

### Research Article

## Are you tired? Low Thyroid may be the Culprit: Part 2

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### Rebalancing the Thyroid System

Conventional medicine's view of thyroid functioning is marked by two distinct problems:

- One problem, as noted in Part 1 of this article, is the flawed process of diagnosing thyroid disorders. Even when a patient is obviously symptomatic, his or her condition may go unrecognized by orthodox physicians because they focus so exclusively on the results of conventional thyroid blood tests. These tests do not directly measure the functioning of the entire thyroid system, which includes both the central production of T4 hormone and the conversion of T4 to T3 at the tissue level. This conversion process, which occurs outside of the thyroid gland itself, is essential because T3 is the active form of thyroid hormone that works in the body's cells.
- The second problem with the mainstream approach to thyroid functioning occurs in the treatment phase. When a patient is in fact diagnosed with a low thyroid condition by conventional medicine, the physician's automatic, reflex reaction generally is to prescribe a synthetic T4 medication that does not contain T3.

The use of thyroid medication may be the easiest path for doctor and patient alike, but it is not the best long-term solution for a sub-optimal thyroid system. A preferable (and more natural) approach is to help the thyroid mechanism heal itself using a variety of non-drug treatments. This healing process may reset the full functioning of the thyroid system, whether the central thyroid thermostat, which produces T4, or the peripheral conversion of T4 to T3. As a result, the patient will not have to depend on an oral thyroid hormone medication to function optimally.

In Dr. Feldman's experience, when a patient takes thyroid hormone medication for months on end, the thyroid system recognizes that it no longer needs to produce thyroid hormone internally and shuts itself down. The result is that the patient stays on the drug for

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Citation: Feldman M, Null G (2022) Are you tired? Low Thyroid may be the Culprit: Part 2. J Altern Complement Integr Med 8: 229.

Received: February 22, 2022; Accepted: February 23, 2022; Published: February 28, 2022

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many years or even for life. Therefore, when patients are amenable to a natural rebalancing, Dr. Feldman prefers to try to repair and optimize the thyroid system without medication. This process requires a two- to three-month therapeutic trial.

### A Natural Protocol for Repair

The effectiveness of the natural repair process is partly determined by the patient's level of commitment. The more changes you are willing to make, the higher your probability of success in rebalancing the thyroid system.

The specific steps involved fall into two main categories: lifestyle changes and natural therapies that support thyroid functioning. They are as follows:

### Detoxify and Cleanse the Body

Any toxins in your system may have a negative effect on thyroid functioning, so it's important to reduce your exposure to toxins such as fluoride, chlorine, mercury, pesticides, aspartame and caffeine. Patients with a suboptimal thyroid system need to clean out the toxins that have been accumulating in the body.

In *Thyroid Power: Ten Steps to Total Health*, authors Richard Shames MD and Karilee Shames RN PhD, note that the "everyday legal drugs" of caffeine, alcohol, tobacco and even sugar are especially harmful to thyroid function. Nicotine, in particular, hinders the conversion of T4 hormone to T3, while the others have a more indirect effect [1].

The Shameses also believe that the multitude of chemicals found in our food, water and air are largely responsible for today's epidemic of thyroid conditions. These chemicals are hormone disrupters that can confuse and stress the immune system, leading to an autoimmune process that attacks the thyroid system. Other investigators agree that synthetic chemicals often interfere with the thyroid hormone balance [2,3].

Of the many types of hormone disrupters that exist today, the main culprits worldwide seem to be pesticides. Herbicides, fungicides, insecticides and nematocides often contain PCBs (polychlorinated biphenyls) and dioxins, both of which have a wide range of disruptive effects. These effects have been documented, but there are many other synthetic chemicals polluting the environment that have not been well studied [4].

As you detoxify your body, consider whether your diet also may be impairing your thyroid functioning. An excess intake of carbohydrates, for example, can be a major contributing factor in hypothyroidism because it can push the blood sugar high and stimulate the production of cortisol. This leads to hypoglycemia and interferes with thyroid production [5].

### Use a Fluoride Filter

The incidence of hypothyroidism is higher among people who drink fluoridated water without using a filter, according to Dr. Feldman's patient records. The reason for this connection is not entirely

clear, but it may be that the fluoride and thyroid molecules are similar in chemistry. As a result, fluoride poisoning seems to target the thyroid.

People with thyroid problems would do well to avoid fluoride, which actually was used as a medication in the past to slow down an overactive thyroid, according to Richard and Karilee Shames in *Thyroid Power* [6].

The forms of fluoride being added to drinking water today to prevent tooth decay are *not* the pharmaceutical grade sodium fluoride that was originally researched for this purpose. Waste products derived mainly from the phosphate fertilizer and aluminum industries are the source of fluoride for 90% of fluoridated communities [7].

Worse yet, most of the fluoride put into the water supply does not end up on our teeth, but rather in lawns, swimming pools and rivers. We accumulate this fluoride from showering and swimming in it, and we take in an unknown amount from the fluoridated drinking water that may be used in juices, beers, wines and other drinks [8].

The five boroughs of New York City all have fluoridated water. To determine if your local water supply contains fluoride, contact the central water information center in your community.

You can protect your thyroid system from fluoride exposure by using a special dedicated fluoride filter or drinking bottled water. Most standard water filters do not remove fluoride efficiently, so you will need a separate fluoride filter to do the job.

In addition to using a fluoride filter, people with low thyroid conditions should install a chlorine filter on their showerhead. Chlorine gas is produced as the shower water sprays out, and this toxic substance will be breathed in as you bathe.

## Reduce or Eliminate Medications

If possible, reduce your use of medicine of all kinds to help detoxify the body. Medications that may weaken the thyroid include Premarin and Provera, two synthetic, chemicalized hormone products that are commonly prescribed as hormone replacement therapy for postmenopausal women. Birth control medications also may prove harmful to the thyroid.

## Reduce your Allergic Burden

Any person with a low thyroid condition must seriously honor his or her immune system, since it may contribute to a suboptimal thyroid condition. One important way you can assist your immune system is to avoid foods and environmental allergens that cause reactions.

What is the connection? The immune system must process any allergens that enter the body, but it has only so much capacity to meet this ongoing demand. At some point the immune function reaches its threshold and begins to spill over like a rain barrel. This malfunction can set off an autoimmune process that causes the immune system to attack the tissues of its own body as if they were foreign invaders. The thyroid mechanism is one area commonly targeted by this improper, destructive response. Other types of tissue that may be targeted include the myelin nerve sheaths, skin, connective tissue and joints.

Each person's level of immune-system overload will depend in part on the severity and frequency of allergic reactions. Dr. Feldman's analysis of patient records in his practice has revealed a high correlation between allergic incidences and stress on the immune system.

Some of the more serious autoimmune illnesses are lupus, rheumatoid arthritis, severe allergy states, multiple sclerosis, uveitis, scleroderma and Sjögren's syndrome.

The goal is to lessen your body's allergic burden so that all of the individual allergens cannot build to the point that they exceed the threshold level. Start by reducing or eliminating any foods to which you are intolerant. Pay particular attention to common food allergens such as wheat, dairy, sugar, beef, corn, eggs and yeast.

In addition, reduce your exposure to environmental allergens such as dust mites, molds, tree, grass and weed pollens, and animal dander, as well as seasonal allergens. Use air purifiers and dehumidifiers and take other steps to protect yourself from these allergic triggers.

## Use Natural Therapies

The lifestyle changes you make should be accompanied by natural therapies that help rebalance the thyroid functioning. A complementary health professional can guide you in the use of appropriate therapies. Dr. Feldman's protocol for thyroid repair is individualized and may include many of the following components:

### Thyroid-supporting nutrients

A number of minerals and amino acids help the thyroid system function optimally. They include:

- **Iodine:** The follicles in thyroid tissues normally contain 40 times more iodide—the form of iodine found in foods—than does the blood. The thyroid's concentration can be 300 times greater at maximal activity. Iodine is chemically combined with tyrosine, an amino acid. Be aware, however, that not everyone with a low thyroid condition needs to supplement iodine. An excess of this mineral may create problems, so each person's level must be assessed by a knowledgeable health-care professional. For those who do need iodine, a certain subgroup will respond much better to iodine drops in the form of potassium iodide than to kelp or other iodine tablets.
- **Selenium:** This mineral is needed in the process of converting T4 hormone to T3 in the liver, kidney and elsewhere. Even people who have healthy diets may not obtain sufficient selenium because some regions of the country have marginal levels of the nutrient [9]. The food supply is low in selenium because it has been depleted from the soil.
- **Magnesium:** This nutrient plays a role in the regulation of energy production and the functioning of the mitochondria—both of which are closely associated with thyroid hormone. The RDA for magnesium is 350 mg, an amount that often is not met by the typical American diet [10]. In fact, as the diet includes more processed foods, adults are consuming an average of only 143 to 266 mg per day. Dr. Feldman often prescribes supplemental magnesium at higher doses, depending on a person's mineral status.
- **Zinc:** This mineral is an essential enzyme cofactor in metabolic pathways, and it affects the formation of thyroid hormones. In one study, zinc-deficient rats had 30% less concentrations of T3 and free T4 [11]. Meanwhile, many Americans have a marginal zinc deficiency. The optimal level of zinc supplementation for an individual may exceed 20 mg per day, depending on his or her status.
- **Rubidium:** This mineral promotes thyroid metabolism, according to anecdotal reports and case studies. The mechanism by which it does so is unknown [12].

- **L-Tyrosine:** This amino acid is a building block of the body's proteins and the foundation of the thyroid hormones T4 and T3 [13].
- **Glutathione:** Like other free radical scavengers, glutathione offers protection in the body's process of converting T4 to T3 in the liver and elsewhere [14]. N-acetylcysteine is a precursor of glutathione that is well tolerated and assists the optimization of this metabolite.

**Herbs:** Many herbal preparations are available that can aid the thyroid. They include skullcap (herb), parsley (plant) and uva ursi (leaf).

**Homeopathic remedies:** These natural formulas have a high rate of success in rebalancing the thyroid system, coupled with a low incidence of side effects. While their use in the United States has been limited to date, they are in wide use in England, France and Germany.

The only limitation with this modality is that you must work with a health-care practitioner who is experienced in the use of homeopathic sarcodes to rebalance thyroid functioning. The formulas are administered by oral pellets or drops and should be taken alone, sublingually, usually three times per day. In addition, the mouth should be kept empty for at least 15 minutes before and 15 minutes after taking the remedy. Homeopathic energy solutions are easily disturbed by food, nutrients or even water in the mouth, so they need a free energy field of their own to work effectively.

## Correct the structure of the neck

Dr. Feldman's patient records statistically verify that a poor alignment of the neck (including the upper back and base of the skull) is more prevalent in patients with thyroid problems. As a result, realignment modalities are occasionally needed as part of a complementary approach to rebalancing the thyroid system.

Two readily available modalities are osteopathy and chiropractic, both branches of structural medicine. The need for such treatments is not much of a leap philosophically, since the thyroid gland does sit anatomically inside the neck.

## What are the Results?

Using the above components, Dr. Feldman conducts a therapeutic trial for a few months to determine whether a patient's thyroid can repair itself. The results often depend on the level of change made by the patient: The more a person is willing to do in terms of detoxifying the body, reducing allergic reactions and so forth, the better the odds that he or she will meet the goal of rebalancing both the central regulation of the thyroid system and the peripheral conversion of T4 to T3.

In general, Dr. Feldman's records for participants in Gary Null's Anti-Aging Support Groups and patients in his private practice show that about two-thirds of people presenting with a low thyroid condition do not need to take external oral thyroid medication. They are able to rebalance their thyroid system naturally.

The remaining one-third may improve their thyroid functioning as well, but not to the point that the system is working optimally. In such cases, the next step is to use a thyroid medication to replace the hormones the body is not producing optimally on its own.

## Thyroid Medications

When a therapeutic trial of thyroid hormone is indicated, physicians and their patients can choose from a number of medications that are available by prescription. These pharmaceuticals may be natural

or synthetic in origin, but the fundamental difference lies in the types of thyroid hormones they contain.

The most commonly prescribed thyroid medication is Synthroid, which contains T4 only. Other thyroid medications contain both T4 and T3, thereby providing a direct dose of T3 hormone for those who do not convert T4 to T3 properly. The greater effectiveness of the T4/T3 combination was the subject of research published in the *New England Journal of Medicine* in 1999. The researchers found that the partial substitution of T3 for T4 may improve both mood and neuro-psychological function in people with hypothyroidism [15].

Many complementary or alternative physicians prefer a natural prescription product called Armour Desiccated Thyroid Hormone because it contains both T3 and T4, reflecting the human thyroid's production of both hormones. This medication is derived from the thyroid gland of a pig and closely resembles the human thyroid gland output. It is dried or desiccated and processed into tablets. People who take desiccated animal thyroid may also receive intermediary substances such as T1 and T2 thyroid hormones; some patients seem to need these substances, while others do not [16].

Two other natural thyroid prescription options are Westroid and Nature-Throid, both produced by Western Research Laboratories. These products contain all four hormones that occur naturally in the thyroid gland T3 and T4, as well as T1 and T2. By supplying T3, Westroid and Nature-Throid ensure that this hormone can be put directly to work, rather than assuming the T4-to-T3 conversion will occur at the tissue level.

The porcine source animals for Westroid do not receive hormones or antibiotics, and their food is grown without herbicides, pesticides or artificial fertilizers [17]. Westroid and Nature-Throid are identical in their hormonal content but use different binding ingredients. Nature-Throid is bound by microcrystalline cellulose, a derivative of paper that has a very low probability of causing allergic reactions. Therefore, it can be prescribed to people who have allergic reactions to Armour or Westroid.

Another pharmaceutical option for patients is Thyrolar (Liotrix Tablets, UPS), a thyroid product that also contains both T4 and T3 hormones. Rather than being derived from animals, this medication is a synthetically prepared mixture of liothyronine sodium (T3) and levothyroxine sodium (T4). The T3-to-T4 ratio in Thyrolar dosages is 1:4. In a one-half grain dose, for example, Thyrolar contains 6.25 mcg of T3 and 25 mcg of T4.

Finally, many readers will be familiar with Synthroid, the leading brand of synthetic thyroid hormone. Most conventional physicians, including endocrinologists, prescribe this product, while complementary physicians typically do not use Synthroid because it contains T4 only. (Medications that provide a direct dose of T3 are not commonly prescribed. One such prescription product is Cytomel, a source of pure T3.)

Conventional physicians commonly argue that Synthroid provides a more accurate dose of the T4 hormone than is available from a natural product such as Armour. Interestingly, however, in 1997 the FDA reclassified all oral products made with T4 levothyroxine (including Synthroid) as new products because their stability and potency were problematic.

The newsletter reports that Synthroid has experienced some problems with potency, even though it has “maintained a reputation as the ‘gold standard’ of thyroid replacement products.” In 1984, for example, some patients developed symptoms of thyrotoxicosis while on a constant dosage of Synthroid. In addition, the manufacturer recalled Synthroid lots in 1989, 1991, 1998 and 2000 due to subpotency [18].

For the minority of Dr. Feldman’s patients who require thyroid medication, he prefers the products that supply both T4 and T3: Armour, Westroid, Nature-Throid or Thyrolar. He begins by prescribing a low dosage and gradually increases the medication until he discerns the optimal dosage for each person. Dr. Feldman also recommends that a medication containing T3 be taken as a twice-daily dose. This eliminates the objection that T3 has a shorter-acting time frame than T4.

Complementary physicians usually prefer to monitor a patient’s basal body temperature and the clinical symptoms as the main guideposts to the optimal dosage (see Part 1 of this article for more information on this temperature test). It may take several weeks before the benefits are realized and the basal body temperature returns to normal.

By contrast, most mainstream physicians guide the dosage level of Synthroid and similar drugs by the conventional blood levels of TSH and sometimes T4. As the body receives external T4, the pituitary feedback mechanism will sense the increased level of circulating T4 and reduce the output of thyroid stimulating hormone. It presumes the thyroid requires less direction to increase its production of the hormone.

The signs of too much medication (T3, T4 or both) may include the following: difficulty sleeping, feeling too hot, a racing heartbeat, sweating for no reason, twitching muscles or tremor, rapid thoughts and feeling too hyped up in general [19].

As noted earlier, people who require thyroid medication often must take it for a lifetime. Armour, Westroid and Nature-Throid are very well tolerated, however, and Dr. Feldman has not seen any long-term negative effects of these products in his practice. The initial results with Thyrolar also are encouraging. Cytomel, the T3 medication, also can be effective when taken in two divided doses a day.

That said, it bears repeating that it is always better to rebalance the thyroid system so that it makes its own hormones and the liver, kidney and elsewhere then convert T4 to T3. That way, you will not be dependent on a medication to meet the body’s hormonal needs.

### Wilson’s Syndrome

Another approach to thyroid therapy is that of Denis Wilson, M.D., whose treatment consists of a long-acting T3 pharmaceutical. Ordinarily, T3 is broken down rapidly compared to T4, but Dr. Wilson has developed his form of T3 to help rebalance some of the problems with the peripheral conversion of T4 to T3.

Dr. Wilson’s treatment is based on the fact that almost all of this conversion occurs in the tissues and cells of the body. Factors such as fasting and stress (caused by childbirth, divorce and so forth) cause the body to convert less T4 to T3 and more T4 to reverse T3, an inactive byproduct that inhibits the conversion process even more by using up the enzyme involved in this mechanism [20].

Dr. Wilson’s regimen is an involved protocol that requires a lot of discipline on the part of the patient, and it may need to be

administered in several cycles to be effective. So far, his therapy has received mixed reviews in the complementary and alternative medical community and is still being evaluated.

### Holistic Hormone Balance

As you work to improve your thyroid functioning, remember that this mechanism is intricately connected to the rest of the body’s hormonal systems (adrenals, pancreas, pituitary, ovaries and testes). All of the hormonal glands must work together efficiently, and a malfunction in any one of them may have a negative impact on the others.

Hormonal malfunctions that begin with a gland other than the thyroid can end up reducing thyroid functioning. For example, an imbalance of the ovarian functioning may interfere with the thyroid system over time. And if the adrenal glands are repeatedly stressed to the point that they wear out, they can have a negative effect on the thyroid as well.

As with the thyroid system, natural therapies also are available to support other hormonal systems:

#### Ovaries

If the ovaries are imbalanced (symptoms include irregular menstrual cycles, skipped cycles and infertility), a variety of nutrients may prove helpful. Among them are vitamin E, zinc, and herbs. Homeopathic sarcodes may help as well.

Some of the appropriate herbs for ovarian rebalancing are: damiana leaf (*turnera diffusa* var. *aphrodisiaca*), wild yam root (*dioscorea villosa*), partridge berry leaf (*mitchella repens*), black cohosh root (*cimicifuga racemosa*), cramp bark (*viburnum opulus*), dong quai root (*angelica sinensis*), evening primrose seed (*oenothera biennis*), flax seed (*linum usitatissimum*), burdock (*arctium*), chaste tree berry (*vitex*), and motherwort (*leonurus*).

#### Adrenals

If the adrenal glands are suboptimal due to excess stress, caffeine or sugar consumption, the nutrients that can help rebalance and optimize this system include vitamin C, pantothenic acid, bioflavonoids and herbs such as licorice root (*glycyrrhiza glabra*). Homeopathic sarcodes also are available.

### The Consequences of Missed Diagnoses

People suffer when thyroid disorders are not diagnosed because the conventional blood tests are “normal” and physicians do not recognize a patient’s symptoms as thyroid related. If a patient is profoundly depressed and is put on Prozac or another drug when the cause may be a low thyroid condition, his or her problems have just begun.

A missed diagnosis means the person will have two major problems to contend with: one is the underactive thyroid system itself and all of its ramifications; the other is the depression, which is often treated with antidepressants like Prozac in America today.

As Dr. Stephen Langer aptly puts it, “When you have an undiscovered organic basis for a psychological problem, being put on psychotropic medication is like sitting on a thumbtack and being put on pain pills for the rest of your life. It has about the same effect. It wears the system down, and as a result the patient’s condition not only does not improve but will in fact deteriorate, because the underlying cause is not being treated.”

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