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Specific Physical Illnesses and Low Moods

Very often people who feel depressed when they are ill believe their feelings are only a psychological reaction to their sickness. However, medically ill people who become depressed and remain that way beyond the initial discomfort, fear and frustration of the first three to four weeks of their illness may also have brain amine changes that are adding to their mood disturbance. People who are depressed need to be screened for physical illness and those who are physically ill need to be evaluated for depression.

The stress and disturbance caused by disease can rapidly deplete your body of nutrients at the time you need them most. A number of studies have measured nutrients in post-surgical and severely ill patients and have found significant deficiencies. Also, any illness that decreases the amount of oxygen circulating through your body can increase the likelihood of depression. Research has shown that the enzymes which initially break down tyrosine and tryptophan (tyrosine and tryptophan hydroxylase) are regulated by oxygen. Thus, low oxygen can inhibit brain amine synthesis.

While virtually any illness can coincide with de-

pression, some illnesses are far more likely to create mood problems than others. Though all sick people are dealing with the psychological stress of illness, only some have the distinct constellation of neurochemical imbalances which adversely affect mood.

The physical conditions that most often predispose a person to mood disorders are low thyroid, premenstrual syndrome, chronic candidiasis (fungal infections), viral infections, high blood pressure, stroke, other cardiovascular diseases and Parkinson's disease. Because of the chemical imbalances involved, patients with some of these illnesses have benefited a great deal from the nutritional program in conjunction with the medical attention their condition may require.

THE THYROID CONNECTION

The neurotransmitters directly influence hormone levels. For this reason, people who are depressed often have associated hormone changes. Likewise, a primary hormone disorder or glandular malfunction can lead to depression.

There is a delicately balanced system of hormonal regulation originating from your hypothalamus, an area deep in the bottom center of your brain. It regulates your pituitary, the part of your brain that controls the glands and their hormone production. Your hypothalamus responds to the chemical environment of your body and prompts your pituitary to stimulate your glands to secrete. Your glands, in turn, must have the necessary ingredients for hormone formation; these include essential fatty acids, amino acids, vitamins and minerals. Once formed, these hormones then feed messages back to your hypothalamus and

other brain parts, directly affecting your neurotransmitter mechanisms.

We know that neurotransmitter depletion is the biochemical cause of depression, and one of the areas of the brain most depleted is the hypothalamus. Therefore, besides affecting mood, deficient neurotransmitters can create hormonal and metabolic imbalances and also disrupt normal biological rhythms.

The most consistent, best documented hormonal changes associated with depression are related to the thyroid, adrenal and ovarian hormones. In my practice, I find low thyroid function in a number of those who are depressed.

A forty-eight-year-old woman who came to my office said, "I've had depression all my life." She had been hospitalized on numerous occasions over the previous nineteen years, had had many doctors and years of psychotherapy, so she knew the psychological jargon and the psychological answers. She had tried to kill herself repeatedly, once by wrist cutting and nine times by drug overdose. She said, "I feel I can't even succeed at killing myself, so I don't try anymore. But I think, wouldn't it be nice if I would just die?"

At the time of our first meeting she was taking the antidepressant medication Elavil, the major tranquilizer Navane, Cogentin to counteract the side effects of the Navane, Catapres for her high blood pressure, and the diuretic hydrochlorothiazide for her high blood pressure. She also had a history of heavy drinking. Beyond these physiological pollutants, she had been an abused child and had led a chaotic life. Family history revealed she had a schizophrenic sister who was also a drug addict, a schizophrenic brother and two alcoholic brothers.

On an initial health questionnaire she indicated the following huge list of symptoms: headaches, faint-

ness, imbalance, sleepiness soon after eating, insomnia, sneezing, watery itchy eyes, blurred vision, hearing loss, chronic cough, gagging, canker sores, frequent yawning, sensitivity to light and sound, tight feeling in her chest, sudden changes in blood pressure, severe constipation, bloating, belching, feeling of fullness long after finishing a meal, abdominal pains and cramps, skin rashes, itching, sweating, chronic fatigue, weakness, muscle cramps, swelling of hands, feet and ankles, binge eating, severe depression, mental lethargy, confusion and suicidal thoughts.

Initial laboratory tests showed low thyroid, low magnesium, low potassium, extremely high cholesterol and triglycerides, slightly elevated blood sugar and high uric acid (gout).

We began treatment with thyroid, a multivitamin mineral, vitamin B complex, vitamin C, bioflavonoids, an extra calcium-magnesium-zinc preparation, another 400 mg of magnesium orotate, 3200 mg a day of tyrosine and 3000 mg a day of tryptophan. She was instructed to eliminate sugar, red meat, milk, eggs, and cheese from her diet in order to treat the gout and high blood sugar.

Within two months this patient was able to stop her medications for blood pressure because her pressure had normalized. Within three months she was able to stop all other medications she was taking at our first visit and to remain on only our treatment program. Her depression was completely cleared and she was feeling much better in every way. It is now two years later, and she continues to have a totally normal mood and normal blood pressure. She is, in every respect, a "changed woman."

The literature indicates that 15 to 20 percent of depressed people are also hypothyroid. This is no surprise because the thyroid hormone regulates me-

tabolism in all of your body cells, including your brain cells. Very slight shifts toward a lowered thyroid state can affect our very responsive brain cells, which seem to be more reactive to subtle thyroid lack than are other body cells.

Depression is the major mental manifestation of those with hypothyroidism. In fact, 40 percent of those diagnosed as hypothyroid also suffer depression. They may also experience other mental changes such as poor memory and concentration, and overall slowing of mental processes. At times, paranoia and even psychosis can result. Other possible symptoms are:

Chronic fatigue, especially in the morning

Muscle weakness and lethargy

Excess sleepiness

Menstrual changes or problems

Weight gain with swelling and puffiness

A deepened or hoarse voice

Constipation and other digestive symptoms

Cold intolerance

Decreased sweating

Hair or eyebrow loss

Dry, coarse rough skin

An average morning underarm temperature below 97.2 degrees

As if we need more to complicate the diagnosis, thyroid dysfunction may not readily be discovered by doing the usual thyroid blood tests measuring so-called T3, T4 and TSH. Studies have shown that approximately 20 percent of depressed patients have antithyroid antibodies in their blood. This condition is called autoimmune thyroiditis and some now believe it is the most frequent thyroid disorder in our population. It is like an allergic inflammation of the

thyroid gland. It occurs eight to ten times more often in women than in men, primarily between the ages of thirty to fifty years, although it can appear at any age. Most of these same patients have normal T3 and T4 and TSH blood levels.

Another blood test that may reveal thyroid problems is called the TRH test. You can request it if you suspect you have thyroid problems that the usual tests have not revealed.

Tyrosine and iodine are required for the formation of thyroxine, the thyroid hormone. When tyrosine becomes depleted, our bodies may first use tyrosine for thyroid formation before it is used for norepinephrine formation. This seems to be the case because low thyroid is less common than depression.

I have not seen research evidence on the use of tyrosine to treat these instances of subtle low thyroid, but some investigators have reported lower tyrosine blood levels in hypothyroid patients. In my practice, I have successfully used tyrosine in several patients with borderline low thyroid, and the thyroid levels have increased to the midnormal range. This approach certainly makes sense when used in conjunction with 75 to 200 mcg of iodine daily. If, however, the levels of thyroid are clearly below normal, then thyroid hormone should be added as well.

Many different circumstances can predispose a person to low thyroid. First of all, there is a strong genetic component to thyroid disease. Additionally, chronic stress and pain can inhibit the release of thyroid hormone, so people experiencing these would do well to ensure sufficient tyrosine and iodine in their bodies. Other conditions which contribute to decreased thyroid formation are aging, and excess vitamin A, iodine, fluoride, chloride and bromide. Those who have excess thyroid in their bodies al-

ready have too much tyrosine in their systems and should not take extra amounts.

If you suspect thyroid disorder in yourself, see your doctor for complete evaluation and also read the excellent book called *Hypothyroidism, The Unsuspected Illness*, by Broda Barnes, M.D.

PMS—PREMENSTRUAL SYNDROME

We know now that PMS is a condition of biochemical disequilibrium which can be related to increased activity of monoamine oxidase (the enzyme that breaks down the neurotransmitters), nutritional deficiencies, antibodies to ovarian tissue, chronic fungal infections, estrogen and progesterone imbalances, thyroid disorders and other possible contributing factors.

Now that PMS is finally receiving the validating attention it deserves, we are able to discover more about its impact on America. Studies indicate that between 30 and 50 percent of women from twenty to fifty years of age are affected, and most studies are toward the 50 percent figure. This can have staggering consequences in many areas besides the approximate one hundred billion dollar yearly loss to the work force because of PMS-related absenteeism.

By definition, the sufferers from PMS must have at least one symptom-free week per month, and a somewhat consistent pattern of increased symptoms anywhere from three weeks to one day before the onset of menstruation, which then abate with menstrual flow. The severity of the symptoms can and does vary from month to month.

Depression and anxiety are common aspects of PMS, and some researchers believe there is a relationship between PMS and mood disorders. Studies

do suggest that premenstrual malaise predicts an increased vulnerability to depressive illness.

PMS has been treated with tranquilizers, antidepressants, diuretics, progesterone, oral contraceptive pills and amphetamines. None of these have had the clear-cut positive results we would hope for.

Guy Abraham, M.D., has been a major contributor to the understanding of what he calls PMTS (Premenstrual Tension Syndrome), especially as it relates to nutritional factors. He and others in the field believe that malnutrition and stress are common factors underlying PMS. In general those with PMS should avoid sugar, caffeine, chocolate, nicotine, alcohol, salt, fatty and fried foods, and excess dairy products. Women with PMS need to eat plenty of fresh fruits and vegetables, lean meats, beans and whole grains.

Estrogens are central nervous system stimulants, while progesterones are central nervous system depressants. The balance of these two hormones has a profound effect on moods and this balance can be nutritionally influenced. The nutritional treatment in this book should significantly help with most cases of PMS. When this basic program does not completely eliminate PMS, the magnesium supplement can be doubled or tripled, the vitamin B complex doubled or tripled, and the vitamin B₆ doubled or tripled. When breast tenderness is a problem, additional vitamin E up to a total of 1600 IU daily may be useful. Extra vitamin E should only be used in those women who have no problems with hypertension. It is contraindicated otherwise. In those cases where nutrients are not completely effective, there should be an evaluation for the presence of yeast overgrowth.

FUNGUS INFECTIONS

In my practice, the infection I have found to be most commonly associated with depression and other psychiatric symptoms is the condition of yeast, or fungal overgrowth. The favorite places for this growth are the mucous surfaces of the body. The infection is called monilia when in the vagina, thrush when in the mouth, and candidiasis when it is more widespread, such as in the gastrointestinal or genitourinary tracts.

Coyotes and rabbits may coexist in a certain balance in the neighboring hills. But if someone comes along and kills the coyotes, we'll have a rabbit population explosion. Likewise, this yeast lives in all of us and usually coexists in proper balance with its other normal neighboring microorganisms. Under certain conditions this internal environmental balance is disturbed and there is a yeast population explosion.

Antibiotics can create this imbalance because while they are killing unwanted harmful organisms, they can also kill the friendly bacteria that help to keep the yeast in balance. This especially occurs with repeated antibiotic use. These normal bacteria can be reintroduced by eating yogurt or taking lactobacillus acidophilus capsules, especially if this is begun at the onset of antibiotic usage.

Certain other conditions help sustain the yeast either by feeding it or by providing an optimum growth environment. This particularly occurs after the overgrowth process has already begun. Excess sugar in the blood and other alterations in the internal environment related to hormones, such as cortisone or birth control pills, can promote proliferation of yeast cells. After they are established,

the yeast organisms are often very resistant to attempts to control their population. Once an individual has developed this tendency, the yeast seems to be ready and waiting for the slightest opportunity to multiply. It may only take the help of a few days of eating sugar or breads high in yeast, drinking yeast-filled alcohol, or returning to antibiotics to cause a flare-up. Once the fungal infection has taken hold, it creates chemical imbalances, including amino acid imbalances that predispose to depression.

Though this nutrient program will contribute to the general well-being of people with persistent and serious yeast infections, they need additional antiyeast nutrients or medications and must follow a specific antiyeast diet.

Yeast overgrowth has become such a major problem that I discover it relatively often in those who come to me for treatment. If they score high on the candida questionnaire, I then order a blood test for what are called anticandida antibodies, for confirmation. When this test is abnormal, we proceed with appropriate treatment.

VIRAL INFECTIONS

I have seen and known a number of patients who had a totally normal mood when physically well but could progress to a severe depression with any viral episode. The exact mechanism by which this occurs is unknown, but it clearly tips the scale in those with already delicately balanced systems. Be alert to any mood swings accompanying viruses and treat them with this program. Depression is known to accompany or follow viruses such as mononucleosis, hepatitis or influenza.

HIGH BLOOD PRESSURE AND HEART DISEASE

Hypertension is the second most common illness after depression, and often the two coexist. This isn't surprising, since many drugs used to treat this condition cause depression. There is also increasing evidence that low vitamin B₆ and low magnesium contribute to high blood pressure as they do to depression.

A complicating situation is that some traditional antidepressants should only be used with caution in those with hypertension or on antihypertensive medication. There are even precautions to be followed when giving amino acids to severe hypertensives. (See page 71.)

Those who have suffered heart attacks or who have other forms of heart disease often suffer from depression. In studies on patients with heart attacks, 60 percent are depressed during their hospitalization, 20 to 30 percent are still depressed one year later, and 15 to 20 percent never return to work. Again, one reason for such statistics may be that many of the common heart medicines can actually create depression as a side effect. But there are also nutritional and biochemical mechanisms involved in this process that can be ameliorated by the food supplement program.

STROKE

People who have suffered from strokes experience mood disorder more commonly than other patients with equally disabling medical illnesses. Depression in these patients cannot be fully explained by the severity of their impairment. Rather, it seems to be the result of physiological changes in the brain in

response to the localized injury of the stroke. The incidence of depression is highest when the damage is to the anterior left portion of the brain. Also, the closer the damage is to the left front, the more severe will be the depression. In contrast, when the stroke is in the *right* frontal area, the patient may become indifferent and, conversely, even tend toward jocularity.

Some investigators have surmised that the injured brain cells may switch from producing neurotransmitters to synthesizing protein for regeneration of the damaged cells. This would suggest that depletion of the amines following injury to certain brain areas could contribute to causing some post-stroke mood disorders and additionally supports the entire biochemical theory of depression.

Because of the statistics and because many people with strokes can't talk or otherwise express themselves well, it might be especially prudent and highly beneficial to proceed with the safe, antidepressant amino acid treatment that is the subject of this book.

PARKINSON'S DISEASE

Parkinson's disease is often related to depression, which is especially interesting because it is a disorder caused by neurotransmitter deficiencies of certain areas of the brain that relate primarily to movement.

Depressed people with Parkinson's disease can benefit from the nutritional program in this book, but if they are taking L-dopa they must not supplement extra vitamin B₆. L-dopa lowers tryptophan levels, so when depression is present these people should supplement tryptophan as well as tyrosine.

ORGANIC AILMENTS AND DEPRESSION

Because of the frequent simultaneous occurrence of depression and certain physical illnesses, we cannot be certain that an intrinsic biochemical vulnerability to depression does not in some way predispose people to certain organic ailments and vice versa.

It does become apparent that costs, severity and duration of illness, and mortality can be reduced by appropriate evaluation and treatment for depression. Otherwise, normal healing processes may be compromised, the immune system may be altered and an already ill person may become more vulnerable to infection as well as many other complications.

A side effect of the nutritional treatment of depression is overall improved general health as well as improved moods. Such a promotion of healing and wellness is far more desirable than the emotional, social and monetary costs of being ill.