

**Avoid the 'Freshman 15'**  
and increase your grey  
matter with our guide to  
staying healthy on campus.

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# Increase your brain-power

**THE TRANSITION TO COLLEGE** or university is both a stressful and exciting time for students. The stress of adapting to a new environment, finding new friends, and having more personal freedom can all lead to adopting poor eating and sleeping habits. As a result, most students gain weight by the end of their first year, which phenomenon is known as the 'Freshman 15'.

Juniors and seniors alike must concern themselves with eating a well-balanced diet and keeping fit. Not only will it help boost concentration, memory, and energy levels, it will also help develop lifelong habits that can be integrated into the real-world after graduation.

## Fat builds the brain

Increasing brain power requires a little background information about the grey matter itself. About two-thirds of the brain is made up of fat, hence the term 'fat head' – ha! All kidding aside, the brain is built from the essential fats omega-3 and omega-6. These are termed essential because they cannot be produced by the body; therefore a steady diet of omega-3 and omega-6 fatty acids is crucial to a well-functioning brain.

Seafood is commonly called 'brain food' because of its high amount of omega-3. Other sources include flaxseeds, walnuts, sea vegetables and green leafy vegetables. Food sources of omega-6 include cold-pressed sunflower, safflower, corn, and sesame oils.

Those who dislike fish and lack green leafy vegetables in their diet should strongly consider supplementing with deodorised fish oils, which come in oil or capsule form. To boost your supply of omega-6, evening primrose, borage,

and black currant seed oils are good alternatives. However, today's typical diet is usually loaded with sources of omega-6, and supplements are rarely needed.

Also remember that supplements are not meant to replace whole foods; they are meant to be taken as additional insurance. Always consult with a physician prior to taking supplements, as they may interfere with the absorption of other medications or may cause side effects.

## Getting physical

Exercise enhances overall circulation, which helps improve the flow of blood-sugar to the energy-hungry brain. It also helps promote the growth of new brain cells, which improves learning abilities and memory. The brain obviously loves physical exercise, so get up and move around. Walking for 30 minutes or performing gentle yoga poses, three to four times per week can benefit the mind and body. For those that can't find the time to exercise, remember that some physical activity is better than none. In fact, three 10-minute bouts of exercise throughout the day are equivalent to one 30-minute workout.

In reality, there is no one magic food or pill that will help people perform their best mentally and physically. A well-balanced diet, regular exercise, and lots of rest are the best guarantees for optimum performance.

## Carbohydrates feed the brain

Although the brain only occupies about 2 per cent of a person's body weight, it consumes 20

per cent of the body's total energy. This energy-hungry organ must be kept well fuelled or else symptoms like dizziness can occur.

Glucose or blood sugar is the primary fuel source for the brain. Therefore, carbohydrates play an important role when studying or thinking extensively because these get converted into glucose in the body. Carbohydrates are also known to increase the production of serotonin, a neurotransmitter in the brain that affects mood, desire, and appetite.

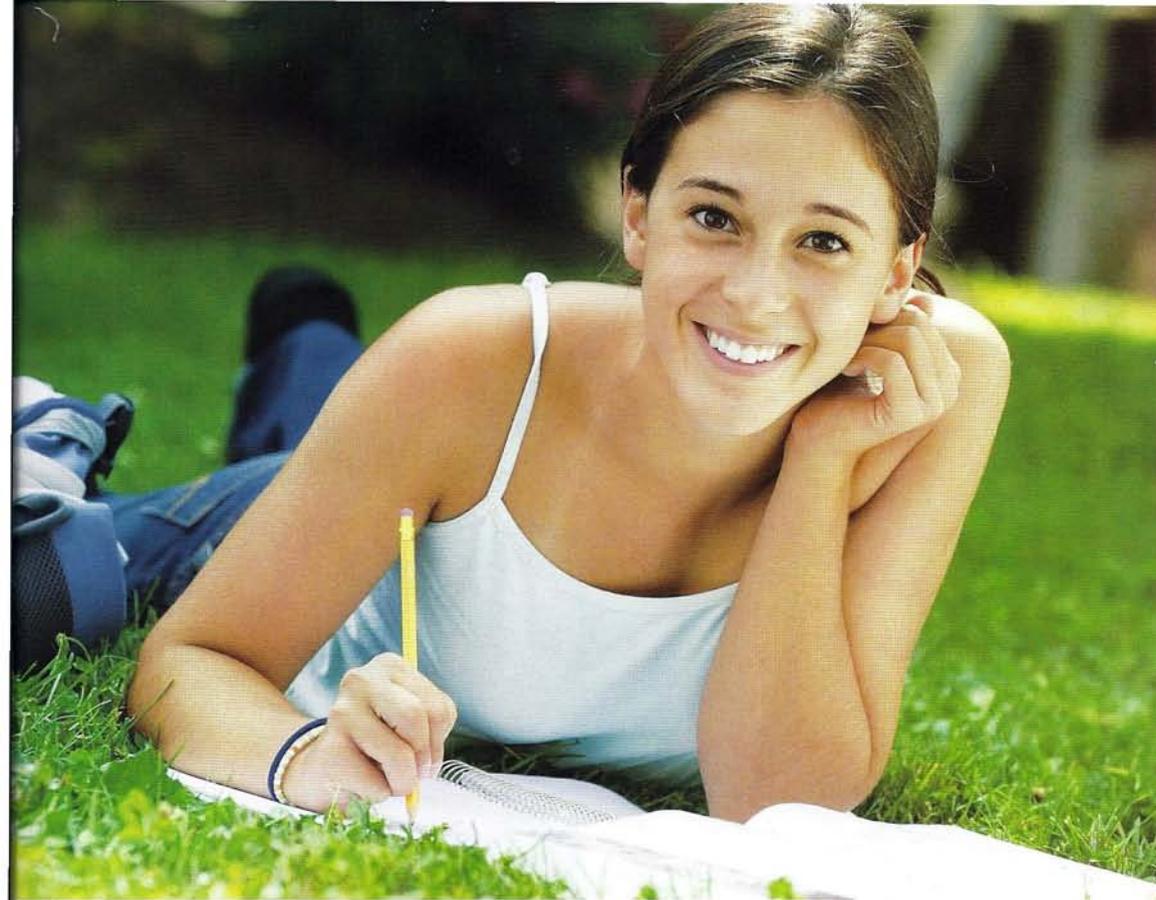
This feel-good brain chemical can help overcome stress and calm the nerves down before exams or presentations. Avoid anything that is refined or bleached however, like white bread, white rice, rice cakes, or white crackers. The energy boost it provides is usually followed by an energy drop shortly after. Instead, opt for slower release carbohydrates like whole wheat bread, brown rice, baked potatoes, oatmeal biscuits and whole wheat pasta. In general, whole foods such as fruits, vegetables and whole grains are all healthy, economical and can offer the brain the energy it requires.

## Boost your memory & concentration

Many studies have shown that skipping meals affects your ability to concentrate. Poor concentration is a common symptom of low-blood sugar; therefore eating frequent meals throughout the day will help keep energy levels high and will result in longer attention spans in class. Eating meals every 3 to 3 ½ hours will help boost the metabolism and prevent weight gain.

A common complaint amongst students regarding food is time and its preparation.





### Interesting Fact:

Early humans who lived near water sources and ate seafood experienced the biggest brain growth and development, while those who lived inland and who did not have access to omega-3 sources remained with brain capacities the size of that of a chimpanzee for three million years!

Planning ahead of time, like the night before or once a week can overcome this problem. A meal does not mean having to spend countless hours in the kitchen cooking and baking; a simple sandwich that can be prepared in a few minutes and easily packed is a great alternative. Mid-morning and mid-afternoon snacks like carrot sticks and hummus, or fresh fruit mixed with low-fat yogurt are also easy on-the-go meal choices that are nutritious.

College and university cafeterias also offer a selection of foods, however most of the time they have tempting foods that aren't very healthy. Try to avoid anything that is fried or battered, like french-fries or fried chicken. These are high in saturated fats, which increase the risk of heart disease and do nothing for the brain or figure. Always make the best food selections by following the hierarchy of meal choices:

- Fresh food is better than frozen food
- Frozen food is better than canned food
- A meal with nutritional value that has some protein and complex carbohydrates is better than a very high sugar snack food
- A meal is better than a shake
- A shake is better than a sports nutrition bar
- A sports nutrition bar that has 30 grams of

protein is better than a candy bar

Many studies have shown that skipping breakfast has a negative effect on short-term memory. The types of foods eaten also affect memory and concentration. Students who eat high-fat meals tend to have poorer learning abilities and memory than those who have a more balanced diet. Therefore, a nutrient packed breakfast that includes a protein, a carbohydrate and minimal saturated fat will ensure optimum brain performance. For example, a spinach omelette with a side of oatmeal, or a low-fat yogurt mixed with fruit, or low-sugar muesli cereal with skimmed milk are all healthy breakfast options.

### Get some zzz!

Lack of sleep is not uncommon during exam times, or when preparing for a big presentation or project. However, sleep deprivation negatively affects problem-solving skills, learning abilities, concentration, memory and alertness.

On the other hand, a good night's sleep helps refresh the memory, shunt any new information into long term storage, process new practices, and sharpen new skills. There is also some evidence that sleep can help solve problems and create eureka moments when a person wakes up. So get to bed early, and let the unconscious mind get to work!

In reality, there is no one magic food or pill that will help people perform their best mentally and physically. A well-balanced diet, regular exercise, and lots of rest are the best guarantees for optimum performance.

**For health & fitness tips, contact Bernadette at 050-283-2020 or [Bernadette@mailme.ae](mailto:Bernadette@mailme.ae)**

## Supplements & caffeine to boost performance

There are many reports that claim vitamins B, E, C, beta-carotene, and magnesium mineral can boost brain power. However, before taking pills, it is important to realise their high presence in real foods. For example, foods rich in the B vitamins include fortified breads and cereals, meats, poultry, fish, eggs, dairy products, legumes, and green leafy vegetables.

Foods rich in vitamin E include vegetable oils, green leafy vegetables, nuts, wholegrain flour, and sunflower seeds. Vitamin C can be found in citrus fruits; beta-carotene sources include carrots, spinach, and other green leafy vegetables, and magnesium can be found in beef, poultry, fish, nuts, grains, legumes, and green vegetables. Clearly, there is a wide variety of foods to choose from that provide brain-boosting vitamins and minerals.

Coffee and late-night studying go hand-in-hand for most students. However, the long-term effects of caffeine outweigh the short-term energy boosts it provides. Caffeine intake causes the release of adrenaline; a hormone that responds to periods of stress. Recent studies have proven that adrenaline and noradrenalin remained elevated at night even when people drank their last cup of coffee at lunch time – that means the body is under stress for 24 hours!

So if restful sleep is elusive, coffee is most likely the culprit. Furthermore, coffee also affects the absorption of essential minerals including iron, magnesium, zinc and potassium, and the B vitamins. Remember, B vitamins and magnesium are amongst the vitamins and minerals that help boost brain power.

For these reasons, opt for herbal teas and good old fashioned water instead.