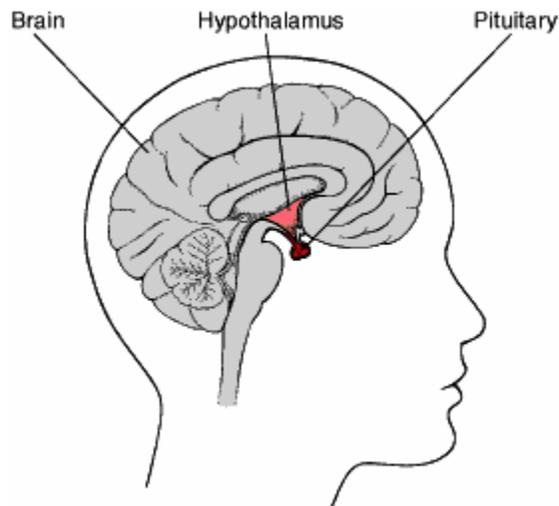


# Part I

## Hyperthyroidism Affecting the Human Condition



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### Hypothalamus-Pituitary-Thyroid Axis

“In part, this has resulted from clinical observations, some of them centuries old, that a disturbance in the Hypothalamus-Pituitary-Thyroid axis usually leads to a disturbance in mental activity” (Esposito, 1997).

## **Dysthyroid Problem Develops.**

### **Too Much Medication.**

For more than fifteen years, I have lived with the results of Graves' hyperthyroid disease. For more than ten of those years, I lived with a drug-induced hyperthyroid condition directly related to the amount of thyroid medicine prescribed by my doctors (DeWhalley, 1995; Al-Abadi, 2001; Canaris, 2000).

Hyperthyroidism adversely influences the entire human condition including brain chemistry (Shames, 2001). My situation was particularly difficult because I experienced the devastating condition of brain chemistry imbalance-balance-imbalance on at least two different occasions since 1989 (Arem, 1999). This is in addition to the long period of having the brain chemistry imbalance due to the hyperthyroid condition.

Hormone blood levels must be in balance for healing to begin. Although I was diagnosed with Graves' disease over fifteen years ago, healing did not begin until October 2004. It can take as long as thirty months to complete the healing process; and since complete healing is impossible (Bommer, 1990), I will continue to experience residual symptoms and signs.

### **Symptoms and Signs.**

The medical journals and books by physicians that I consulted list more than 75 symptoms related to hyperthyroidism. The full list of my findings, with references, is located in Part II in the section titled, "Dysthyroid Characteristics – Itemized and Defined." A symptom is a subjective indicator experienced by the patient and is indicative of disease, while a sign is an objective indicator discovered upon examination (Stedman's Medical Dictionary).

The typical symptoms and signs of Graves' disease, a condition where there is too much thyroid hormone in the blood causing hyperthyroidism, include restlessness, anxiety, nervousness, irritability, hyper-excitability, and emotional instability (Constanti, 1998). Cognitive impairment with "attention, memory and planning" brought on by Graves' disease can appear as early as two years before other symptoms and signs (Stern, 1996).

At one time or another since the late 1980s—and to one degree or another, I have experienced the following hyperthyroid-induced symptoms and signs. Clearly, a dysthyroid condition adversely influences the entire human condition. By February 2005, some of these symptoms and signs began to noticeably subside. These symptoms and signs include:

Intense anxiety, apathy, short attention span, blurry vision, chorea, delirium, depression, diplopia, disorganized thinking, distractibility, easy fatigability, emotional withdrawal, **erythema and flushing**, excessive perspiration, fine tremor, inappropriate

guilt, appearance of fine and silky hair, heat intolerance, impaired recent memory, increased psychological vulnerability, irritability, labile emotional disposition, lid lag, mania, memory loss, moodiness, muscle weakness, nervousness, ophthalmologic foreign body sensation, personality change, staring tendency, sweating, talkative behaviors, and weight gain.

From an interpersonal point of view, my red face is a particularly difficult part of this illness. It is a direct result of both the thyroid condition and the thyroid hormone replacement medicine, Synthroid. Medically, it is described as “flushing” (Synthroid Data Sheet) and “erythema” (Niepomniszcze, 2001). When I wake in the morning after a full night of sleep, my face is red. People who encounter me interpret my red face as a sign that I am angry or upset when I am neither angry nor upset. To dispel their worries and show that I am approachable, I go to great lengths to behave calmly and pleasantly at all times.

Finally, Hypothyroidism is a condition where too little thyroid hormone is in the body and the symptoms and signs include fatigue and lethargy, weakness, slowness of thought, memory impairment, depression, slow and hoarse speech, and bradycardia (Constanti, 1998).

### **Thyroid Hormone Laboratory Tests.**

The thyroid gland is a member of the endocrine system and it works closely with the hypothalamus and pituitary glands. Like the other parts of the endocrine system, the healthy thyroid gland produces hormones.

Thyroid hormone refers to the two primary products of the healthy thyroid: thyroxine (T4) and triiodothyronine (T3). About 90% of the healthy thyroid’s output is T4 and the remaining 10% is T3. Several different products—like Synthroid—provide a supplement for T4. Cytomel replenishes T3. (Constanti, 1998).

Thyroid hormone levels in the blood are detected in laboratory (lab) tests. Three thyroid-related lab tests check the levels of T4, T3, and thyroid-stimulating hormone (TSH). To quantify the level of thyroid hormone in the blood, a reference range is used. If a patient’s hormone blood-level score falls within the reference range, it is considered normal. Although the normal range represents a healthy condition for most people, it may not represent a healthy condition for all individuals (Anderson, 2002). With each new development of more sensitive serum detection devices by the medical equipment companies the laboratory companies are able to adjust the reference ranges to arrive at more meaningful parameters. The result is that physicians are better equipped to provide care that is more competent to their thyroid patients.

Physicians view the TSH score as an important indicator of the degree of thyroid health (Kasagi, 1999). The diagnostic test for TSH has become dependable in the past few years (Ross, 2001; Fadel, 2000). In particular, the third generation immunoassay can dependably detect TSH to a level of 0.01 mU/mL. Prior to about 2000, the TSH test was

not completely dependable and proper patient care was difficult to provide. Today, all the necessary tests such as TSH, T4 and T3 used to determine thyroid health are reliable.

The thyroid patient should have blood work performed at least annually, and some patients choose to have them performed at six-month intervals. The TSH lab score should be about 1.0 mU/mL—within the reference range of 0.3 to 3.0 mU/mL (Hoogendoorn, 2004). The T4 score should be in the upper portion of the reference range—between about 0.80 to 1.90 ng/DL. T3 should be within the reference range. When these lab tests are correctly configured, the patient's condition is said to be normal or euthyroid.

However, just because a thyroid patient's lab scores are normal they are not necessarily normal for each individual. This is part of the insidiousness of a dysthyroid condition.

If an individual's TSH score is outside of the normal range, that individual is either hyperthyroid or hypothyroid. These conditions are further subdivided into subclinical and overt—as in subclinical hyperthyroidism and overt hyperthyroidism (Anderson, 2002). A severe form of hyperthyroidism is subclinical with a TSH reference range is 0.01 to 0.3 mIU/L (Canaris, 2000). The most severe form of hyperthyroidism is overt hyperthyroidism with a TSH reference range of any value below 0.01 mIU/L (Canaris, 2000).

While some individuals in the medical community consider subclinical to be mild and overt to be severe, the fact is that physicians who routinely work with thyroid patients know that any disruption of thyroid hormone production adversely affects that person's brain chemistry and their body (Arem, 1999). This is a critically important point! The fact is that any change in the thyroid's production of hormones affects human physiology (Artunkal, 1964). This change affects every chemical reaction in every organ in the body (Shames, 2001) including brain chemistry (Smith, 2002) and in every muscle. Subclinical hyperthyroidism adversely affects physiology to a greater degree. Overt hyperthyroidism is an even more dangerous condition.

Furthermore, all patients are different. For example, one patient may be partially affected by overt hyperthyroidism and another patient may be debilitated by subclinical hyperthyroidism (Marangell, 2002).

My lab test results are listed in Part II in the section titled "Personal Medical History." I don't recall ever needing a lab test before 1989.

### **Triiodothyronine – T3.**

At this writing, the compulsory use of supplemental T3 is unresolved. While T4 is immediately prescribed for a hypothyroid condition, it is not so for T3. There are medical research studies completely in favor of the use of supplemental T3 and those who say there is no distinct advantage in its use. Since I have learned about this subject over the past year, I believe the logic for the need of supplemental T3 is compelling. My personal experience with T3 confirms this belief.

We know that 10% of the hormone production of a healthy thyroid is T3. Because the healthy body produces some amount of T3 I believe that we can infer from this that an amount close to 10% is necessary for proper body function. Further, a portion of T4 is transformed into T3 in tissue cells. Due to the radioactive iodine medical treatment I had in 1990, my thyroid produces neither T4 nor T3. In my opinion, the healthy thyroid produces T3 for specific physiological reasons that include, at least, proper muscular system functioning and proper brain chemistry functioning (Esposito, 1997).

In my personal experience since beginning to use T3 in February 2005, I have found that my body's need for supplemental T3 is essential. Within the first week of using supplemental T3 I noticed an improvement in my cognitive abilities and a loss of muscle stiffness. After using it for several weeks my muscles became larger and more dense with little or no exercise. Before this period, I had been exercising regularly by walking and lifting light weights. Due to the cold weather in the first three months of the year, my exercise routine had decreased significantly. In spite of this reduction in my daily exercise, my muscles continued to increase in density and strength. My cognitive abilities have also continued to improve. Supplemental T3 has indeed improved my physical and mental condition. This is consistent with the findings of Arem, Blanchard and other physicians who have worked in this area for years.

### **Autumn, 1989: A Suggested Problem.**

In July 1989, I changed employers and moved to Indianapolis, Indiana from Cincinnati, Ohio to fill a position as an assistant sales manager at a computer company. Shortly after arriving in Indianapolis, I met a female physician—with a specialization in anesthesiology—and we began spending a lot of time together. In February 1990, we married. The marriage lasted eleven years; and in May 2001, she filed for a divorce.

After several weeks in my new role as a manager in 1989, I began to notice that I felt warm most of the day and was perspiring easily. At mid-morning, I was famished after eating a full breakfast only hours earlier, and my cognitive skills were lacking. I seldom wore a suit coat or sweater, preferring instead to carry them—even though the season was changing to a cooler time of the year. My ex-wife noticed that I was often warm and other medical signs and symptoms. She recommended that I see a physician for an evaluation.

### **Winter, 1990: Diagnosis.**

After seeing the physician in autumn 1989 and January 1990, doctors administered tests to determine the health of my thyroid gland. In addition to the physical exam, they performed a thyroid uptake and scan. While I do recall being examined by the physician, I do not recall the uptake and scan. I know about the uptake and scan evaluation because the information is reported in the lab reports that I retrieved from my doctors in 2004.

The results of the physician's evaluation and the uptake and scan were conclusive: I had an autoimmune thyroid disease called Graves' disease—inducing a hyperthyroid condition. There were few options for good health. The options included anti-thyroid drugs. The doctor told me the drugs would not work. My recent research indicates that the drugs are only a short-term solution, viable for no more than a year. I could have had surgery to remove a portion of my thyroid and hope that the surgeon removed the correct amount of the thyroid gland. If surgery was successful, my thyroid system could be returned to a normal condition. The third option was treatment with radioactive iodine to kill all of the thyroid's function. This option would eliminate my symptoms and would require me to take one pill a day containing a supplemental thyroid hormone for the rest of my life.

I chose radioactive iodine. After having suffered with this condition for the past fifteen years I can say with certainty that there is no wholesome solution to Graves' disease.

### **Why I Have This Disease.**

There is a noticeable discrepancy between my usual healthy physical condition prior to about 1989, and the fact that I acquired this disease. Individuals typically acquire Graves' disease either because of their heredity or through an adverse environmental impact (Ginsberg, 2003). After checking with my older siblings, I learned that no one in my family has had a thyroid ailment. Therefore, my thyroid problem was not hereditarily induced.

Only one possibility remains: Some material in my environment induced this thyroid disease into me. Was the material in the air around me, in my abodes, food or drink? Perhaps it was a reaction to the routine vaccinations that I was given when I was in the military more than a decade before. I don't recall having had any vaccinations since my tour of duty was honorably concluded in 1979.

Since hereditary factors have been eliminated, I conclude that the adverse environmental impact was in the form of some material that was introduced to my environment either one time or many times and that this material is directly responsible for eventually inducing Graves' disease into my body.

Specifically, those factors that Ginsberg has identified as predisposing someone to Graves' disease include the following:

- Females are significantly more predisposed to thyroid problems than males, and I am a male.
- There is no known genetic history of thyroid problems in my family.
- There were no known negative stresses in my life when I began to experience thyroid problems.
- I have never been a smoker.
- I have never knowingly ingested a drug—such as amiodarone or lithium—that could have contributed to this condition.

- I have never experienced any ocular ophthalmologic problems.

On January 24, 1990, a radiology uptake and scan documented a diffuse toxic goiter. It remains the sole characteristic I had that Ginsberg lists as a predisposition for Graves' disease.

### **Radioactive Iodine Treatment (RAI).**

It is chilling to consider ingesting radioactive iodine. Nuclear radiation is supposed to be bad for humans. In addition, medical personnel wanted me to ingest it so that I could help them kill one of my internal organs. Looking back on it, I now realize that it was an incredibly dangerous and frightening set of circumstances.

On January 31, 1990—just three days before my wedding, I received the radioactive iodine treatment at St. Vincent's Hospital in Indianapolis. The nuclear medicine physician administering my treatment advised me to ingest two radioactive pills from a paper cup and followed them with water. It was so simple and I had no idea how the quality of my life would degrade so insidiously and progressively over the next fifteen years.

### **RAI Results.**

Throughout autumn 1989, I was usually merely warm. By the first three months of 1990, the Graves' disease had progressed so that my body was hot. When we would go to bed at night, my ex-wife loved to place her very cold feet on my hot back for warmth. My body was so hot that this coldness didn't feel uncomfortable. Within a few weeks, this condition had drastically changed. By spring, the massive amount of thyroid hormone that had been keeping my body so hot was nearly depleted; it was now difficult for me to keep warm. I set the thermostat to seventy-five degrees, wore a full sweat suit with a hood, woolen cap, and heavy socks—and wrapped myself in a giant comforter. Yet, I was still shivering with cold. The hypothyroid condition had been achieved and it was time to visit the doctor for thyroid hormone replacement medication.

My body was changing. I was cold all the time, even in warm weather. I gained weight and would gain weight throughout this experience. Perhaps as early as two years before my diagnosis, the condition was changing my brain chemistry (Stern, 1996). Yet, I had no idea what was happening in my body and no one I saw offered me relief.

### **Achieving a Balance with Thyroid Hormone Replacement Medicine.**

The physician began my thyroid hormone replacement medicine with Synthroid. This is a typical solution. He prescribed one dose a day. According to the documentation in my medical record, I received about 225 mcg of Synthroid per day. Soon my body temperature became much more comfortable. At that time, a reasonable body temperature was a welcome relief. Years later, I can now see that this was just one of many unreliable and deceptive obstacles I would confront. It was unreliable because while it did improve

one part of my condition, it did not reveal or correct the problems with cognition. It was deceptive because the obvious body temperature relief it provided implied that it corrected my entire condition. I failed to detect the problem with cognitive functions and I continued to gain weight.

### **Something Is Not Right.**

Initially and for the next fifteen years, I never felt quite right. I sensed that something was wrong, but was at a loss to adequately explain it. My body temperature was often in question and I continued to gain weight. I did not know that my brain chemistry was changing and yet, these issues had influenced my life dramatically in only a short time.

When I received the RAI treatment, my life had already changed significantly. I had accepted a new job, moved to a new city, and would be married a few days after the treatment. Now, I had been treated with nuclear material that would have a direct impact on every chemical reaction in every tissue of my body (Shames, 2001). I had no idea the grief this medical treatment would bring me.

I changed doctors soon after receiving treatment. Over several months and perhaps for a year, I repeatedly told my doctor that I was not satisfied with the present dose of Synthroid. He increased my dose each time until one day he told me there was no higher dose available. I suggested prescribing multiple pills per day since that would increase the dose. He assured me that no additional dosage—I was taking 300 mcg per day—would improve my quality of life. More than a decade later, I discovered that 300 mcg per day was indeed about 75 mcg too much.

The research material and my lab reports showed it is likely that my dysthyroid condition went from a hyperthyroid state to a euthyroid state, and then back to a hyperthyroid state on two separate occasions. This is the worst type of dysthyroid condition to experience because it has a profoundly adverse and long-term impact on brain chemistry (Bommer, 1990).

The mental, physical, spiritual, emotional, professional, and social parts of an individual's life are affected adversely and profoundly by this condition (Jadresic, 1990).

### **Synthroid, Cytomel, Lipitor, and Tenuate Dospan.**

In the late 1990s, my doctor at that time prescribed several medications to help me deal with the adverse affects of this thyroid problem. I was still taking 300 mcg of Synthroid and began to take 5 mcg of Cytomel, a drug that replaces another required thyroid hormone. The doctor prescribed Tenuate Dospan—a powerful amphetamine-like drug used as an appetite suppressant—to help me lose weight and Lipitor to keep my cholesterol in check. The appropriate implementation of these medicines could have improved my condition, but this was not the case.

At the time, my doctor didn't have the sensitive diagnostic equipment that exists today to help him treat my problem. The third generation immunoassay can effectively detect TSH. I know now that the doctor prescribed too much daily Synthroid. It is not clear if the Cytomel dose was correct. Tenuate Dospan placed my nervous system in an unhealthy condition for at least twelve hours each day. Furthermore, my doctor had no faith in the TSH test because the 1994 lab results show that he didn't order a TSH test; he did have my T4 tested.

To understand the affect of these medications, imagine an absent-minded character with a foul attitude and a perpetual red face, who consumes caffeinated diet pills, drinks several pots of coffee and several jolt colas before each meal—everyday for several years. This is an accurate picture of the condition of my life on this combination of medications.

It sounds crazy and it is. I am actually fortunate that the doctor didn't initiate brain surgery, exploratory colon surgery, insert a shunt in my brain, or perform a double bowl resection—treatments reported by other misdiagnosed and mismanaged thyroid patients (Blanchard, 2004).

I can now see that the doctor was unable to properly treat my condition. The medical community has significantly increased their understanding of thyroid diseases in only the past ten years. More importantly, and this is a critical point, thyroid stimulating hormone (TSH) diagnostic equipment in the form of the third-generation immunoassay has become far more competent in the past five years.

### **Why I Didn't Stop This Experience.**

After the RAI treatment in 1990, there was no chance of a healthy and properly functioning thyroid, body and mind. Therefore, it was impossible for me to take any meaningful action to stop this experience.

However, I did try to put a stop to the uncomfortable physical and mental deficiencies that arose because of the RAI treatment. I asked for more thyroid medication. I incorrectly believed that more thyroid hormone replacement medicine would help me feel better. The doctor prescribed more thyroid medication and it did not solve the problem. When I discovered as a result of consultation with my doctor that there were no additional options, I believed I was experiencing the best I could expect.

In reality, the doctor had prescribed too much medication and it gave me a hyperthyroid condition for many years—the same condition induced by Graves' disease in the late 1980s. I was mentally unable to figure out the best solution. I had no medical training and because of my thyroid condition, my brain chemistry had suffered the destructive cycle of imbalance-balance-imbalance.

Since 2004, and due directly to my own research, I have learned thyroid lab-test scores must at least be within the lab test reference range—with the TSH preferably close to 1.0 mU/mL. The thyroid hormone level of T4 should be in the upper portion of the lab test

reference range. Blood tests should be performed at least annually. The correct dose of Synthroid alone may or may not be satisfactory for any given individual. Finally and perhaps most significantly, doctors typically do not change their patients' thyroid medication prescription—even when lab tests clearly indicate that a change is justified.

If a patient's TSH is outside the lab test reference range, the patient's condition is likely unbalanced. For example, my doctor told me repeatedly over the years that my thyroid hormone levels were "a little high, but okay." I've since learned by evaluating my lab reports that anyone encountering me since 1989—and perhaps for the two years before my diagnosis—were dealing with a dysthyroid-induced mental health patient.

I had no concept of the damage hyperthyroidism was inflicting on my brain chemistry, my body, and my personal relationships. In part, the multi-year imbalance resulted in the routine condition of cognitive deficiencies, intense dysphoria, and severe mental distress.

To better understand what I mean by cognitive deficiencies, I offer a personal computer analogy. The speed and agility of a new personal computer is evident in its initial boot process, how fast it loads programs, and how quickly it accesses the Internet. Now, load up the unit so that the hard drive is more than eighty percent full, remove some of the memory sticks, and observe how it operates. The computer's performance is significantly degraded but it will eventually get the job done and the impaired condition does not damage the computer. A hyperthyroid individual behaves in a similarly slow way, with two exceptions: it is likely that the hyperthyroid patient may not correctly complete their tasks and their condition does indeed damage their brain chemistry and body.

My body felt the results of hyperthyroidism. Prior to the diagnosis Graves' disease in 1990, I bicycled often throughout the week during the warmer seasons. It became distinctly more difficult in the late 1980's and was certainly a difficult task for me in the 1990's. I thought it was nothing more than age. After I sat down from physical activity such as exercising, mowing the lawn, or hiking, my body would become very stiff and my muscles would ache (Klein, 2000). In the late 1990's, I had a multi-hour therapeutic massage each week and it helped, but I was still stiff and sore. I simply grew accustomed to it and considered it part of growing older.

During the past several years, I performed weight lifting exercises. I always experienced muscle aches and stiffness. For several of those years in the late 1990s, I worked with a certified personal trainer so I know that I was performing the exercises correctly and with an appropriate amount of weight. Furthermore, although I always used the appropriate amount of weights and performed significant work, I did not grow strong (Biondi, 2002).

Other more serious body problems listed in the medical journals are atrial fibrillation (Fadel, 2000) and ophthalmological (Felz, 1999) problems. Since my other muscles were constantly achy and sore, it led me to question the condition of my heart muscle. While I have never had an overt heart condition, I had no way of knowing what this thyroid condition was doing to it. As for vision problems, I at least needed to use sunglasses more often. Again, I believed this was simply part of the natural aging process.

My interpersonal relationships grew strained since no one wants to be around a constantly nervous, angry, and emotional individual. The following description is a collection of some of the many *symptoms and signs* that an individual can have while under the influence of hyperthyroidism.

Consider a big man, six feet tall, two-hundred eighty pounds, with a *red face* behaving in an *excited, irritated, nervous, restless* and *confused* manner with a *stare, hand tremor*, and a look of *fear* who is constantly *out of breath* and whose *speech is quick, soft* one minute and *loud* the next.

The hyperthyroid patient is constantly under a significant amount of distress due directly to the great amount of thyroid hormone in their blood. I wouldn't want to deal with this person either.

I experienced this mental and physical condition every minute of every day for more than ten years. During this time, there was no one who helped me resolve this oppression. Everyone seemed to look on in disbelief that this could happen to someone. Others found my predicament humorous. The lack of proper thyroid hormone was damaging my brain chemistry. I did what I could everyday to maintain a sense of normalcy and to keep myself in order. Since I had no dialog from other people concerning this condition, or how I was handling it, I had no way of knowing that I was failing miserably. Furthermore, I didn't know that I was hyperthyroid.

To the extent that a thyroid patient is able to reduce the affects of this miserable experience, they must take responsibility for having annual blood tests, knowing their lab scores, taking their thyroid hormone replacement medicine correctly and caring for their dysthyroid condition in cooperation with a trusted and knowledgeable physician. The patient must seek out a doctor who will be genuinely attentive to the details of the lab report and who will make necessary changes.

## **Accidental Discovery.**

### **May 2004: A Routine Physical.**

For several years before 2004, I had a physical examination and blood test to determine the status of my thyroid condition. In December 2003, my divorce was final and I was almost fifty years old. Consistent with my plan to build a new life, I decided to establish a baseline for my physical and mental condition. I still didn't know at that time that I was hyperthyroid. The evaluation was to include a physical examination, full blood work, heart evaluation, body scan, mental health evaluation, and other tests. At my first meeting with the new family practice doctor, I intended to ask for a referral to an endocrinologist who could specifically evaluate my thyroid condition.

In May 2004, my new doctor performed a physical examination and ordered blood tests. After receiving the results of the blood test, my doctor determined that I was being prescribed too much Synthroid – I was hyperthyroid. He ordered an immediate reduction of my daily Synthroid dose from 300 mcg to 250 mcg. He told me I could be injured by such a high dose and he then referred me to an endocrinologist.

I would later realize that this discovery was a favorable sea change for my life. The doctor who recognized the problem stands alone as the only physician out of a group of three other experienced and presumably competent physicians—over a 15 year period of time—prudent enough to interpret the results of his examination and the lab scores and genuinely provide proficient patient care. His diagnosis was the beginning of the end of my oppression. Unfortunately, it would still be months from his analysis before my condition would be normal enough for healing to begin.

I was concerned and surprised when he suggested I was taking too much thyroid medication for several reasons. The several previous doctors who examined me and used blood tests decided that 300 mcg was appropriate. I believed that if I reduced my dose I would certainly lose my fight with body-weight management. I had been exercising regularly and was determined to find a way to manage the weight.

Yet, from the initial diagnosis in 1989, I sensed the medical care had been poorly handled because there was something not quite right with this whole matter. I delayed using the new dose in 2004, but I remembered the doctor explicitly stating that I could be injured if I continued on the old dose. Members of his staff left messages on my voice mail a couple of times and repeated this caution. He was clear about reducing the dose and he called in the new prescription to the local pharmacy.

Finally, my gut feeling prevailed. If I hadn't had this deep-seated and long-held belief from the beginning, then I likely would have sought and acquired a second opinion about the change in my Synthroid thyroid hormone replacement medication. I rationalized further that if this dose change were incorrect, the endocrinologist would presumably discover the mistake in our July 2004 meeting.

In June 2004, I began using the new dose and it resulted in profound and unusual changes in my body. These changes were temporary.

### **The Adjusted Dosage's Impact.**

Beginning with the change in the thyroid medication dose and continuing for several months, my body felt terrible. In particular, I was exhausted. I woke up at 5:00 AM and exercised. By 10:00 AM, I was ready for a nap. By noon, I was ready to sleep for several hours, but I refused to succumb. My eyes felt the burning sensation as though I had been awake for more than twenty hours. I fought to keep my circadian schedule. By 3:00 PM, I was simply waiting for 8:00 PM so I could go to bed for the night.

The cognitive problems were similarly noticeable. I accomplished very little meaningful work. Reading was difficult and I lost concentration easily and became easily confused. When I researched at the medical library, I could do so only for a few hours a day. Because of this condition, I was only able to be productive for two to four hours a day. Otherwise, I spent hours watching educational videos via my high-speed Internet connection.

The medical journal research that I have read indicates that individuals with a dysthyroid condition typically have job and career difficulties because of this condition (Perrild, 1986). I certainly understand why.

When I met with a different endocrinologist in February 2005, I shared this experience with him. He told me that he typically reduces the medicine much more slowly and over a longer period. The delicate process of carefully adjusting the medicine dose to treat this dangerous health condition is excruciatingly time consuming. As these events evolved, it took from June to October 2004, for me to achieve a euthyroid state. If the dose adjustment had been performed in a more appropriately slow manner, the euthyroid state would have taken longer to achieve and would have delayed the start of the healing process.

Even in light of this information, I maintain that the family practice doctor in May 2004, took the correct action in reducing my thyroid medication. After all, he was the only one in more than ten years to provide competent medical care for my condition.

### **Medical Library Journal Research.**

My plans for 2004 were to attend college for Spanish language training and to acquire much needed education in other areas. I even had my entire summer schedule planned with several week-long language immersion courses. After the medical revelations in May, my plans significantly changed.

During the summer and autumn of 2004—and while continuing to endure the hyperthyroid induced brain chemistry imbalance, I performed an extensive exploration of

the medical journal research and physician-authored books revealing the chilling details concerning hyperthyroidism's impact on brain chemistry and the body. This project took far longer than it would have taken if I had been well.

Eventually, I collected more than 240 articles from 114 different journals and more than 10 different physician-authored books. Without this valuable source of information, I am certain that I would still be in the clutches of the mediocre medical care that can be so devastating to the well-being of a thyroid patient.

The following is an alphabetical list of some of the journals that I consulted. Only a sampling of their excerpts is included in Part II of this document.

Acta Endocrinologica  
Acta Medica Austriaca  
Acta Psychiatrica Scandinavica  
Advances in Internal Medicine  
American Journal of Psychiatry  
American Family Physician  
American Heart Journal  
American Journal of Medicine  
American Journal of Nursing  
Annals of Internal Medicine  
Annual Review of Physiology  
Archives of General Psychiatry  
Arch Intern Med  
Archives of Environmental Health  
Archives of Family Medicine  
The Australian and New Zealand Journal of Psychiatry  
Autoimmune Thyroid Disease  
BioFactors  
Biological Psychiatry  
British Journal of General Practice  
British Journal of Psychiatry  
British Medical Journal  
Canadian Journal of Psychiatry  
Circulation  
Clinical Cardiology  
Clinical Chemistry and Laboratory Medicine  
Clinical Chemistry  
Clinical Endocrinology  
Clinical Science  
Comprehensive Therapy  
Critical Reviews in Clinical Laboratory Sciences  
Developmental Neuroscience  
Dimensions of Critical Care Nursing  
Deutsche Medizinische Wochenschrift

Endocrine  
Endocrine Journal  
Endocrine Practice  
Endocrine Regulations  
Endocrinology and Metabolism Clinics of North America  
Environmental Health Perspectives  
European Journal of Endocrinology  
European Journal of Nuclear Medicine  
European Archives of Psychiatry and Clinical Neuroscience  
Experimental and Clinical Endocrinology & Diabetes  
Family Medicine  
General Hospital Psychiatry  
Hormone and Metabolic Research  
Hormone Research  
International Journal of Neuropsychopharmacology  
International Journal of Obesity  
International Journal of Psychiatry in Medicine  
International Review Neurobiology  
Journal of Endocrinological Investigation  
Journal of Human Genetics  
Journal of Human Nutrition and Dietetics  
Journal of Neurology, Neurosurgery, and Psychiatry  
Journal of Psychiatric Research  
Journal of Psychosomatic Research  
Journal of Abnormal Psychiatry  
Journal of Affective Disorders  
Journal of Clinical and Experimental Neurophysiology  
Journal of Clinical Endocrinology and Metabolism  
Journal of Endocrinological Investigation  
Journal of Neurological Sciences  
Journal of Neuropsychiatry  
Journal of Neuropsychiatry and Clinical Neurosciences  
Journal of Nutritional and Environmental Medicine  
Journal of Postgraduate Medicine  
Journal of Psychosomatic Research  
Journal of the American Academy of Child and Adolescent Psychiatry  
Journal of the American Academy of Nurse Practitioners  
Journal of the American Medical Association  
Journal of the Mount Sinai Hospital  
Journal of the Royal College of Physicians of London  
Klinische Wochenschrift  
Mayo Clinic proceedings  
Methods of Information in Medicine  
MJA Practice Essentials  
Neurology  
Neuropsychobiology

Neuroscience and Biobehavioral Reviews  
New England Journal of Medicine  
Ophthalmic Plastic and Reconstructive Surgery  
Papua New Guinea Medical Journal  
Pediatrics  
Pharmacology Biochemistry and Behavior  
Physician Assistant  
Physiology and Behavior  
Postgraduate Medicine Journal  
Postgraduate Medicine Online  
Psychoneuroendocrinology  
Psychopharmacology Bulletin  
Psychophysiology  
Psychosomatic Medicine  
Psychosomatics  
Quality of Life Research  
Quarterly Journal of Nuclear Medicine  
Recent Progress in Hormone Research  
Risk Analysis  
Singapore Medical Journal  
Southern Medical Journal  
The British Journal of Psychiatry  
The Journal of Clinical Endocrinology and Metabolism  
The Journal of Clinical Investigation  
The Journal of ECT  
The Lancet  
The Medical Journal of Australia  
The New England Journal of medicine  
Thyroid  
Thyroid Today  
Thyrotoxicosis

## **Continuing the Correction.**

### **July 2004: Introduction to the Endocrinologist.**

On June 23, 2004, I sent a letter of introduction to the endocrinologist to prepare for our July 2004 meeting. Months later when I re-read that letter, I could see it had originated from the confused mind of a hyperthyroid patient. Furthermore, even the document you now read is in need of more work. Clearly, this condition required the attention of an endocrinologist.

In the June letter, I shared several details with him. I said that I believed the thyroid condition had been mishandled from the beginning, I questioned the change in the thyroid medication, and I declared that unusual changes were taking place in my body. For example, even though I would not have described my body as having been under pressure, my whole body began to “de pressurize.” I felt this sensation particularly in my head, eyes, and genitals. I assured him that he had my full attention and cooperation.

### **Meeting with the Endocrinologist.**

The endocrinologist told me that my hyperthyroid-induced medical condition had put me in danger. I had been living with a very serious disease. Before 2004, I had no idea of the danger. While he wasn't specific, I interpreted this message from his demeanor, our dialogue and my personal experience with this illness and the medical journal research I had uncovered.

I was amazed and grieved when he revealed the historically poor state of thyroid stimulating hormone (TSH) diagnostic technology. His remarks confirmed that which I had just recently discovered before this meeting. For example, he told me that before the mid-1990s, he could test a patient's TSH each week for several weeks and receive an erratic set of lab report scores. However, he said that this had changed recently with the routine use of the third generation immunoassay, so he can be more certain about the validity of his patient's TSH lab reports.

He asked how I was “holding up” and if I wanted any psychotropic—anti-anxiety—medication. My research revealed that many people suffering from this affliction used anti-anxiety medication (Stern, 1996). Further, he said that while a temporary dose of medication might help at this time, a visit to a mental health professional likely would not be beneficial until my brain chemistry was balanced. I declined both options.

I refused the anti-anxiety medication for two reasons. First, I believed that I was tough enough to handle it. I had the resolve to get myself through this difficult time. Second, I had already been suffering with this ordeal throughout the previous fifteen years. If I had ever needed to use medication, it was in the 1990s. Since I had already persevered to this point, I knew that I could endure it the next few weeks or months.

In retrospect and based on the condition of my mental health at that time, both reasons were unsound. However, my perseverance was indeed rewarded. To others who experience this same condition, I suggest that they seriously consider taking the anti-anxiety medication—at least temporarily.

The dynamics of my dialog with the endocrinologist suggested that I should retrieve all my medical reports from the previous years. He repeatedly asked me about particular medical measurements for the past fourteen years. I didn't have the lab reports to answer his questions. When I told him I would get that information for him, he said that it was not necessary. I interpreted that I should seek this information to satisfy my own curiosity—if for no other reason. My discovery was startling because the previous lab reports indicated that my thyroid condition had indeed been mismanaged for many years.

Because of the result of the lab report initiated by the endocrinologist in July 2004, he reduced my thyroid medicine even more to an average daily dose of 228 mcg.

### **Medical Record Lab Reports.**

The medical record lab reports I retrieved from previous doctors showed that I had been hyperthyroid for many years. The report from 1992 showed my TSH at 0.1 mU/mL and in 1996, it was even lower at a level of 0.07 mU/mL. In 1990, I understood that my thyroid condition had been balanced through the correct dose of thyroid medicine and that it was only necessary to visit the doctor if I was having a problem. As a result, I only went to see the doctor infrequently. Moreover, I didn't know what any of this meant. The doctor told me year after year that my dose was “a little high, but okay.” In stark contrast, I have learned that a TSH score of 0.1 mU/mL is certainly not okay!

A copy of each of my lab reports begins on page 83. Most of these were retrieved as a result of my conversation with the endocrinologist in July 2004. They span the period from 1990 to 2004.

With reference to the chart on page 80, it shows the sudden and mysterious euthyroid condition that occurred between 1999 and 2001. I did nothing to cause this condition. My thyroid medication was not changed and I did not change my prescriptions' routines.

By sometimes taking the medicine with food, I inhibited some of the thyroid medicine's absorption and unknowingly protected myself to some degree. This negligent routine unfortunately continued until recently and therefore, did not cause the sudden and curious multi-year euthyroid condition that occurred from 1999-2001. Also, I discovered that the Lipitor I was taking to reduce the amount of cholesterol in my body in the late 1990s does not interact with Synthroid.

The sudden and mysterious onset of this euthyroid condition was made even more mysterious when it just as suddenly disappeared after May 2001. The January 2002, lab report shows that I was hyperthyroid again. My lab reports from 2003 and 2004 show that I was overt hyperthyroid, the most severe level of this condition. The lab reports show

that it took from May 2004—when the doctor discovered the condition and initiated corrective action—to October 2004, before I became euthyroid again.

Once euthyroid, I began to heal. In November 2004, another blood test showed my TSH value approached 1.0 mU/mL and confirmed that I was euthyroid. These were indeed two good signs of an improved condition.

### **Fatigue and Cognitive Problems.**

The fatigue and cognitive problems have continued for a very long time – they continue to this day. It required from June until October 2004, for my blood and hormone levels to achieve a normal level and I could begin healing. It was a very difficult ordeal. After October 2004, I could feel that my body and mind were beginning to heal slowly—very slowly. Each month there is a little more indication that my body is slowly healing. Because of this slow healing process, my memory is returning, my thoughts are growing clearer, and the fatigue is lessening.

This description of my experiences does not adequately communicate the profoundly adverse quality of life I experienced due to the decline of my body, mind, spirit and the eventual loss of interpersonal social contacts. This has indeed been an unconditionally desolate experience.

### **Frightening Realizations.**

Frightening realizations concerning that which has happened to me continue. As my condition has improved since the summer of 2004 and particularly since October 2004, I am realizing that I have indeed been through a terribly traumatic and dangerous disease experience for more than ten years. Prior to May 2004, I didn't know the danger that I was in. I knew there was a problem and that my condition was that of a thyroid patient, but I didn't know anything about the degree of danger that I was in with my hyperthyroidism or the characteristics of hyperthyroidism.

Now however, each week and month of improvement in my mental and physical condition brings more revelations about what I have experience. These are frightening revelations. Two analogies come to mind. Winston Churchill told the story of squaring off at close quarters with an opponent who fires a gun at the head and the bullet barely misses its mark. Another analogy is the person who watches a video of himself walking down a dark street in a dangerous part of town and, unknown to him at the time of the walk, someone violently swings a lead pipe at his head and barely misses its mark. Unknown mortal danger was experienced which was not known until later. Clearly, I have many issues to work through once I achieve a significant degree of wellness.

## **Euthyroid.**

### **October 2004: Euthyroid—The Healing Begins.**

A thyroid condition is a chronic illness. Today, my quality of life is directly dependent on my daily discipline. I remain educated about this chronic condition. I am compulsive to require proper medical care and I take the supplemental thyroid hormone replacement medication correctly. I maintain a specialized diet of nutrition and exercise, and I have sufficient rest each night (Fahrenfort, 2000).

In particular, I continue to be carefully vigilant about the source and quality of my food and drink.

In February 2004, I began using the other supplemental thyroid hormone, T3. Within the first week, I noticed a positive difference in my mental and physical condition. Unfortunately, I also noticed my body needed more rest to acclimate to the medicine. Gratefully, my cognition (Baldini, 1997; Esposito, 1997; Gonen, 2000) has improved and my muscles feel strong—without the constant ache and tightness that I have lived with for so many years. It is truly amazing that this condition requires such a long time to heal.

## **Not a Simple Solution.**

### **False Sense of Security.**

Clearly, my condition has no simple solution. The radioactive iodine neutralized the affects of Graves' disease. However, the solution to the disease brings on another problem—hypothyroidism.

American doctors typically inform their Graves' hyperthyroid disease patients that modern medicine can treat their condition easily. The doctor will advise the patient to be treated with radioactive iodine to stop some or all of the thyroid's hyperactivity. The patient will be told that ongoing treatment is not a problem since it requires them to take just one pill every day after the treatment. Finally, the doctor may inform the patient that they could experience some slight weight gain and minor mental health issues.

While these statements are generally true, the reality of a dysthyroid—particularly a hyperthyroid—condition is that there is much more to the condition. The radioactive iodine terminates the thyroid's hyperactivity and effectively removes most if not all of the problems produced by the Graves' disease. However, the patient will experience hypothyroidism within a few weeks or months of the treatment and this condition requires one pill each day. What's more, the dosage must be carefully adjusted and the patient will endure blood tests about every six to eight weeks over a several month period until an acceptable balance is found. This acceptable balance is different for each person. Some patients prefer to continue blood tests and adjustment every six to twelve months thereafter in order to ensure that their customized supplemental thyroid hormone dose remains correct.

The patient's quality of life during this adjustment is completely dependent on their doctor's knowledge, skill, and attention to detail. The patient's doctor must be able to negotiate the symptomatic obstacle course in a way beneficial to the patient. Therefore, doctors who describe the treatment of a dysthyroid condition as "easy" are not being helpful or truthful. There is no good way to treat a Graves' hyperthyroid disease condition. Antithyroid drugs are only a short-term treatment strategy. Surgery often needs repeated and the associated anesthesia risks hardly yield a good quality of life. Ablation through the ingestion of nuclear material resulting in hypothyroidism is profoundly dramatic. Unfortunately, ablation is the option that is most commonly used in the United States as the treatment of choice for Graves' disease.

My personal experience and the findings of the medical journal research, clearly indicates that conveying the treatment as simple and easy gives the patient a false sense of security. I suspect that the following remark by Dr. Arem is an important reason why this practice continues to be common (Arem, 1999).

“The paradox in this phase (hyperthyroidism) is that people with thyroid ailments do recognize that unusual things are happening within their bodies and minds, but they are unable to understand them, qualify them, or even describe them accurately.”

A dysthyroid condition—hyperthyroid or hypothyroid—influences a person’s entire life: mentally, physically, spiritually, emotionally, socially, and professionally and it does so in various strange, unique, and insidious ways.

### **To Other Graves’ Disease Patients.**

You will make the necessary adjustments in your personal life and therefore achieve a “sufficient” quality of life or you will have a miserable and unhealthy quality of life. Yours is a dangerous chronic medical condition, make no mistake about it!

If you were a type-A personality individual prior to your Graves’ disease diagnosis then you are in for a change. You are going to discover that you need more rest (Fahrenfort, 2000). This means that you will have to protect the most productive time of your day. Everyone has a time of the day when they are most productive – your time of the day is now even more important to carefully schedule and vigilantly safeguard.

Educate yourself about your dysthyroid condition. I recommend primarily researching your condition in medical journals and books by physicians. A secondary source of information can be other patients who have a similar condition. No one can help you with this task. You have to do it yourself. In my case, if I had not performed the amount of research and done so from numerous authoritative sources, there is no way that I would be in the “more healthy condition” that I am in now – and I am still experiencing cognitive problems and fatigue. Indeed, I definitely would not have known that I needed to insist on the addition of a reasonable amount of supplemental hormone T3.

Be vigilant. Take your thyroid medicine properly. Do so at the same time each day on an empty stomach. Comply with other medicine guidelines. When you have questions about your medicine or about how to take your medicine, then ask your pharmacist or physician immediately.

Have a blood test to evaluate your TSH and T4 levels at least every twelve months without exception. Some thyroid patients choose to have a blood test every six months.

Know your TSH and T4 lab results. At this writing, TSH should be within the reference range near 1.0 mU/mL. T4 should be within the upper portion of its reference range. Insist that your doctor adjust your medicine as necessary to keep your lab results within the appropriate levels – levels that are appropriate for your specific situation. If your doctor refuses to make the appropriate adjustments, get a different doctor.

Seriously evaluate with your physician the use of supplemental hormone T3 treatment in addition to the T4. This is particularly helpful for muscle relief and cognitive functions.

Continue to educate yourself about your condition. Maintain an exercise regimen and the specialized nutrition suggestions outlined by the below referenced authors. Consistently more patients discover that daily participation in such sports as Yoga and Tai Chi is beneficial. Reduce or remove caffeine from your diet. Everyone's body is different and they therefore respond differently to every treatment. Books written by the following physician-authors were particularly helpful: Arem, Blanchard and Shames. I found Dr. Arem's book very helpful. Their references are listed in the enclosed bibliography.