

IMPORTANCE OF GOOD NUTRITION TO MANAGE STRESS, ANXIETY AND DEPRESSION

Introduction

Often we suffer from stress, anxiety and depression for quite some time before we are actually aware of it or admit it to ourselves. In that time, though we may well have been changing the way we eat.

Everyone responds differently to stress, some will eat more, some will find they lose their appetite or interest in food and eat less.

As stress levels rise we tend to crave “comfort” foods which are generally highly processed and high in sugar and/or fat. Less time and less motivation, poor sleep, an irritable tummy, all combine to make eating more of a chore than a pleasure.

Processed foods generally contain a lot less nutrients than “real” foods so our bodies become starved of vitamins and minerals, this can lead to overeating as our brain tries to get these vital nutrients in – we are actually hungry for nutrients not just for energy (although stress is tiring on the body so energy could also be a factor).

When stressed or time poor, we can often resort to eating on the go, eating quickly, in the car, at a desk, or curled up in front of the TV. None of these situations are helpful for good digestion, food won't be chewed properly, air may be swallowed with the food, both can cause poor absorption of nutrients and discomfort further down the line. It is much better to make the time to eat sat upright, slow down, think about what you are eating, enjoy the taste and the whole experience, eat “mindfully” for a more relaxed and efficient digestive process.

We have evolved to work in two different systems, one, the parasympathetic nervous system, which maintains and repairs our body and keeps the immune system, reproductive system, and digestive system working at optimal levels. The other, the sympathetic nervous system, is responsible for our emergency response – the “fight or flight” response.

This response whether it is due to a truly dangerous threat or a perceived threat, releases cortisol and adrenaline into the blood stream. These hormones move sugar into the blood from our muscles and liver, speed up the heart rate to get that sugar to the areas that most need it. Energy is diverted away from the immune, reproductive, and digestive systems, they are effectively shut down until the danger has passed. This works out fine if the emergency is a one off but when we are constantly in this emergency state, you can start to see that problems will occur within these other systems.

Looking at the digestive system, food may not be broken down fully, may not be absorbed fully. Problems can manifest via cramping, bloating, pain, diarrhoea, constipation. All these issues can the cause more stress and a vicious cycle is started.

It is important that any changes to your bowel habits should be checked medically but more and more IBS is being treated with strategies to reduce stress (CBT, mindfulness, yoga, relaxation techniques).



Blood Sugar Control

One of the most important things we can do to help improve mood is to manage our blood sugar levels. To do this we need to know a bit more about carbohydrates.

When we think about carbs we generally think about pasta, bread, rice, and potatoes. These are obviously carbs but there are an awful lot more foods in this group that can influence our mood both positively and negatively.



Carbs are sugars, starches, and fibres found in a huge variety of foods. I like to put them on a spectrum ranging from those that are most beneficial at one end (whole fruits, vegetables, beans, chickpeas, lentils) right through to the least helpful at the other end (sweets, cakes, biscuits, juices, crisps etc). Pasta, bread etc fit somewhere in the middle. All carbs break down in the body to give up sugar (glucose) for energy. We can use fats and proteins for energy and often do but sugar is the preferred source especially for the brain.

The brain is in constant need of an easily accessible source of energy. We are programmed to keep these blood sugar levels within a relatively small and specific range, too high or too low can be a risk to health. Therefore, if levels are too high we release insulin to bring it down, too low and cortisol and adrenaline are released to bring it back up (from stores in muscles and liver).

Going back to the spectrum, the foods in the first half are in their most natural state and, being plant based are high in fibre which takes longer to be broken down and release sugar slowly and consistently, keeping us within our healthy range. Foods from the middle to the far end are getting more and more processed, they lose some of their fibre, cell walls are broken down before we eat them and the sugar is far more accessible and enters the bloodstream much more quickly. This will lead to a rise above safe levels triggering insulin to Hoover up. This is fairly indiscriminate and will quickly send sugar levels to below our safe level triggering cortisol and adrenaline to bring them back up.

These last two hormones are responsible for the fight or flight response so can bring about a feeling of anxiety as your heart rate speeds up and can make you feel a bit shaky. If you are already prone to anxiety or suffering from stress, you will only be adding to your problems by eating carbs that send your sugar levels up quickly. Often, these are the foods that you will be eating therefore you will be on a constant roller coaster of emotions related to your food choices. You are more likely to crave these foods since the brain being low on sugar, is more likely to send you for a quick fix which will start the whole process off again. Low blood sugar can also make you feel lethargic, unable to concentrate or make decisions. All of these can make you feel more stress and more anxiety. You could be experiencing both psychological and physiological stress, the latter you can do something about by eating more foods from the first half of the carb spectrum and managing your blood sugar levels.

For example, starting your day with a bowl of cornflakes and a glass of orange juice will start you on the roller coaster and you will find it difficult to make good food choices for the rest of the day. Much better to start with porridge, made with milk with added fruit, nuts or seeds, or eggs on wholegrain toast with beans and tomatoes. You may prefer other foods for your first meal of the day, which may not even be breakfast if you work shifts, but try to ensure you pick foods from the first half of the carb spectrum, and include some protein and healthy fat, both of these will also help to slow down the release of the sugar into the bloodstream.

Gut Bacteria , Health and Wellbeing

Living in and on our bodies are trillions of micro organisms, bacteria, viruses, fungi etc. Here we are going to look at those living in our guts and their impact on our health both mind and body.

The bacteria in our digestive system live mainly in the large intestine and are responsible for many functions – protective, structural, and metabolic. The term micro biota is used for the individual collection of these micro organisms in each of our guts. All the different species compete for resources, food, living space. Some are harmful but if we have enough beneficial species, they don't necessarily cause a problem. Our unique composition is influenced by how we were born and whether we were breast fed or bottle fed, by medications, genetics, and by our dietary habits and lifestyle. A healthy gut micro biota is one with lots of different species all working together in harmony.

Some of the foods we eat are actually food for our micro biota. Indigestible fibres from some carbohydrates (fruits, veg, and wholegrains) pass all the way through to the large intestine. Here the bacteria ferment these indigestible fibres forming chemicals that provide energy to the cells and exert effects all over the body. They maintain the integrity of the gut wall, make vitamins (especially K and some of the B complex) and neuro transmitters and generally play a vital role in a whole host of physiological processes.



It is in the gut that the micro biota make serotonin, the brain chemical or neurotransmitter that is responsible for maintaining a calm and happy brain. It controls mood, lowers anxiety, improves sleep, regulates appetite, sexual desire, memory and temperature regulation. It is known that levels of serotonin are low in those suffering from depression so it makes sense to try and boost our levels by ensuring our diet is rich in the food that our bacteria need to produce it.

The vagus nerve connects the brain and the gut and is part of the para sympathetic nervous system associated with feeding and resting behaviour (the sympathetic nervous system is associated with the stress response). It's 2 way messages can travel from the gut to the brain and vice versa so if we are stressed this will upset the gut and if the gut is upset this will upset our brain.

The key to a healthy diverse gut micro biota is to eat a diverse diet, eating a large array of different fruits, vegetables, nuts, seeds, wholegrains, beans, chickpeas, lentils, lean proteins and healthy fats. Choose the least processed forms of these foods as often as possible. Minimise sugars which can suppress the good bacteria allowing the harmful ones more room to take over.

You may have heard the terms 'pre' and 'pro' biotic. Pre biotics are the indigestible fibres found in whole grains, seeds, legumes, fruits (under ripe bananas are high in this kind of resistant starch as are oats and potatoes) which pass through the digestive system to the large intestine where the bacteria ferment them as mentioned earlier.

Pro biotics are live micro organisms that provide a health benefit that is supported by scientific evidence. They can be found in foods such as dairy products and dietary supplements. Other fermented foods such as cheeses, yogurt, kefir, miso, unpasteurised saurkrauts and pickles contain lots of live bacteria that are known to be good for us but so far don't have the required scientific backing to be called pro biotic.

Hydration

Our bodies are around 60% water and it's absolutely vital for life. All systems of the body require water to function optimally. The liver and kidneys filter and rid the body of waste products and toxins and require a good supply of water to do this.

In the digestive system water is needed to help eliminate waste smoothly and increasing water intake is often recommended to help treat constipation . Also important to increase water intake when eating a higher fibre diet.

Skin, hair, nails all require water to help bulk their cells. The brain is strongly influenced by the level of hydration in the body. Studies have shown that even mild dehydration (1-3%) can impair many aspects of brain function. These may manifest as headaches, irritability, poor memory, low mood, and increased feelings of anxiety and fatigue.



Whilst there is very little evidence to say exactly how much we should drink, and this will vary from person to person and from day to day depending on a lot of different factors, it is a good idea to get into the habit of drinking around 6-8 glasses a day. If you are exercising you may need more depending on the intensity, environment, and how sweaty you get. Having a glass on waking and then carrying a bottle with you that you can sip throughout the day can help. Keep a jug or bottle in the fridge for when you get home to remind you.

If you don't like plain water you can try putting a slice of lemon/lime/strawberries in, cucumber and mint leaves are lovely on a hot day. Most people get used to plain water in a very short time so persevere, and tap water is absolutely fine, no need for expensive bottled water in this country. Also, fruit and veg generally have a high water content so another good reason for increasing your intake of these.

A good indicator of your hydration level is the colour of your urine – if it is pale yellow then you are probably well hydrated. If it is a strong dark colour then you need to drink more.

Putting it into Practice

Making better food choices can have a massive impact on your well being, there is no doubt, but, how do you go about making changes that you can stick to?

Making changes can be very hard, especially when undergoing periods of stress, anxiety, or depression, so it is important to know that even small changes can help. Perhaps start by not even changing what you eat but how you eat – sit down at a table, away from the workstation or TV, eat slower, taste the food, enjoy it, and see if you can reconnect with feeling satisfied by a certain amount (not full!) and maybe save the rest for later.

Look at the meals that you are eating now and think which would be the easiest to make healthier, stick to just that for a week or two until that becomes easier. Looking at breakfast, this may involve changing white bread for wholemeal, swapping cornflakes for the higher fibre in weetabix, having eggs or beans, or soaking oats overnight in yogurt with frozen berries and seeds.



The main goals of eating healthier are:

- to eat more slow release carbohydrates such as fruit, veg, whole grains, beans, chickpeas, lentils
- to eat protein with each meal (lean meat, fish, dairy, eggs, beans etc., nuts and seeds)
- to get fat from oily fish and plant based foods (seeds, nuts, avocados, olives).

Think **EAT MORE REAL FOOD**. Eat foods that are as near to their natural state as possible. Try to reduce the meat, pasta and rice portions on your plate so there is more room for veg.

We have already looked at the importance of increasing fibre in our diet both for our health and that of the gut bacteria. Consider adding fresh or stewed fruit to breakfast cereals, snack on fruit and veg sticks or nuts instead of crisps and sweets, keep the skins on your potatoes, use wholegrain or rye bread instead of white, add lettuce, tomato, carrot, beetroot to sandwiches, use brown rice and pasta. Frozen fruit and veg are very nutritious and can be easier and cheaper to use with no waste.

We need to eat far less processed/manufactured foods. When you have time try cooking some of your favourites from scratch, there are lots of easy recipes on line, they will not only taste better but will be much better for you with no additives and preservatives. A lot of meals can be batch cooked which you can then put in the freezer for your very own “ready meal” on days when you really have no time to cook.

It is a good idea to plan ahead, think about when you can cook and when you can't, make a shopping list. This might even include storage containers for taking food to work or for putting left overs in the fridge or freezer. You might need to invest in a small cool bag or a bottle for your water.

Working shifts makes everything harder and means that planning will be even more important or it will be too easy to resort to quick fixes and slip back into bad habits. Here it is even more important to keep blood sugar levels under control and maintain hydration. It is also an idea to stop thinking of meals as “breakfast”, “lunch”, and “dinner”. You might need to eat smaller meals more often rather than having one big meal before your shift, “managing” and then eating another big meal after. It's especially important not to have a big meal before sleep as this will lead to a restless night and set you up for fatigue the next day.

However, trying to sleep on empty will also lead to poor sleep. Eating for a good night's sleep you need to include a protein that is high in Tryptophan and a carbohydrate to help the body process this into Melatonin, the chemical that aids sleep. Good choices before sleep include warm milk, a small bowl of porridge with a handful of berries, a couple of wholegrain crackers with hummus, a small turkey steak with salad, or a slice of wholegrain toast with marmite. Of course, if your last meal already had good sources of Tryptophan (turkey, chicken, oats, lentils, legumes) don't feel you must also have a snack too.

If you are waking from a morning or daytime sleep, eat a mixture of protein and carbohydrates to help wake you up and provide energy for the day ahead. Chicken, fish, eggs, with veg, beans on wholegrain toast with veg, or yesterday's lentil dahl heated up.

It can be difficult to eat during a night shift but it's still important to keep you alert. Try fresh fruit, nuts, a wholegrain pitta stuffed with hummus and salad veg, a flask of home made lentil soup.

So remember that even small changes can have an impact on your health and wellbeing and can lead to bigger changes in the longer term.

Any positive changes you make will be supporting your body and mind to deal with stress rather than adding to it.

