

Depression: Functional Medicine Approach

By Ronald Grisanti, DC, DABCO, DACBN, MS



You will soon discover information that will change your life and the life of your family, friends, and patients.

Depression is a national and global epidemic. Just in the United States alone there are over 12 million people who suffer with depression, and that number is rising at an alarming rate. The costs to the American public are enormous.

The following are just a few of the common causes of depression. If you want to get better and bring happiness and joy back into your life, then you owe it to yourself to be absolutely certain that you have each of the following causes thoroughly checked.

Here is the first area you need to have checked:

Depression and Thyroid Function

Approximately 10%-15% of patients with depression have a thyroid hormone deficiency. Now I must emphasize to you that the testing of your thyroid MUST include the following:

- **Thyroid-stimulating hormone (TSH)**
- **Free serum thyroxine (fT4)**
- **Free triiodothyronine (fT3)**
- **Reverse T3 (rT3)**
- **Anti-thyroglobulin antibodies (anti-TG)**
- **Anti-thyroid peroxidase antibodies (anti-TPO)**

Anything less than this is simply unacceptable.

It is well documented that the evaluation of only TSH is inadequate as a means of testing your thyroid. If you have been told by your physician that your thyroid is fine and have not had the above tests ordered, then think again...your physician DOES NOT have all the facts.

Obtaining a comprehensive thyroid panel is essential to rule out thyroid disorder as a possible cause of depression. The medical literature has discovered a link between low T3 and long-standing depression. In fact the common treatment of hypothyroidism with Synthroid (a T4-only thyroid medication) may be contributing to an increase in depressive symptoms due to its inability to address a deficient T3.

A comprehensive thyroid panel will also test the possibility of you suffering from a thyroid auto-immune/depression syndrome. The medical literature has found women with high levels

Depression is considered the most dreaded condition of mankind. What makes depression so awful is the sad fact that it is the one disease devoid of hope in the minds of many who suffer with this global epidemic.

Unlike debilitating diseases like arthritis, which shows its ugly face by causing pain, depression is a silent enemy afflicting millions every year.

My goal in this article is to prepare and educate you on a few of the common triggers of depression.

These are not original thoughts on the subject of depression but are in fact documented peer-reviewed research proving the existence of a world of information kept under "lock and key" contributing to a sea of suffering and mental anguish.

The cause of your depression just may be found with a thyroid problem.

center -- the hypothalamic pituitary adrenal (HPA) axis. The HPA is a complex communication system between the hypothalamus, the pituitary gland, and the adrenal glands.

The hypothalamus is a region of the brain that controls an immense number of bodily functions including, but not limited to, emotions, behavior, pain, and pleasure.

The pituitary gland is again divided into two distinct portions: the anterior (front) pituitary and the posterior (back) pituitary portions. For the sake of this article, I will only discuss the significance of the anterior pituitary and its relation to depression.

The anterior pituitary produces six very important hormones. Each has a different and distinct function necessary for maintaining health and well-being. One hormone of special interest for the topic of depression is called Adrenocorticotropin. Adrenocorticotropin is responsible for causing the adrenal glands to produce the well-known stress hormones called cortisol and DHEA.

Now with some basic physiology under your belt, here is what happens to a person suffering with depression.

First, when a person experiences some powerful depressing thought, the hypothalamus is sent a signal to wake the pituitary up telling it to produce some of its hormones. The hypothalamus is basically a collecting center for information concerned with

of anti-thyroid peroxidase (anti-TPO) antibodies to be more vulnerable to depression. A recent German study concluded: "in cases of repeated depressive episodes, it seems necessary not only to get lab testing for TSH, T3, and T4 but also to assess the autoimmune status of the thyroid gland (autoantibodies)."

As you have read, it is CRITICAL that you ask your physician to do a comprehensive thyroid panel. DO NOT settle for a TSH test alone. The cause of your depression just may be found with a thyroid problem.

Depression and Adrenal Function

Depression has been linked to disruptions in the body's stress

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the well-being of the body, and in turn much of this information is used to stimulate the pituitary to produce its hormones.

The one hormone just discussed is called Adrenocorticotropin. This in turn sends a signal to the adrenal glands to produce more and more of its hormones. Adrenal gland secretion of the hormones cortisol and DHEA has been directly tied to stress and other emotional factors.

A strong relationship between the overproduction of cortisol and mood variations has been established in both depressed and healthy individuals. As with many of the body's physiological responses, balance is the key. Overactivity of the body's stress system is associated with anxiety, insomnia, loss of libido, while underactivity is linked to depression with accompanying fatigue, lethargy, and indifference.

Depressed individuals often exhibit trouble in the normal relationship between the hypothalamic, pituitary, and adrenal glands. A hyperactive Hypothalamic-Pituitary-Adrenal axis may likely result in a hypersecretion (too much) of cortisol, which in turn will also result in depressive symptoms.

It is important to know how your hypothalamic pituitary adrenal (HPA) axis is functioning. With that information in hand, your physician will be in a better position to outline a patient specific treatment.

Here are two excellent labs that I presently use:

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Nutrient deficiencies, Chemical Toxins and Depression.

As the incidence of depression reaches epidemic proportions, I sometimes wonder how one can overlook or may I say ignore the research documenting known causes that can be easily identified and treated.

Another common cause is the relationship between nutrient deficiencies, chemical toxins, and depression.

The medical literature is "over-flowing" with peer-reviewed abstracts proving beyond a shadow of a doubt that depression, nutritional deficiencies, and chemical toxicities are linked.

Our bodies require optimal amounts of trace minerals such as magnesium, zinc, and vanadium (to name a few) to function. Not too much and not too little... just the right balance. Excesses or deficiencies of specific minerals can set off symptoms of depression. For instance, low levels of zinc are associated with resistant depression. Deficiencies of magnesium can bring on a wide range of psychiatric symptoms related to depression and psychosis. Research has revealed a link between high levels of the mineral vanadium and manic symptoms.

Chemical Connection: Invisible Brain Toxins

One of the big problems with chemicals is they have this nasty ability to sneak up on you and when you least expect it. Most of the chemical sensitivities sneak up on a person over a period of weeks, months or years slowly damaging your detoxification pathways. It is not unusual for a person to experience a sudden

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onset of depression when a new carpet is installed or a building is renovated or freshly painted.

Let me explain some basic biochemistry...

In order to detoxify chemical toxins, your body requires adequate amounts of zinc. Zinc runs the enzyme alcohol dehydrogenase and it is this important enzyme that is responsible for detoxifying everyday home and office chemicals. The most common chemical found in carpets, home furnishings, copy machines, secretarial white-out, commercial floor cleaners, polishes, waxes, glues, adhesives, and other common household and office surroundings is a chemical called trichloroethylene.

You may be asking how trichloroethylene can cause depression. Let me explain. When you are exposed to this chemical, it is likely that you either inhaled it or absorbed it through your skin. Normally this chemical, like most chemicals, will be neutralized by your body's detoxification system and eliminated.

However, if your body's ability to neutralize chemicals is impaired (possibly a zinc deficiency), the chemical will back up and will accumulate in the brain. When trichloroethylene is stored in the brain it is likely converted to choloral hydrate. If you are a baby-boomer reading this, you may remember the old "Mickey Finn" or knockout drops. And this is exactly how a person feels who is sensitive to trichloroethylene. They will feel spacey, dizzy, dopey, unable to concentrate, foggy, and very depressed.

I have simply presented one chemical linked to depression. There are other environmental toxins linked to depression. My goal was to provide another piece of the depression mystery.

There is no one treatment that will fix all people. Take ten people suffering with depression and it is likely the cause and the treatment can be different for all ten. What may help one person may do absolutely no good for five others. With that in mind, it is wise to be certain what may be causing your health problem. You may indeed be suffering with a zinc deficiency that would interfere with the body's ability to effectively eliminate chemicals off-gassing from your new carpet.

Again, what works for one will undoubtedly fail on another. With that in mind, it is imperative to have a physician who understands the potential causes of a disease and, for the sake of this report, depression.

Your physician **MUST** conduct a thorough and rather exhaustive interview/consultation with each patient and determine what direction to go in. For one patient, your physician may determine that an evaluation of the thyroid and cortisol levels would be a good start. For another patient, maybe checking for chemical toxicities and nutrient deficiencies would be the way to go. No matter what, the recommending of an anti-depressant without this type of medical detective work is simply not acceptable.

If you think that the cause of your depression is linked to chemical toxicity and/or nutrient deficiencies, then I recommend

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that you ask your doctor to order the following tests:

- **RBC mineral/toxic chemical assay (Genova/MetaMetrix)**
- **Toxic Effects Core (Genova/MetaMetrix)**
- **Urine Toxic Metals- DMSA Challenge (Doctor's Data)**

Depression is disease that claims new victims everyday. The causes of this mental disease can range from thyroid, cortisol deficiencies, to nutrient deficiencies/chemical toxicity exposure.



Ronald Grisanti D.C., D.A.B.C.O., M.S., is medical director of Functional Medicine University. If interested in improving your diagnostic skills and increasing your community reputation and recognition, we strongly recommend subscribing to our Free Clinical Rounds Series. These challenging case studies will give you the unique opportunity to test your clinical skills and, at the same time, improve your ability to handle many of the most difficult cases. Go to the following link to get your free access: www.ClinicalRounds.com.

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