

Leicester Ozone Clinic leaflet

Nutritional Approaches to mental health (Anxiety/Depression)

Legal Notice: This leaflet is not intended to replace medical advice and treatment from your regular registered doctor; it is simply an advice based on our own interpretation of the science that some people may find helpful. Please do not stop taking any prescribed medication. Please feel free to discuss the contents of this leaflet with your doctor for further advice.

The following nutritional approaches are advised to help manage mental health conditions, such as anxiety and depression:

a) Vitamins and minerals:

B vitamins are essential for the normal response to stress. Dietary deficiency and/or problems with vitamin B activations (1 in 5 people have gene mutation called "MTHFR gene" which can make it difficult for them to activate B vitamins). Those people need higher doses or activated forms of these vitamins (orally or by injections). As many as 70% of people with this gene variant suffer from anxiety.

1. Vitamin B3 (Nicotinamide): B3 has a marked calming effect even for severe anxiety but without the side-effects. It often needs to be used at high dosages of between 2000 and 4500mg daily to be effective (but do not exceed 6000mg daily). It often takes a month to obtain the full benefits of this treatment.
2. Other B vitamins and Folic acid: B vitamins work together so use a mega B vitamin preparation as well as using Vitamin B3. A few people with the MTHFR gene variant may need methylated versions of B vitamins such as methyl B complexes.
3. Magnesium. This mineral has a general calming effect. Magnesium deficiency is common because of low levels of Magnesium in soil as a result of intensive farming and the use of chemical fertilisers. Doses are 150-250mg twice daily. Please choose a preparation with high absorption, e.g Magnesium Oxide is very poorly absorbed but Magnesium citrate has a good absorption.
4. Other minerals: especially zinc (30mg) and manganese (4mg) and chromium 200 mcg are also essential for mental health. In one study, 600 mcg supplementation of chromium to people suffering from depression showed a 65% improvement. Also, Serotonin needs zinc to be effective. People with low zinc often do not respond to standard antidepressants.
5. Vitamin C: see below under L-phenylalanine and L-tyrosine.

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b) Amino-acid supplements and Herbs:

Most anti-depressant drugs act by increasing the levels of serotonin (the happy chemical) and sometimes noradrenalin (the motivating chemical) in the brain. These drugs, called SSRIs and SNRIs. A natural way to boost these neurotransmitters is by increasing the intake of their building blocks as follows:

1. Tryptophan (as 5HTP): To make serotonin you need tryptophan which is then converted to 5 hydroxytryptophan (5HTP) and then converted to serotonin. The most logical way to treat depression is to provide the building blocks of serotonin and this has been tried. Tryptophan is not available but 5HTP is and there have been many trials of 5HTP in depression and these have shown improvements around 30-40% in depression (compared to 15% from SSRIs with much less side-effects!). Most studies have used 300mg daily of 5HTP. However lower doses such as 50mg twice daily will often help. It is also good for sleep. 5HTP is available from health food stores. It is relatively expensive. Another solution is to eat foods which are high in tryptophan (500 to 2000mg daily). Cashew nuts are particularly rich in tryptophan (470mg per 100 grams) as are pumpkin seeds (560mg per 100 grams). Most 100 gram portions of nuts and beans have about half this amount. Other good sources are dates and figs, eggs and Cheddar and Parmesan cheeses.
2. L-phenylalanine and L-tyrosine: Low noradrenalin is thought to be a cause of depression, especially depression linked with lack of motivation and low confidence. The building blocks for noradrenalin are L-phenylalanine and L-tyrosine. These are also the building blocks for the happiness neurotransmitter "dopamine". The normal oral dose of tyrosine is between 1 and 2 grams daily and for L - phenylalanine the dose is between 500mg and 3 grams daily. These amino acids are better taken away from meals. However the majority of people have enough L phenylalanine on board but are unable to convert it to noradrenaline due to deficiency of Vitamin C. Using Vitamin C in large (multi-gram) doses is often a cheap and effective way to improve levels of noradrenaline.
3. Glycine: This is an amino acid that acts as a neurotransmitter in the brain and spinal cord. Supplementation with Glycine cause a stimulating effect on memory function, learning and attention and aids relaxation and sleep.
4. Taurine: This amino acid is an inhibitory neurotransmitter and can be supplemented to increase relaxation.
5. St John's wort: Some herbs can be helpful. St John's wort at a dose of 300 - 900mg has been shown to help in mild depression. It is prescribed by doctors in Germany and is easy to obtain from health food stores. Eight trials have shown it to be as effective as anti-depressants and with less side effects. Be careful if you are on anticoagulants though.
6. Herbal help for sleep problems: Poor sleep is common with mental health problems. Herbal remedies are not as strong as sleeping tablets but they are not addictive. Passiflora is especially good if you have an overactive mind. Valerian is more for a restless body (also helps certain types of pain or spasms). Melatonin can be useful but takes a while to kick in. This is the hormone we normally produce during sleep

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but it decreases with age. Another option is to use 5 hydroxy tryptophan (5HTP 100-300mg) as this is converted into melatonin.

c) Other dietary approaches:

A low carbohydrate diet - low in sugar and refined carbohydrates (white flour, white rice, most bread, pasta etc) and high in good fats can make a big difference to anxiety and depression.

1. Avoid high carbohydrate and sugar diet: It was found experimentally that most patients with anxiety suffered from fluctuating blood sugar with episodes of hypoglycaemia. This is the drop in sugar which usually occurs 2 to 4 hours after high sugar foods. Hypoglycaemia triggers the release of adrenaline which can create anxiety. The key to avoiding hypoglycaemia is avoiding sugars (including alcohol) and refined carbohydrates (like white flour). Many people don't realise how much better they can feel simply by cutting sugar out of their diet. Cut out fizzy drinks (including diet drinks (see point 2)) and ready meals to avoid hidden sugars. Also remember that B vitamins and chromium rapidly become depleted on a high sugar diet or with alcohol.
2. Avoid Aspartame (artificial sweetener): This sweetener (which is found in diet drinks, and in over 6000 products and processed foods) blocks the conversion of tryptophan to serotonin. Studies have found people became more depressed and irritable within a week of taking higher doses of aspartame (equivalent to 3 litres of Diet Coke daily).
3. Increase Essential fat intake: We need both Omega 3 and Omega 6 essential fats for brain health. Omega 3 fats have been found to improve depression, sleep, increase libido and reduce suicidal thoughts. Foods with omega 3 fats include oily fish, walnuts, pumpkin seeds and flaxseed. Eggs, especially enriched (hens fed on flaxseed) contain a little as does meat from wild animals. Note most farmed fish have low levels of Omega 3 and high in toxic chemicals used to control fish diseases in their artificial enclosed environment. Foods with Omega 6 include most seeds such as sunflower seeds and most nuts. Cold-pressed oils are an excellent source of these fats. Hemp seed oil is also good and has essential fats in the right ratio. Use about 2 tablespoonfuls a day from any of these oils. Note supermarket oils labelled sunflower or safflower have been heated to high temperatures -these contain no essential fats and will likely make the problems worse.

d) The Microbiome

The bacteria in our gut produce nearly 40% of the compounds circulating in our blood stream. The modern diet and many of today's medications upset the balance between friendly and harmful bacteria resulting in low

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levels of key nutrients like neurotransmitters and vitamins. Restoring this balance can make a difference. Both probiotics and dietary changes can make a difference.

e) Beware of Chemicals

A further factor in depression in some people is chemicals. Ninety per cent of chemicals alter brain chemicals such as serotonin. People working with pesticides have higher rates of both depression and suicide and 50% of those exposed to solvents at work suffered from depression in one study. Air fresheners have been linked with depression and it is a good idea to avoid aerosols wherever possible. Chemicals from aerosols are absorbed directly into the brain where they interfere with normal brain function. The general rule here is to use as few chemicals as possible.

f) Exercise

A study of people with depression who exercised for 30-60 minutes 3-5 times weekly found a 30% improvement of depression. Exposure to daylight also helps. Note that both exercise and sunlight are known to increase serotonin levels.

g) Body Rhythms

When we live under natural light or spend more time outdoors we secrete the right amount of hormones such as melatonin which helps us sleep. The use of computers, mobile phones, pads and TVs which emit a blue light and stimulates us makes our body think its morning or midday when it isn't. The way to get round this is to make sure you get exposure to natural light outdoors in the morning. In the evening put phones, pads and computers away one or more hours before bed times. Keep the TV off or at a distance and turn other lights down. Keep the bedroom as dark as possible and don't use TVs or phones in the bedroom. Glasses are available which filter out blue light. There are also apps to reduce blue light on phones and pads. Another strategy is to get up half an hour earlier than your normal time every day. Do this regularly for two weeks however tired you feel. Although this is counter-intuitive, research has shown this can be effective.

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Fatigue Fibromyalgia Clinic (www.fatigue-fibromyalgia.co.uk)