

# Does food affect mood?

**W**e all have good days and bad days; we all have foods we like more, or like less.

But is there a connection between feeling fine and the foods we have eaten?

How can we minimise the negative and maximise the positive impact of food on our moods? Is it possible to plan a diet for a good mood?

When diets are very limited and inadequate, and result in deficiency states, effects on mood and brain function are well documented. Anaemia (low levels of haemoglobin in blood) can occur due to inadequate intakes of iron, which results in feeling weak, tired and lethargic all the time. The risk of anaemia is reduced with the regular intake of lean red meat and fish, and can also be helped by avoiding drinking tea with meals (tannins in tea bind with iron decreasing its uptake by the body). Studies have suggested that not having enough of the vitamin folate (found in liver, green vegetables, oranges and other citrus fruits) can increase the chances of feeling depressed, and this may be particularly important in older people. Therefore, certain nutrients in our diet may have a direct link with our moods.

## The effect of Carbohydrates

The glucose in our blood comes from the carbohydrates we eat (both from sugars and starches) and is needed to fuel muscles and the brain. Not having enough glucose in our blood makes us feel weak and tired and 'fuzzy minded'; this may happen when not enough food is eaten, and is a particular risk for diabetics and sports people. Having enough glucose in blood is the basis for the advice to eat breakfast and to consume regular meals containing some carbohydrate throughout the day; the ability to concentrate and focus comes from the adequate supply of energy to the brain. However, once blood glucose is in the normal range there does not seem to be any improvement in mood or ability to concentrate with further increases in glucose, that is, with eating more or different types of carbohydrate. There is a messenger

chemical in the brain called serotonin, which improves mood and how we feel. Some researchers claim that this happens from eating foods that are high in carbohydrate (breads, cereals, pasta, fruits and starchy vegetables such as potatoes) and low in protein. This theoretical 'carbohydrate craving' to improve mood has been used to explain the eating of sweet comfort foods such as cakes and chocolate; in practice there is not enough evidence to support this effect. Nevertheless, spacing out small meals and snacks that contain carbohydrates (e.g. bananas, dates, tomatoes) to trigger the production or release of serotonin may help us improve our mood.

## Food containing substances that are 'drug-like'?

Caffeine, found in coffee and cola drinks, acts as a stimulant and can improve alertness and feelings of energy, and counter the effects of fatigue. Too much caffeine may cause the adverse effects of irritability and headache. Suggestions that chocolate contains particular mood-enhancing substances are often made, but measured pharmacological effects do not seem to explain the popularity of this food as a comforter. How much caffeine is enough to produce mental alertness? As little as a cup or two of coffee (100-200 mg.) daily or a small portion of diet carbonated cola (32 mg) can improve mental performance and alertness, reduce fatigue, and work as a natural antidote to the tiredness many of us experience after eating. However, it's important to check with your dietitian if any underlying medical conditions may limit the use of caffeine in the diet.

There are many ways that foods can affect how we feel, just as how we feel has a large influence on what foods we choose. Some of the mood/food effects are due to nutrient content, but a lot of effects are due to prevalent associations of foods with pleasure and reward (chocolate) or diet and deprivation (plain foods). Some foods have religious, economic and cultural significance which



will influence how we feel when eating them. Feeling good comes from a diet that provides adequate amounts of carbohydrate at regular times to keep blood glucose levels stable, and that contains a wide variety of protein and vitamin and mineral containing foods that support the many vital functions of the body. Plenty of fruits and vegetables and wholegrain cereal foods, with some protein foods will support a good supply of nutrients for good health and good mood.

In the world of science it's hard to establish a direct link between our brain chemistry and our physical or emotional response conditioning. For instance, if your mother rewarded you with chocolate cookies for doing well in school, you may continue to reward yourself with cookies as an adult when you finish a challenging task. Or perhaps choosing certain foods may not be about mood, but about what your body must have to meet its nutrient needs; this may mean you choose to snack on an orange for its vitamin C content, not its food/mood effect. Or, perhaps, feelings drive you to choose certain foods: a piece of pie may alleviate boredom; crunching on corn chips could augment anger!

While the food and mood branch of nutrition science is new and still developing, studies show that, to a certain degree, what we eat can influence and control our emotions. So what should you reach for when stress leads to an overpowering sugar craving? Mixing a well-balanced meal or snack with a sugary, bite-sized treat afterwards is the ideal solution. But remember, while food can influence how you feel, it can't eliminate your emotions or stress. With the right food choices, however, we can regulate the ups and downs of our everyday emotions – and perhaps find a little bliss along the way.



Mr. Mario Caruana BSc. (Hns.), PQDip N&D, MSc. Dietetics (Edinb), MBDA, Registered Dietitian. Obtained a degree in Health Science from the University of Malta in 1999 followed by a Post Graduate diploma in Nutrition & Dietetics at the same university in 2002. Thereafter obtained a Masters in Science in Dietetics with dietetic registration and distinction from Queen Margaret University College, Edinburgh. Currently working as a dietitian at St. Lukes Hospital & St. James Hospital advising on diets involving different medical conditions. He is involved in various NGO's such as the Malta Diabetes Association and Coeliac Association Malta. He is also a member of the British Dietetic Association and forms part of the sub-committee of the 'Council for the Professions Complementary to Medicine' as related to the field of dietetics. Email: mario.caruana@gmail.com · Website: www.mariocarua.com