Anxiety

Anxiety can be difficult to treat. Drugs like valium (diazepam) are effective but highly addictive. Beta-blockers help, but side-effects are common. Anti-depressives usually have only mild anti-anxiety effects.

Breathing techniques are the mainstay of treatment. New psychological treatments like NLP and the energy psychologies (eg Emotional Freedom Technique -EFT) seem to work faster and better than older psychological techniques but are not widely available.

Sadly nutritional treatments are rarely considered and yet have proven value. The typical western diet is low in B vitamins, essential for the normal response to stress (these are washed out by sugar and alcohol) and also low in essential fats (which are essential for normal brain function). Worse still, one in five people have alterations in the MTHFR gene which can make it difficult for them to process B vitamins and they typically need higher doses or more bioavailable forms of these vitamins. It is thought that as many as 70% of people with this gene variant suffer from anxiety. And this is not the only genetic variation that can affect brain function. Correcting the nutritional deficiencies can make a real difference.

B Vitamins

Nicotinamide (sometimes known as niacinamide) which is Vitamin B3 can have a marked calming effect, similar to diazepam, but without the side-effects. Work by pioneers in this field such as American psychiatrist Dr Hoffer and Prousky have found this to be an effective treatment even for severe anxiety. They found it often needs to be used at high dosages of between 2000 and 4500mg daily to be effective (but do not exceed 6000mg daily) when dry mouth and nausea can occur. It often takes a month to obtain the full benefits of this treatment. It is difficult to find preparations with amounts of B3 as high as this, although a 1500mg slow release niacinamide is available.

B vitamins work together and combine with magnesium so use a mega B vitamin preparation (with 10-50mg of most of B vitamins) as well as using Vitamin B3. And add magnesium. 70% of the population are deficient in this mineral and it has a general calming effect. Doses are 150-250mg twice daily. Having a couple of handfuls of Epsom salts (magnesium sulphate) in

the bath is also a good way to get magnesium. At the Brain Biocentre they found nearly all patients with anxiety were deficient in magnesium. Some minerals, especially zinc (30mg) and manganese (4mg) and chromium 200 mcg (if hypoglycaemia is present –see below) are also useful (note zinc deficiency blocks serotonin formation and will stop antidepressants working as can folic acid deficiency).

Although there are specialised formulas that contain all of these, for most people it is easier to combine a multi B vitamin with higher doses of nicotinamide (Nature's Best does a 500mg), zinc and essential fats which are readily available from health foods shops. Using a multivitamin, multi-mineral is another way to get the key vitamins and minerals, but these usually don't have enough B vitamins and have no essential fats.

A few people with the MTHFR gene variant may need methylated versions of B vitamins such as methyl B complexes.

Essential Fats

This is the most common deficiency in the body. We need both Omega 3 and Omega 6 essential fats.

Foods with omega 3 fats include **oily fish (mackerel, herring, sardine, pilchards) 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. Foods with Omega 6 include **most seeds such as sunflower seeds and most nuts**. So adding some flaxseed and sunflower seeds to the diet will help.

Cold-pressed oils are an excellent source of these fats. A good quantity for someone of average weight would be **2 tablespoonfuls of cold-pressed sunflower or safflower oil and one of cold-pressed flaxseed oil** (more if above average weight). Hemp seed oil is also good and has essential fats in the right ratio (use 2 tablespoonfuls a day). These are widely available from health food shops. They don't taste good but note that they are well absorbed through the skin which is useful for children. Note supermarket oils labelled sunflower or safflower have been heated to high temperatures and been denatured –these contain no essential fats and will likely make the problems worse. Mixed oils such as Udo's oil are also available but can be more expensive.

Diet

A low carbohydrate diet - low in sugar, sugary drinks and refined carbohydrates (white flour, white rice, most bread, pasta etc) and high in good fats can make a big difference to anxiety and mood disturbances. Many sugary foods are highly addictive which adds to the problem but also deplete the body of B vitamins and trigger hypoglycaemia.

Hypoglycaemia

Dr Hoffer heard that most patients with anxiety suffered from hypoglycaemia. (This is the drop in sugar which usually occurs 2 to 4 hours after high sugar foods). He didn't believe it, so he tested all his anxious patients with a prolonged glucose tolerance test. To his surprise he confirmed that 75% of his anxious patients were indeed suffering from hypoglycaemia. *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) which cause sugar spikes and subsequent crashes (reactive hypoglycaemia). These cause an increase in insulin and a dip in sugar starting 70 minutes later. This problem can also be helped by eating foods in the right order: foods with fibre first (especially vegetables), then proteins and fats and lastly starches. Also avoid eating sugar and starches on their own (combining with non-sugary/starchy foods reduces the sugar spike) and to exercise in the hour after food (reduces sugar spike). Hypoglycaemia can also occur with sweeteners. Avoid sugary and diet drinks.

At the Brain Biocentre they also found frequent problems with sugar control in people with anxiety.

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 levels of key nutrients like neurotransmitters and vitamins. Restoring this balance can make a difference. Dramatic demonstrations involving faecal transplants from depressed patients to mice which have produced depressed states in mice show how important our gut bacteria are

to our mood. Both probiotics and dietary changes can make a difference (***see leaflets on Gut Bacteria and Probiotics).***

Summary

The most important change is a low sugar/low carbohydrate diet combined with a good B vitamin supplement. If this is not enough then add essential fats, magnesium, key minerals and high dose nicotinamide.