary flavoured variety, is a source of protein and calcium. It contains the amino acid tyrosine which aids in the production of neurotransmitters that increase mental alertness and memory. Tyrosine is depleted by stress, thus requiring continual replacement.

Bircher muesli is an excellent breakfast on exam days, especially if you add other brain foods: apple, honey, almonds, oats, blueberries, strawberries and sunflower seeds.

Bananas are packed full of beneficial nutrients: amino acids that aid in the production of mood-enhancing neurotransmitters; nutrients that aid focus and memory; potassium that keeps hearts beating strongly, delivering oxygen to the brain; magnesium that aids electrical activity between the nerve cells in the brain and helps the brain dispose of the accumulating waste that interferes with the ability to focus.

Try a banana smoothie, put banana on your cereal, and jag one just before entering a big exam.



NOSSAL WELLBEING NOTES



And finally—chocolate! Dark chocolate has good antioxidants that aid focus and concentration.

Milk chocolate increases memory and reaction times. But beware. Milk chocolate should be eaten in great moderation.

The caffeine and milk solids (fats) in milk chocolate can be counter-productive when eaten in excess.

Australian milk chocolate is very sugary. French KitKats are nowhere near as sweet as their Australian manufactured counterparts.

