

IHHS Health & Wellness Center

1607 South H Street, Bakersfield, CA 93304

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Hormonal, Homeopathic, & Nutritional Services

Office (661)-837-0453 FAX (661)-837-0560

Website: YourHomeopath.org

HRT Patient Information

WILSON'S SYNDROME

Rebalancing Thyroid Gland Secretion

INTRODUCTION

Wilson's Syndrome is the cluster of seemingly unrelated symptoms that result from a maladaptively slow metabolism due to an impairment in the conversion of T4 to T3 (thyroid hormones). Especially caused by significant physical, mental, or emotional stress (often persisting even after the stress has passed), and characterized by a body temperature that runs on the average below normal with routine thyroid blood tests often being in the "normal range".

It would be cumbersome to refer to, discuss, or order a pizza if there was no term for it. The collection of medical information above has been given the term "Wilson's Syndrome". It is a cluster of seemingly unrelated symptoms. At various stages of illness, hypothyroid patients often have subtle symptoms or complaints and may have been diagnosed erroneously as having an unrelated problem. The key to accurate diagnosis of thyroid disease is clinical suspicion of subtle signs. A high index of suspicion is needed to identify the "symptoms of just living" as symptoms of thyroid disease.

It has been well documented that conversion from T4 to T3 decreases under periods of physical injury and chronic or acute illness. Conversion may also be impaired by glucocorticoids, which may also increase under period of mental and emotional stress. Additionally, conversion has also been shown to decrease under conditions of fasting. Fasting has also been shown to produce a slowing of the metabolism (as measured by energy expenditure), and that this resulted in a persistent slowing of metabolism even after the starvation is over. Other findings have also demonstrated a peripheral auto-regulatory mechanism of thyroid hormones possibly by the hypothalamus. If a thyroid problem was disregulated after re-balancing heavy metal toxicity may be considered, due to deposition of heavy metals in the hypothalamus.

Too often Health Care Professionals only consider the hypothalamic-pituitary-thyroid axis rather than the entire thyroid system. This is evident by Health Care Professionals deduction that thyroid function is normal just because the patient's thyroid function tests are normal (indicating normal glandular function). This does not necessarily mean that the entire thyroid hormone system is working appropriately. Many Health Care Professionals are not aware that people can develop sustained depression of metabolic rate. This impairment in the thyroid hormone system, which regulates the metabolic rate, is often not considered. Instead, patients are treated far less appropriately and effectively, one symptom at a time, with antidepressants, diuretics, headache medicines, acne medicines, etc. One must consider not only the hypothalamic-pituitary-thyroid axis, but also peripheral metabolism and auto-regulation of thyroid hormones. It is easy to understand how a patient may develop classic Decreased Thyroid Hormone System Function (DTHSF) symptoms from a stress, or how the depression the metabolic rate could be sustained, and why the patient may respond so well to proper T3 therapy. For this reason, the peripheral conversion of T4 to T3 is emphasized in the definition of Wilson's Syndrome.

Low body temperature or hypothermia is a well-known finding in decreased thyroid hormone system function. When availability of biologically active hormone drops because of decreased production of thyroid hormone by the thyroid gland, the body temperature characteristically drops. Additionally alterations in the extrathyroidal T4 deiodination may also profoundly affect the availability of biologically active thyroid hormone and also result in decreased body temperature. Thyroid medicines are given and adjusted in every case by clinical response and laboratory findings. It would then be logical to utilize body temperature to assist in adjusting a person's thyroid medicine.

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Regardless of the testing approach, authorities caution that biochemical evaluation is only one aspect of diagnosis. The key to accurate diagnosis of thyroid disease is clinical diagnosis of the subtle signs and symptoms. This caution once again underscores the fact that a patient may have normal blood tests, yet still be suffering from classic symptoms of deficient availability of active thyroid hormone.

One major problem that has existed up until now is that there was no good explanation for those patients that are clinically deficient in thyroid hormone function, but whose blood tests are normal. This obstacle has now been overcome with the identification and description of Wilson's Syndrome, which includes the recognition, or the importance of body temperature patterns as influenced by thyroid hormone system function.

T4 therapy is not necessarily the treatment of choice in all forms of thyroid hormone system deficiency. T4 can actually make a situation of persistent impaired T4 to T3 conversion, as in Wilson's Syndrome worse.

When given T4 therapy a Wilson's Syndrome patient will frequently improve clinically for a short period of time, typically 3 months then go downhill again. If the T4 therapy is increased, the patient may again improve only to decline again after a similar period of time. However with a further increase in the T4 dose, the patient's clinical status may not get any better at all. In fact it may degenerate right away, which is generally an unfavorable sign that indicates the patient is perhaps being pushed too far in the wrong direction, with the wrong thyroid medication. In addition, patients who are responding favorably to T4 therapy may find that their clinical status declines inappropriately and persistently at a particular point in time, even while on T4 therapy. This allows the conclusion that patients treated with T4 can sometimes develop Wilson's Syndrome. In the Physicians Desk Reference (PDR) it states under "Cytomel" that T3 may be preferred in cases where impairment of peripheral conversion of T4 to T3 is suspected. Such impairment may be suspected, when a patient presents with a clinical picture consistent with decreased thyroid hormone system function (especially when brought on by a major stress), in spite of having normal blood tests. The PDR also states that in every case the dosage must be individualized according to patient response and laboratory findings.

Everybody is different, but our body temperatures are remarkably similar. It is clear that the body changes certain body functions to adapt to different conditions. However, it is interesting to note that one of the last things to change significantly is a person's body, under different conditions, is the body temperature. If two people are in a room that is 75 degrees their body temperatures are both going to be 98.6 degrees. If they are then placed, one into a freezer that is 32 degrees, and the other into 100 degree heat, their bodies will both adapt to keep their body temperatures remarkably close to 98.6 degrees. The body does this because virtually all the reactions in the body, through enzyme conformation, depend upon it. Due to this body temperatures are extremely useful in the monitoring and treatment of patient with decreased thyroid hormone system function. It is hoped that the following information will be useful, by providing predictable responses to therapy for patient with Multiple Enzyme Dysfunction (M.E.D.) due to low body temperature patterns due to DTHSF.

Thyroid problems are most common in women. Symptoms include eye swelling, weight gain, low body temperature. This will lead to second stage exhaustion where the adrenals are "used" up and body has now gone on to thyroid gland and will progress to the pancreas. Lethargy, muscle weakness and burn out by 9:30pm ensues. The person is easily chilled, constipated, has swollen feet and hair loss. The nerves tingle in various muscle groups and usually not limited to 1 or 2 groups. Will tend to use caffeine and sweets to drive themselves on. Their reaction time will slow and cholesterol levels will rise. Iron anemia may occur with a loss of libido. The skin will be cool to the touch and their heel skin tissue can crack. These symptoms are all usually considered sub-clinical.

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The symptoms of M.E.D. are due to the denaturing of the bodies' enzymes due to body temperature pattern abnormalities. It is known that high fevers can lead to enzyme denaturation, delirium, and even death. Likewise, the bodies' enzymes do not function optimally at body temperatures that are too low. Low body temperature patterns produce symptoms of M.E.D., which are consistent with symptoms of decreased thyroid hormone system function. Ideally, body temperature patterns should be both normal and steady. The more normal and steady a person's body temperature patterns, the more time that person's enzyme systems spend at proper temperature and thus operate optimally. The goal of T3 therapy is to do just this, keep the body temperature pattern as normal and steady as possible. Ideal normalization of temperature patterns may not be possible in every case with our current level of technology. However, significant improvement can be accomplished in many cases to improve body functioning and quality of life, in patients suffering from the symptoms of M.E.D., secondary to low body temperature patterns, with proper T3 therapy.

The symptoms of M.E.D. can not be unequivocally shown to be related to thyroid hormone system malfunction. There are two reasons to proceed with T3 therapy in the treatment of Wilson's Syndrome patients. The first is it is still the best tool currently available to predictably, effectively, reproducibly, and comfortably normalize body temperature patterns. The second is that many times when the body temperature pattern becomes more normal, the symptoms of patients with Wilson's Syndrome resolve. Often when the T3 therapy is gradually discontinued, the body temperature pattern remains more normal with the symptoms remaining resolved.

The T3 therapy is accomplished using a sustained release form of liothyronine. This is also known as T3 or biologically active natural thyroid. It is made according to your Health Care Professional's order. A special, licensed, and trained pharmacist does this. An old pharmaceutical art called "compounding prescriptions" is used. With special technological capabilities, the pharmacist is able to put together a capsule that is sustained release. It will need to be taken twice daily, exactly every 12 hours if at all possible. It is necessary to gradually increase the dose of T3 for good therapeutic response. To do this your Health Care Professional will order several strengths of T3 sustained release, and work with you to optimize your individual dose.

Patient Evaluation

It is important that the patient provide the Health Care Professional with a complete medical history. This history should include, past acute and chronic illnesses, present illnesses if any, surgeries, accidents, and maternity history. Childbirth is the number one cause of Wilson's Syndrome, it is important to report miscarriages, abortions, ectopic pregnancies, infertility, and full term pregnancies. Past and current prescription history is also important to determine any possible interactions. Family history should include, cardiac problems, especially myocardial infarction, cardiac bypass operations, strokes, and at what ages these events occurred in the lives of the family members. The history should also include other family members with thyroid diagnoses.

Next it is important to review the primary symptoms that the patient is experiencing. Wilson's Syndrome can cause a large number of symptoms. Many times it is easier to use a checklist of the many symptoms possible. Once these are determined it is necessary to find out which 2 or 3 symptoms are the most bothersome. Once these are narrowed down it is useful to recognize the onset and how it related to any unusual circumstances such as major stresses.

The physical exam should look for signs of decreased thyroid hormone system function, such as dry skin, dry hair, fluid retention, thinning of the lateral third of the eyebrows, thinning of the hair of the body and

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head, periorbital edema, etc. The thyroid gland should be examined for any nodules, goiter, or tenderness. Wilson's Syndrome patient sufferers come in either sex, all age groups, and from all walks of life.

Wilson's syndrome patients have a similar appearance. Their skin may appear slightly on the dry side and less supple than usual. They may have a little bit of puffiness in the face, especially around the eyes. The puffiness is extremely subtle frequently, and can sometimes only really be identified after having seen many cases of Wilson's Syndrome before and after therapy. Before therapy facial features appear "fuller" and after therapy they may appear "sharper". Almost as if the appearance and features have become more focused. The fingernails will be splitting peeling, soft, and that break easily. It may be possible to see the scalp through the hair. In more severe cases mild puffiness around the eyes might make them resemble the appearance of someone who has just awoken from sleep. The skin may appear more coarse and wrinkled than one would otherwise expect.

Tests will be done to assist in evaluation of thyroid hormone system function, status, risk of T3 therapy, and other possible explanations for existing symptoms. Conditions that can be made especially worse with T3 therapy include cardiac arrhythmia's, Addison's disease, and others. With no other explanation for the symptoms or complaints a therapeutic trial of T3 may be considered.

Initiation of Therapy

As T3 therapy is started the body will compensate by lowering TSH, T4, and therefore T3. As subsequent increases are made in T# therapy the body will again compensate. This is not an infinite process and is often complete when the bodies' thyroid hormone system function is replaced with T3 therapy for a time.

Sometime a body' temperature pattern can not be made to average 98.6 in the first cycle of T3 therapy, no matter how much T3 is given. Due to this fact, is reasonable not to exceed 180mcg of T3 daily. Body temperature patterns averaging 98.6 can usually be accomplished in such cases in subsequent cycles. It should be noted that, the higher the level of T3 therapy taken, the more difficult it is to keep the T3 level steady. The patient's that respond the best to T3 therapy are the ones that get a response of body temperature patterns to 98.6 on the smallest dosages. However the more severe cases of Wilson's Syndrome, or who have had it longer are frequently the ones who require more medication in the initial cycles to get their temperature closer to 98.6. In such cases the T3 therapy can always be weaned and then restarted. Each time this is done the patient generally requires less medication to bring body temperature patterns to 98.6. The patient will repeat this procedure with the medication getting less and less until hopefully the symptoms remain resolved and the medication being completely discontinued.

There is a higher incidence of side effects in the first cycle. These may include slight headaches, mild achiness of muscles or joints, puffiness, bloating, slight shakiness, increased awareness of heartbeat, lightheadedness upon standing, and fatigue at certain times of the day. It is also important to not stop the therapy abruptly. This could occasionally cause extreme fatigue, lightheadedness, clammy, sweaty, shakiness, and may find it difficult to function for a few weeks. If therapy is stopped abruptly T4 may be used to allow thyroid hormone system function to return to normal. If the dose is only an hour or so late it is best to take the dose and get back on schedule with the following dose.

To initiate therapy a dose of 7.5mcg twice daily is given (15 mcg/day). This may be increase by 7.5mcg/dose (15mcg/day) in intervals up to 180mcg/day. To determine dosing intervals for increasing the dose several factors should be considered. Since T3 does not need to be activated by the body and is already the active form of thyroid hormone, if the body temperature is not raised up to normal on average

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within several hours, then it will probably not get up to normal on that dosage. When body temperature patterns begin to normalize, that is when symptom improvement will occur.

Each dosage change can destabilize the T3 system for up to 2 weeks or 5 ½ lives. The ½ life of T3 is 2.5 days, therefore its destabilizing effect on the next dose increase will occur for 14 days or 5 times its ½ life. It is for this reason that an effective dose one reached should be maintained for 14 days minimum. The amount of time it takes to compensate ranges from one day to three weeks. The most common time frame is 3 to 4 days. Patients that quickly compensate are also the ones who have a greater chance of overcompensating. When this occurs the body temperature may actually lower and experience a decrease of blood pressure that can result in lightheadedness especially upon standing quickly, shakiness, increased awareness of heartbeat, and clamminess, that can be confused with the symptoms of excessive thyroid hormone supplementation. Because of these problems it is recommended that T3 therapy dosage levels change at one-day intervals if their body temperature patterns remain below 98.6 degrees, they are not feeling improved, and they are not having any complaints. Additionally it is recommended 1 to 2 day intervals in slow compensators, because slow compensators tolerate rapid increases better than rapid compensators can tolerate slow ones. It is possible than some patients will do better when dosage is increased more gradually perhaps every 3 to 7 days. It is generally better to increase more slowly the closer to 98.6 to better see where the dosage will level out.

Stabilization

At any point in T3 therapy, remarkable improvement in clinical status may be experienced. This especially occurs as the body approaches 98.6. Once a dose allows for this response it would be desirable to remain at this dose for 14 days. The clinical status may continue to improve for 4 to 6 weeks when the same dose is taken correctly on time.

Several factors can destabilize T3 therapy. One misfortune is of not correctly taking the medication on time, missing doses by 20 or 30 minutes on a few occasions. Second is that emotional, physical, and mental stress can cause the clinical response to be less steady. If the therapy causes one to complain of mild headaches, achiness of the muscles and joints, mild shakiness, fluid retention, difficulty sleeping, fatigue during the day, gas and bloating, and other symptoms use to initiate therapy several alternative may be taken to stabilize the condition. First continue the current dose for 14 days and wait for steady state. If the symptoms are too severe T4 (levothyroxine) may be used. It is 3 times longer acting and 4 times less powerful than T3 and can occupy the active site of T3 action. In this way T4 can dilute the effects of T3 therapy and create a more stable state. Clinical evidence of the effect can often be noted within 45 minutes to an hour after the dose of T4. It should be noted that only small doses of T4 so as to not completely block the effect of what T3 therapy is trying to do. Additionally T4 may increase a person's susceptibility to stressful conditions, during T3 therapy, so dose minimization is important. It is not uncommon to require T4 dosing from once during a cycle, to every 3 to 4 days, to once every 2 weeks.

Weaning

If the complaints with T3 therapy are severe or if the therapy can not be stabilized with small doses of T4, then it may be preferable to gradually wean the patient off T3 therapy and consider a using another cycle. The purpose of T3 cycling is to repeatedly reduce inactive RT3 level, while repeatedly relieving the body for a time and restoring the body the responsibility of delivering active thyroid hormone to the active site of the thyroid system hormone. This is done to systematically coax the thyroid hormone system back into a proper pattern of T4 to T3 conversion.

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It is recommended that when it is time to cycle down off of T3 that it be done completely for at least 2 or 3 days before restarting therapy again. By weaning off completely the patient has a better chance of being able of requiring a significantly smaller dosage of medication. With the lower dose it will be easier to keep steady state and actually do much better with less side effects and expense. As long as a person is not having any complaints, when they cycle up and down on T3 therapy will be determined by Health Care Professional and patient preference.

It should be mentioned that the goal of therapy is a relieving of patient symptoms. If this accomplished the body temperature need not be raised to 98.6 if clinical status is maintained. Patients are most likely to need less medication on subsequent cycles. There is some benefit to increasing the dosage in an attempt to get closer to 98.6 before weaning on subsequent cycles.

Response

The people that respond the best are the ones that get their temperature closest to 98.6.

Some patient seem to be able to be a little off schedule with dosing without noticing much short or long term clinical manifestations as compared to others. Generally it is best that patients stay as close to their dosing schedule, even to the minute, as possible. A significant degree of improvement can be lost before the patient ever notices any side effects or problems with clinical state.

Some symptoms respond more predictably to T3 therapy than others. Headaches, PMS, depression, fatigue, insomnia, panic attacks, seem to respond more quickly, easily, and predictably to proper T3 therapy. That is because these items predictably are more dependent on body temperature than others. Normalization of weight that has inappropriately increased with the onset of other symptoms of Wilson's syndrome is the least predictable to respond. Weight is determined by more than just body temperature patterns. A person's weight is a multifaceted issue that is affected by diet, exercise, stress, adrenal hormones, body surface area to volume ratio, and other factors. A perfectly normal and healthy person might notice with the onset of Wilson's Syndrome the they may develop almost all the symptoms of M.E.D. together at the same time following a major stress, while at the same time gaining, uncharacteristically, a considerable amount of weight. With proper T3 therapy and the resolutions of the symptoms one might expect the weight to return to normal. Sometimes it does not. When person gains weight it changes more than just the weight. The surface area to volume ratio decreases as a person gains weight. It may change to such an extent that merely restoring a person's body temperature may not be sufficient to normalize the weight. An effort in terms of other factors will also be necessary such as diet, exercise, lifestyle and other influences, may be necessary to overcome the surface area to volume ratio, if it can be overcome at all. Another way that weight gain relates to Wilson's Syndrome sufferers seem to be a coping mechanism for starvation gone amuck. It should be suggested that if a patient is willing to make lifestyle changes they should be done prior to discontinuing T3 therapy. This is because excessive dieting may impair T4 to T3 conversion again and reduce basal metabolic rate. If a patient that has already had T3 therapy and through rigorous dieting did relapse into Wilson's Syndrome they would be more likely to gain back any weight lost, and perhaps then some.

The body is like one big chain reaction. When a person is on T3 therapy other body systems are influenced as well as body temperature patterns. For this reason if a patient is responding favorably to T3 therapy and experiences unexpected and uncharacteristic halt in progress other factors need to be considered. In these cases external influences such as female hormone replacement, blood pressure medications, antidepressants, etc. may be the cause.

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The most important recommendation when on T3 therapy is to be consistent in dosing schedules. It may be a good idea to take T3 on an empty stomach to get more consistent absorption but nothing is more important than taking regularly every 12 hours. When blood sugar levels are higher from eating, body temperatures are generally higher as well. Since it is more favorable for body temperature to be as steady as possibly one may deduce that a hypoglycemic diet may promote a more favorable response, which it frequently does.

If a patient is not having any problems with T3 therapy then they may exercise normally. Generally if a patient were going to have trouble during exercise they would likely experience some warnings or unsteadiness prior to exercise. It is recommended that a patient follow a moderate exercise regime to help the body to return to productivity mode.

Alcohol, caffeine, and smoking can influence T3 therapy because they influence body temperature patterns. It is best to avoid these substances during treatment to avoid any confusion with similar side effects to T3 therapy. Additionally it is important to receive adequate and consistent sleep in a regular pattern. Frequently patients with irregularity in sleep patterns have difficulty in keeping their body temperature patterns stable and enjoying the benefits of T3 therapy.

It should be remembered that the bodies in general and thyroid system specifically are dynamic and not static. They are constantly changing and adapting to various influences. Due to this the person may respond differently to T3 therapy at different times. Also how a person responds to medical therapies, stresses, lifestyle changes, diets, and other influences before T3 therapy does not predict how they will respond after proper T3 therapy. T3 therapy is a cyclic treatment and because of this reason a proper trial of T3 should include at least 2 cycles if the patient is not experiences significant side effects. It is important to perform at least 2 cycles because progress is best seen in subsequent cycles. On occasion some patient have performed 11 cycles before expected improvement was seen. After achieving results it is important for the person to avoid significant lifestyle changes for six months after T3 therapy. Sometimes it is preferable for the person to stay on a small dose of T3 for the same period after therapy to exert an influence that discourages relapse.

T3 therapy is pregnancy Category A and is safe to take during pregnancy. It is recommended that patients wean off T3 during pregnancy because human chorionic gonadatropin (HCG) also helps to maintain body temperature patterns. Wilson Syndrome Sufferers often relate that they fare better during pregnancy then relapse after pregnancies end. Also patients that are to undergo anesthesia are also recommended to wean off T3 therapy prior to this time.

There has never been an allergic reaction to T3 and is normally well tolerated by the body, since T3 is already present in the body. Drug interactions are mainly due to the side effects of T3 and the side effects of the other drugs being additive. Therapy with T3 is non-addictive and along with T4 therapy can be considered homeostatic and benign therapy. The potential side effects of T3 are more short term than long term. The goal of therapy is to deliver steady levels of T3 to the nuclear membrane receptor. In the past T3 has been recommended in 1, 2, or 3 divided doses daily. This is not really a sensible pharmacological approach since normal delivery is in small amounts thousands of times a day. Of course all medicines when given in ways that do not make pharmacological sense are more likely to be less useful and cause more side effects. This is why a slow release form of T3 tends to work with minimal side effects. The side effects are essentially the same as for thyroid system hormone deficiency release are causing a patient to be predisposed to atrial fibrillation, PVC's, and other heart rhythm abnormalities.

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Modification of diet and lifestyle may also contribute to successful therapy. Recommendations from 1997 ACAM conference:

Have protein for the first meal of the day or craving for sweets will result.

Have regular small meals.

Iodine 1-4 drops a day

D,L Phenylalanine Take 1500mg to 2000mg daily

Vitamin C Take 2 grams daily

Bioflavonoids Take 1gram (keep the ratio of Vit C to Bioflavonoid 2:1) daily

D,L, Tocopherols Take 800U daily

B-Complex 100 Take 1 tablet daily

Niacin/Niacinamide Take 1gm daily (niacinamide does not usually cause flushing)

Pantothenic Acid Take 1000mg to 1500mg daily by 10:00AM to Noon daily

Organic trace minerals ie 15mg of zinc copper and magnesium, not manganese which can inhibit

Glandular Extracts of Adrenal and Hypothalamus 6 daily, chewed.

Hormones DHEA, Pregnenolone can be of use

Herbs ie Licorice

Avoid junk food, pure sugar, and hydrogenated oils

Lifestyle: learn to laugh, take 15 to 30 min break before 5PM low point each day

Avoid competitive sports and no exercises before bedtime

Go to bed by 9:30PM and sleep in to 9AM on weekends

If no improvement after 2 months consider a hair analysis for heavy metals, dysbiosis, sub-acute infection, adrenal insufficiency, and food allergy.

Selenium up to 500-1000mcg daily. Ingestion of too much can cause hyperthyroidism. Results may not be predictable.

To receive more information about T3 therapy, Doctor Wilson's book, patient information, The Doctor's Manual, and medical billing information please call 1-800-457-3237. Doctor Wilson's published information that he has made available for patients and medical practitioners to augment safe effective treatment will be available at this phone number. The publisher will wholesale copies of the Doctor Wilson's Book "Wilson's Syndrome-The Miracle of Feeling Well" to Health Care Professionals so their patients can conveniently obtain a copy.