

## **Working with Patients Who Have Hypothyroidism**

By Ruth Werner, LMP, NCTMB

### **Dear Readers:**

In my last article on cerebral palsy, I was happy to find lots of material not only on the condition itself, but on how massage can play a part in the life of a CP patient.

I duly related this latter point in my article, expecting little controversy, since this is a well-researched and well-understood condition. Well, duck, because the fallout is still coming down.

I made a few errors in the CP article that I'd like to clear up. First, I misstated the locations in the brain where the damage takes place. Unable to find any specific information on this issue in my pathology resources, I pulled out my anatomy texts and listed the movement centers I know about: the basal ganglia, frontal lobe, and cerebellum.

Gary Bruce, LMT, NCTMB, who works extensively with special needs individuals, corrected me in an e-mail he sent me:

"Specifically, cerebral palsy (CP) is an upper motor neuron disorder, resulting from damage to the descending motor pathways of the pyramidal and extra pyramidal tracts of the motor cortex."

Second, I referred to the tight muscles of a CP patient as a "spasm"- this is quite incorrect: the proper term is *spasticity*, and the way it responds to massage is quite different. (For more information, please refer to my spinal cord injury article in the May edition of *Massage Today*.) These are technical errors, and I take full responsibility for not catching them.

At this point I'd like to restate (or state for the first time) what my job is: I am a translator. I read through scads and scads of material: some boring, some fascinating. Then I try to translate that material into accessible terms, so I can share it with anyone who is interested. Sometimes I get lucky and I find people

who help me understand a topic, either because they themselves live with it, or they work with people who do. Sometimes, unfortunately, I don't get in contact with a valuable resource until it's too late. Such was the case with the CP article.

I want to voice my appreciation to everyone who wrote me with their own opinions about this issue, which proves that we are people who take our work and the well-being of our clients very seriously. It also proves that what the mainstream medical community promotes is not always the last word. To illustrate this fact, I'd like to quote from another response I got to the CP article, from Mary Green, LMT. Her comment relates to the statement that CP is non-progressive, but nontreatable. (Remember, I just report this stuff, I don't make it up!)

My son, Eli, was born in Boulder, Colorado by a forceps delivery in 1973 and has right hemiplegic CP that was treated with Rolfing at age 3, and handicapped skiing, vitamin therapy, massage, and cranial-sacral sessions. Eli is now 28 years old and has been a ski instructor at Taos Ski Valley since he was 18. At age 16, Eli worked as a ski instructor at Angel Fire Resort, using his skiing aides. (Since the day he tried out for Taos, he has not used them.) He has an associate's degree from Colorado Mountain College in Ski Area Operations.

Please do not think that Eli's CP was mild; it wasn't. Eli had a speech impediment until the soft tissues of his mouth were Rolfed. In high school, Eli had a very difficult time writing, but could easily keyboard. At this time, he may be the only example of what can happen once parents of CP children step out of the box assigned them for treatment. So, I'm writing a book about his recovery. As others become aware of our results, in time, there may well be more such cases.

Let's get the word out to our profession and to parents of CP children that CP is treatable. Thanks.

And that's all I'm going to say about CP for the time being.

In my last article, I asked what people would like to read about next, and thyroid disorders won the election in a landslide. I had planned to combine both hyper and hypothyroidism into one article, but it's just too much information, so I decided to limit this discussion to one of the most frustrating and controversial issues in chronic disorders: hypothyroidism.

## **What Is Hypothyroidism?**

Hypothyroidism is a condition in which circulating levels of thyroid hormones are abnormally low, or in which levels of thyroid hormones may be normal, but target cells have become resistant to their action. This interferes with the body's ability to generate energy from fuel.

## **Demographics: Who Gets It?**

Hypothyroidism may be a fairly common condition, affecting about one-tenth of one percent of the population overall. Women are five times more likely to develop hypothyroidism than men. Statistics rise with age; within women over 65 the incidence of this disorder may be as high as 10%. These numbers reflect reported cases; many people may experience hypothyroid symptoms without achieving a diagnosis.

## **Etiology: What Happens?**

Before we get into the specifics of this disorder, we need to discuss some massage school anatomy. You may remember that the thyroid gland, that butterfly-shaped structure that wraps around the trachea, is an endocrine gland that secretes hormones related to metabolism: the use of fuel for energy or growth. It does this under orders from the pituitary gland, which secretes thyroid-stimulating hormone (TSH).

The primary hormone associated with the thyroid gland is called thyroxine. When thyroxine levels are high, metabolism is fast - hyperthyroid symptoms include weight loss, heart palpitations, minimal menstrual periods, and bulging eyes. When thyroxine levels are low, metabolism is slow. Weight gain, low energy, and hypersensitivity to cold may ensue. As with most things concerning hormones, this description is an oversimplification.

The thyroid actually secretes several different substances, including T4 (also called thyroxine, this is a molecule with four iodine atoms) and T3 (a molecule with three iodine atoms). T4 is generally secreted in greater amounts than T3, but T3 is more potent. Enzymes elsewhere in the body may help to convert T3 to T4, or vice-versa. In the etiology of hypothyroidism, it is the presence of T4 that is usually tested and treated with a synthetic version of thyroxine (Synthroid).

Beyond simple low levels of circulating hormones or cellular resistance, several other contributing factors to hypothyroidism have been identified:

- *Hashimoto's disease:* This is an autoimmune attack against the thyroid gland that results in the suppression of thyroxine secretion (as opposed to the autoimmune attack that stimulates excessive thyroxine secretion seen with Grave's disease).
- *Complication of treatment for hyperthyroidism:* The majority of hyperthyroidism patients that use radioactive iodine to suppress thyroid activity eventually develop hypothyroidism.
- *Congenital birth defect:* Some babies are born with abnormally small thyroid glands, or no thyroid gland at all. If these children are not treated, they will experience stunted growth and mental retardation.
- *Medications:* Some medications, specifically lithium (used to treat bipolar depression) or iodides (used as a form of iodine) can suppress thyroid function.
- *Exposure to radiation:* People who have been exposed to radiation in the neck for cancer treatment, or in more general ways, have a high risk of developing hypothyroidism. This has been an issue for survivors of the Chernobyl nuclear plant accident, for instance. Whatever the cause for hypothyroidism, the net result is that a person has difficulty turning fuel into energy. The body tends to absorb nutrition and store it indefinitely, either as fat in lipid cells, or as cholesterol in atherosclerotic plaques.

## **Signs and Symptoms**

Signs and symptoms of hypothyroidism are often subtle but steadily progressive. A person may not realize the extent of the problem until someone points it out. The result of not being able to convert fuel into energy means that a person gains weight, feels fatigued and depressed, and has a sluggish digestive system with chronic constipation. The person will have poor tolerance of cold, and the skin will be puffy, but dry. Hair will be flat and brittle, and may even fall out. In women, menstrual periods tend to be heavy and long-lasting. Some hypothyroidism patients will develop goiter: a painless enlargement of the thyroid.

It is common for hypothyroid patients to develop atherosclerosis, as liver function to produce the chemicals that expel cholesterol from the body is sluggish. High cholesterol levels from hypothyroidism do not respond to cholesterol-lowering medications. Fluid retention in the arms and wrists raises the risk of carpal tunnel syndrome; fluid retention in the neck along with goiter may cause chronic hoarseness. Very severe cases may cause patients to become so cold and drowsy that they become unconscious. This is called myxedema coma, and it is a significant cause of death among elderly hypothyroidism patients.

Many people who fit the profile for hypothyroidism also have symptoms of fibromyalgia syndrome, depression, candidiasis, or chronic fatigue syndrome. It can be a daunting and frustrating process to sort out which is which, since none of these conditions is well-understood or easy to treat.

### **Diagnosis**

Physical exams for hypothyroidism look for goiter, along with a significantly slowed heart rate. Reflexes are often slow in hypothyroid patients.

Blood tests may be conducted to look for elevated levels of antithyroid antibodies, which would point to a diagnosis of Hashimoto's disease. Levels of thyroid stimulating hormone (TSH) might also be evaluated. If the thyroid is underactive, the pituitary usually will pour more of this chemical into the bloodstream.

It is especially important for pregnant women to be tested for thyroid function. Pregnancy can hide some symptoms of hypothyroidism, which can create serious repercussions for the unborn child. Most newborns are tested for thyroid function as a matter of course; early intervention in the rare cases when thyroid function is subnormal can prevent stunted growth and mental retardation.

### **Treatment**

The most common treatment for hypothyroidism is to supplement thyroid hormone. In the early days of understanding this disease, desiccated thyroid glands of a variety of animals were prescribed to treat hypothyroidism. The doses were difficult to regulate, since potency could vary widely. Today, thyroxine is replaced with a synthetic version of the hormone, called Synthroid.

Some researchers, however, suggest that the symptoms of hypothyroidism may be related to other factors: general toxicity, for instance, or cellular resistance to thyroid hormones, or a need to supplement T3 instead of or in addition to T4. And of course the added challenge for treatment lies in the possibility of fibromyalgia syndrome, chronic fatigue syndrome, candidiasis, and any number of other chronic disorders that may mimic or accompany hypothyroidism. These factors, which are often neglected by some "mainstream" medical professionals, may account for why many people who have hypothyroid symptoms do not feel that taking synthetic thyroxine successfully treats their disorder.

### **Can Massage Help?**

Outside of the risk of atherosclerosis (which is a risk for many mature clients regardless of thyroid function), massage is a perfectly appropriate choice for hypothyroidism clients. Although it is unlikely to restore the normal production of thyroid hormones or cellular sensitivity to them, massage can certainly improve the quality of life of people who feel chronically drained and lethargic.

### **Next Time**

In my next column, I'll examine hyperthyroidism. I'd love to hear from any readers who live with this disorder, or whose clients do. How has it impacted the quality of your life? What have you done, or what are you doing to treat it? What kind of impact has massage had on your situation? Share your experiences and wisdom - pathology readers want to know!

Blessings,

*Ruth Werner, LMT, NCTMB*

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