



## Program Adjustments for Special Circumstances

**T**he approach in this book has been devised for use in the relatively uncomplicated cases of low mood and depression that most people experience. If you are reading this book and considering its program, the chances are that you will respond to this nutritional treatment. The more complex and severe your illness, however, and the more problematic the accompanying circumstances, the more likely you'll need professional help in tailoring the program. If you follow all the advice and still are not relieved, you'll need to consult further because other significant health conditions may be influencing you, or your depression may be one of those few that do not respond to this form of treatment.

If someone close to you seems to be severely depressed, this person may have a difficult time following any program, especially if he is self-destructive or lacking in self-esteem or the ability to take care of himself. Initially, he may need the support of a family member or doctor to administer the treatment, but it cannot be forced. You have to want to follow this plan and be willing to change harmful life patterns for it to work.

Also, if you are seriously suicidal, you need to be

in the hospital for your own protection, support and treatment until this time passes, as it will. Once you are past the acute stage, the nutritional treatment, in consultation with the presiding doctor, becomes more essential than ever.

This leads us to the question of how psychiatric treatment meshes with the nutritional program. In my opinion, though psychiatry is a branch of medicine, it became separated from the medical mainstream during the first fifty years of our century. It is now returning to the medical field with the discovery of the mind-body-stress-biochemical interactions.

Psychiatrists, like other doctors, usually do the best they can, but they are not omnipotent. They are trained in medicine and in the special understanding of the psychological processes from both a psychodynamic and a physiological point of view. They can work in partnership with you toward the relief of symptoms which are experienced as "psychological"—though the causes can range from divorce to a brain tumor.

Many psychiatrists will not be familiar with this form of treatment. If that is the case, you may encourage your doctor to learn more about it or to refer you to a consultant who does understand the relationship between nutrition and depression.

#### **ALREADY TAKING ANTIDEPRESSANT MEDICATIONS**

If your physician has prescribed medicine for your depression, you should not change your dosage without working closely with her. But we recommend that, under supervision, you gradually increase the amino acids as you carefully and slowly decrease your medication. Do not stop your medication abruptly or you will likely have withdrawal symp-

toms and could relapse if the nutrients haven't had time to work. For the *severely* depressed, the usual length of time it takes to get off the medication and on to the nutrient program and to maintain a stable improvement ranges from two to six months.

If you are taking medication for depression, you can easily *add* the full doses of vitamins and minerals. If your medicine is any kind other than what is known as an MAO inhibitor, you can also add the amino acids. Some research has indicated that adding tryptophan increases the beneficial effects of traditional antidepressants. Start with the lowest dose and build up gradually as needed.

Because of side effects and food restrictions, MAO inhibitors are not widely used in this country. The research is contradictory about using them with amino acids. Do not use these substances together unless your doctor specifically advises you to.

It makes sense that the more severe and long-lived your depression, the more difficult it is to treat, just as is so with any illness. This is often the rule with traditional therapies and may also be the case with nutrient treatment, but some people who have been ill a long time improve rapidly with this new approach.

## **PROGRAM MODIFICATIONS FOR OTHER PSYCHIATRIC DIAGNOSES**

### **Associated Diagnosis of Schizophrenia**

The depressed person with schizophrenia needs an altered nutritional treatment program and should be under a doctor's care. All the vitamins and minerals are useful, but much larger doses of certain B vitamins are needed. Also, a doctor should be monitoring the tyrosine and tryptophan doses. Sometimes schiz-

ophrenic symptoms improve with tryptophan, sometimes they worsen.

There is a great deal of literature available on the orthomolecular treatment of schizophrenia. For a list of available books, articles and pamphlets, contact The Schizophrenia Association of Greater Washington, Inc., Wheaton Plaza Office Building North, Suite 404, Wheaton, Maryland 20902, phone (301) 949-8282, or The Huxley Institute, 900 N. Federal Highway, Boca Raton, Florida 33432, phone (800) 847-3802, in Florida (305) 393-6167.

### **Associated Diagnosis of Manic-depressive Illness (Now Called Bipolar Disorder)**

If you are manic-depressive, the amino acids can potentially lift you out of your depression if you follow the program in Chapter 4. They can also potentially push you over into mania—as can any traditional antidepressant medication. Even though this can happen, the treatment of the depressive phase of manic-depressives is still essential and most of the time does not precipitate mania. Be aware of the possibility and proceed with antimania treatment, should it be necessary. See the appendix to Chapter 2 to learn the clear signs of moving into a “high” state. Some nutrients can help treat mania, such as:

#### **LECITHIN**

Double-blind, placebo-controlled research has now shown that the nutrient lecithin, which contains choline and inositol, has anti-manic effects. In one study lecithin, in a 90 percent pure form, brought about rapid improvement in four manic patients—three of whom immediately worsened when the lecithin was discontinued. The phosphatidyl choline form is most effective, and the strongest commer-

cially available form has a 55 percent concentration. Take one to four capsules three times daily during a high phase.

### **TRYPTOPHAN**

Tryptophan has been useful in controlling some cases of mania, but it has made others worse. Amounts up to 12,000 mg daily in four divided doses have been safely used for this purpose. Tryptophan is worth a trial in all manic disorders.

## **PROGRAM MODIFICATIONS FOR CERTAIN MEDICAL CONDITIONS**

If you are under a doctor's care for depression, heart disease, hypertension or other serious illness, discuss the program with your doctor and refer to Chapter Ten. Remember, though, that most doctors don't know about or fully understand nutrients, so you might want to consult with one who does, or ask your doctor to read this book.

The following medical conditions require changes in the treatment as specified.

### **High Blood Pressure**

As we have seen on page 71 through 72, you should consult with your physician before trying the nutritional program if you have high blood pressure.

### **Pregnancy**

During pregnancy it is wise to be careful of drugs and excessive nutrient dosages. A number of pregnant women have received this treatment, have experienced no problems and have delivered normal babies. If you are depressed, you can safely take a multivitamin mineral, usually with iron. Take the B

complex vitamins, up to 50 mg twice daily, and vitamin C, up to 500 mg twice daily. If you are still depressed after two to four weeks, take the lowest amino acid dosages—only up to 1000 mg daily of tyrosine and tryptophan. Remember, all these substances are present naturally in food, but pregnancy limits have not been determined, so take them only with the approval of your doctor.

### **Severe Liver Disease**

Since the diseased liver is unable to remove the ammonia formed in the body by the breakdown of protein, any person with severe liver disease must have a protein-restricted diet. Such a person is also unable to take traditional medications because his liver is unable to metabolize them properly. If you are in this situation, do not take the amino acids, but follow the vitamin and mineral program and the other suggestions in the book.

### **Severe Kidney Disease**

Those with serious kidney malfunction may be placed on protein-restricted diets because their kidneys cannot rid the body of ammonia, a by-product of protein metabolism. There is some literature available on the successful treatment of such people with the "free form" amino acids, but, since this point remains unclarified, avoid the amino acids and any extra magnesium if you have a severe kidney disorder.

### **Overactive Thyroid**

The individual with hyperthyroidism (an overactive thyroid) already has an excess of, and poor breakdown of tyrosine. Such a person should avoid extra tyrosine and phenylalanine, but can follow the rest of the program.

### **Parkinson's Disease**

People with this disorder being treated with the drug L-dopa should not supplement their diet with vitamin B<sub>6</sub>, as it can cancel the effect of this medicine. However, L-dopa lowers tryptophan levels, so those who take this medicine may develop depression. This has been successfully treated with 1000 mg of tryptophan daily, as reported in several research reports.

Depression is common with Parkinson's because this illness is caused by decreased amounts of the neurotransmitter dopamine throughout many areas of the brain. Therefore, the precursor tyrosine is sometimes very useful.

### **Phenylketonuria**

Because they lack an enzyme essential for the metabolism of phenylalanine, people with this extremely rare genetic condition should not take any phenylalanine and should be on a restricted diet devoid of this amino acid. Phenylketonuria is quite evident in infancy or early childhood—that is, if you have it, you know it by now.

### **Malignant Melanoma**

One last potential theoretical problem is for those suffering from this rare type of skin cancer. One by-product of the breakdown of tyrosine and phenylalanine is melanin, and you would not want to risk increased melanin production with this condition. I should emphasize that this is theoretical and there are no reported cases in fact, but some researchers are attempting to treat melanomas with diets limited in tyrosine and phenylalanine, with as yet unclear results.

## PROGRAM MODIFICATIONS FOR ASSOCIATED SYMPTOMS

You may wish to modify the program when various clusters of symptoms predominate. Such modifications are as follows.

### **Insomnia, Anxiety, Agitation and Irritability**

**TRYPTOPHAN** If you have a tendency toward agitation, insomnia and anxiety, you may have decreased brain serotonin levels and need more tryptophan. If you sleep excessively when you are depressed, try omitting this amino acid entirely. Tryptophan has also been found to be useful in those with poor control of their aggressive and hostile impulses.

There are now many double-blind studies showing the sleep-inducing effects of tryptophan. Unlike regular prescription sleeping pills, tryptophan does not alter the sleep brain wave patterns and there is no risk of developing a dependency or tolerance and having withdrawal symptoms on abrupt termination. In research, the sleep-inducing dosage of tryptophan has ranged from 1000 to 6000 mg, with 3000 to 4000 mg being optimal.

Most of you have heard of alpha brain waves, the brain electrical activity that occurs when you are in a relaxed awake state—somewhat meditative. EEG's done on subjects taking L-tryptophan showed that any brain wave changes induced were of a desirable type, in contrast to undesirable brain wave changes caused by barbiturates and other hypnotics.

If you are insomniac without agitation or anxiety, take the regular tryptophan dose one hour before bedtime. If there is accompanying anxiety and agitation, low doses of tryptophan throughout the day may be useful, ranging from 250 to 500 mg, three times

daily. Bear in mind that, as with most substances, there can be what is called a "paradoxical" or opposite reaction. Thus, about 1 percent of people become more agitated with tryptophan.

**LECITHIN** Phosphatidyl choline (triple strength lecithin) is also calming. Take it at 55 percent concentration, 2 to 3 capsules, 2 to 3 times a day.

**GABA** Gamma amino butyric acid (GABA) is a calming neurotransmitter that is sometimes used in a pure form and at other times is combined with inositol and vitamin B<sub>3</sub>, all of which are relaxing to the nervous system. Take twice a day for a total of 1000 to 2000 mg of GABA, 200 to 500 mg of B<sub>3</sub>, and 1000 to 5000 mg of inositol.

**MAGNESIUM** In Chapter 7 we will discuss how magnesium deficiency can be associated with agitated states. If you are agitated, try adding magnesium, preferably in the orotate form. Begin with 100 mg, two to three times daily, and increase to 500 mg, two to three times daily, if a higher dose is needed.

If your anxiety, insomnia and agitation are beyond what can be handled nutritionally, you may at first need a traditional, strongly sedative antidepressant drug. You can start the nutrient program at the same time, or you may wait until you respond to the medication and then make a gradual transition to this program.

### **Apathy, Fatigue and Slowed Behavior**

Sometimes depressive people experience slowed movement and speech, general apathy, lower levels of anxiety and little insomnia—in fact, they may sleep too much. Such people are more likely to have

low brain norepinephrine and should take more tyrosine or phenylalanine and less tryptophan.

This type of depression is also likely to be associated with vitamin B complex deficiency, so if you have these symptoms you may try doubling or tripling your vitamin B complex dosage. Folic acid is important here. Make sure you are getting a total of about 1000 to 1500 mcg of folic acid when you add up the total amounts in the multivitamin and vitamin B complex. Folic acid is usually listed in micrograms and 1000 mcg equals 1 mg. Additionally, take 1000 to 2000 mcg of sublingual vitamin B<sub>12</sub>.

### **Predominant Memory and Concentration Problems**

All of the B complex vitamins are important in improving memory, as are tyrosine and phenylalanine. The basic program will be sufficient in most cases of memory impairment. If you don't experience a significant restoration of your memory as your mood improves, you may wish to add in extra memory-enforcing substances. Some companies make combination products for memory. You may wish to try a combination product before adding the following single agents:

**CHOLINE** The choline mentioned in the section on manic-depressives is important in improving memory, especially in the elderly. It is part of the B vitamin family and is a precursor for the formation of the neurotransmitter acetylcholine, which influences mood, memory, learning, long-term planning and primitive emotions and drives, and also helps control muscle tone and activity.

We are not sure whether acetylcholine deficiency relates to Alzheimer's disease, though that is now being investigated.

Researchers administered a continuous infusion of

an acetylcholine-producing drug into the brains of Alzheimer's victims. Several improved during treatment and then relapsed when the drug was replaced by placebo salt water infusions. Also, there is promising research using high doses of the nutrient choline for this condition. So far, the results are mixed, with some improving and others realizing no benefit. In one study, a single oral dose of 3 g improved memory and serial learning ability in the subjects. In another study, a dose of 10 g produced similar results.

Avoid the choline chloride preparations—they will make you smell like a dead fish. One of my seventy-seven-year-old patients had read about the use of choline for memory stimulation and had started taking it on her own. One day she came in for an appointment and my office and the waiting room were suffused with a terrible stench. When I asked her if she was taking choline, she said she was, in the chloride form. The problem disappeared when she promptly switched to phosphatidyl choline.

Alcohol and excess estrogen can cause a choline deficiency. Too much or too little choline can contribute to depression, so balance is very important here. Doses over 3000 mg can deepen a depression, so discontinue it if you have such a response. No RDA has been established for choline, but our usual daily intake is 250 to 1000 mg. The treatment doses have ranged from 1000 to 10,000 mg daily and no toxicity has been reported.

**L-GLUTAMINE** This amino acid is a unique brain fuel important for optimum mental functioning and is useful in some cases of depression. It is what is called an "excitatory" neurotransmitter. It also helps to protect against the effects of alcohol, helps decrease the desire for alcohol, and in some cases decreases the desire for sugar. The dosage is generally 1000 to 3000

mg daily, all to be taken before four in the afternoon. It can be taken at the same time as your tyrosine.

**DMAE DMAE-H3** (dimethylamino-ethanol) is a concentrated solution of the nutrient PABA (para-amino benzoic acid). In liquid form, take ten drops in the morning. This and sublingual vitamin B<sub>12</sub> (2000 mcg in the morning) can be added if three to four months of the other nutrients have not sufficiently enhanced your memory.

## OTHER USES

If you are in a situation where you need only occasional intense mental concentration, focus and output, short-term use of tyrosine or phenylalanine together with vitamin B complex is excellent for this purpose. Such circumstances might be studying for and taking exams, presenting a case in court, or completing an important project.

When experimental animals are given drugs which decrease the amount of norepinephrine in the brain, the animals' capacity for learning is blocked. Then, when the animals are given injections of norepinephrine, the ability to learn returns. This has many unexplored implications for the use of norepinephrine precursors for improved learning.