

Block and Replace Using Armour (NDT) and Iodine: An approach to try if T4-only or synthetics fail you

No paper or written work of this type should be published online or in any other format without the typical disclaimer, so here it is:

This paper should be read as a record of my personal experience and opinions and NOT as a source of information on thyroid or any other related health issue. This paper is not meant to provide directions for the treatment of any individual. The information herein is not intended to replace the care by a qualified, licensed, and competent medical professional. Care by a medical professional may be necessary to meet the unique needs of an individual patient. The information I am presenting here does not in any way represent the practice of medicine. I make no claims that the information contained herein is indicated, applicable, effective or safe in any individual case. I do not recommend that readers alter their treatment that has been created for them by their own doctor or other health care professionals without individualized and clear guidance from these health care professionals. I disclaim any liability resulting directly or indirectly from the use of the information contained herein. A qualified doctor should supervise in all matters relevant to physical or mental health.

For anyone interested in learning more about using Armour, Naturethroid, or the other “naturals”, I recommend visiting the website “Stop the Thyroid Madness” <http://www.stophethyroidmadness.com/> as an excellent source of information for people at all levels of knowledge. You should be able to have all your questions and more answered there.

If there's one thing about "thyroid problems" that's true, is that no one approach works for all. Millions of dissatisfied and unhappy thyroid patients litter the internet to prove it. Thyroid axis dysfunction can occur anywhere along the axis due to a variety of causes, both environmental as well as genetic tendencies. Thyroid patients the world over do the best they can, with what they know and have available to them. There are a variety of approaches available, with varying rates of success. If you are lucky, you will take one T4 pill a day and be able to live a full life with perfect health. If you are unlucky, and the T4 approach doesn't work for you, life can be pretty rough for you. This paper attempts to describe one approach that may help some people not getting relief from their current thyroid treatment. By the nature of the problem, this approach will not help *all* people. But it may help *some* people, and be yet another approach in the arsenal of "thyroid treatments" available to try.

This paper is not a scientific paper and is not intended for a scientific, research, or medical audience. Instead, it was written for the average thyroid patient, who may or may not know much about how the thyroid axis works. For some people, the information herein will be too simplistic. For other people, the information may be too complex. For all patients, I do recommend that you find a practitioner who understands these concepts and is EXPERIENCED at using NDT/Armour and Iodine, and that you trust to work with you on your behalf.

In the "old days", before the synthetic thyroid hormones were developed, physicians successfully used Armour and Iodine to treat thyroid conditions. This paper attempts to provide some explanation as to why this approach was and continues to be successful in some patients today. Currently, traditional physicians attempting to treat unregulated Graves disease, or Graves in combination with Hashimoto's disease, will sometimes use what is called a "Block and Replace" approach. T4/T3 production by the thyroid gland is blocked using synthetic drugs to prevent thyrotoxicosis (hyperthyroidism) either permanently or in the form of flares. Then synthetic T4 is used to replace and create a steady state level of hormones. Turns out Armour and Iodine are really a form of "Block and Replace" as well, which may in part explain its success rate. Note: Any brand of NDT (Natural Dessicated Thyroid) can be used; I will use Armour as the example in this paper.

Note: references for this paper: any questions you have, you can search on them yourself. With the advent of the internet, for the most part, I don't provide specific references anymore. Links can be outdated or change over time. My own opinions change over time too ☺. The Internet, and PubMed, are easy enough to search on any topic you choose. This way you can do your own research on any questions you have about what I've written, and decide for yourself whether or not you agree with the contents of this paper. Doing your own research will also help you decide whether or not you want to try this approach.

The Thyroid Axis: An Introduction:

One way to think of the thyroid axis is this:

The entire thyroid axis exists for the purpose of capturing, storing, and distributing iodine molecules to every cell of the body.

This is a really important concept, because in medicine, as well as the general population, everyone seems to have forgotten about those little iodine molecules and thinks only of “thyroid hormones”. But remember, these thyroid hormones in large part exist because a major goal is to capture, store, and distribute the iodine molecules so necessary for life.

As you do your own research on everything thyroid, over and over again, you will see phrases something like this: iodine is needed by the thyroid gland. Somehow, somehow, the thyroid gland is unique in that it “needs” iodine to function, as if this is the only organ in our body that needs this unique element. Note how my italicized line above shifts this concept. The thyroid gland does “need” iodine, but not because this gland needs it as an end result in itself. Instead, every cell of our body needs iodine, and the thyroid gland, along with all the receptors and enzymes and protein carriers and negative feedback mechanisms, exists to provide this iodine to every cell at every moment it’s needed where it’s needed. It is an incredibly complicated, exquisite, and exacting mechanism for the capture, storage, and distribution of iodine to every cell of the body. Without iodine, we would die.

Iodine is necessary not only for every cell in our bodies, but every mitochondria cell also, which are the “energy powerhouse” cells. Remember, T4 is a protein hormone molecule with 4 iodine molecules attached to it. T3 is a protein hormone molecule with 3 iodine molecules attached to it. This is true whether T4 and T3 are made by your own thyroid gland endogenously, or if it’s the T4 or T3 in your medication (both “synthetic” and “natural”). There are also T1 and T2 hormones, with one and two iodine molecules attached. These are usually considered “waste product” metabolites of T4 and T3, but in reality, it’s not clear what their function is. Nature usually doesn’t waste anything, so there’s a pretty good chance that T1 and T2 do have some functions in the body, even if we don’t know what they are yet.

For the purposes of this paper, I will be redefining the “thyroid axis” as consisting of everything involved in helping to get these iodine molecules into our cells. This includes the brain area, with the hypothalamus and the pituitary, which helps to regulate the production of thyroid hormone. It also includes the thyroid gland itself, which is where the production and storage of thyroid hormone actually occurs. It includes various tissues in the body, such as the liver, which convert T4, the “inactive” storage form of the hormone, into T3, the “biologically active” form of the hormone. It also includes the receptors on every cell and mitochondria that utilize either T3 or iodine to create energy for us, as well as the biochemical reactions needed to make all this happen. Why am I telling you all this? Because the point is, there are a tremendous number of places where things can go wrong with the thyroid “axis” – not just the thyroid gland. Maybe the regulatory mechanisms for homeostasis are not working in the hypothalamus or pituitary. Maybe one or more of the numerous biochemical reactions that occur within the thyroid gland itself are “broken”. Maybe some people cannot convert T4 to T3 very well in

some or all cells, leaving them very low on energy. And maybe something can be wrong with some or part of the receptors and other biochemical reactions that occur in some or all of the cells in our body, so that even if the thyroid gland does produce enough hormone (or even if we take enough hormone orally), our cells can't seem to use it very well. Autoantibodies, some of which are known, and no doubt many which are still yet unknown, can attack any part of this system as well and cause damage.

This is why some people cannot seem to get relief of their symptoms by taking medication, especially just T4 medication. It is assumed by the medical community that the problem is the thyroid gland itself, and that it is not producing enough hormone. A simple problem with a simple fix. But in reality, the problem could be anywhere in the "axis", and supplying a little T4 isn't going to solve the problem for everyone. In some people, supplying oral hormone may help somewhat, but not resolve all the issues. It may be that other parts of the system are too "broken" to utilize the hormones efficiently, or they need more than just T4 to function.

It's a crap shoot when it comes to "broken thyroids". Just check out the millions of unhappy and suffering "thyroid" people on the internet to confirm this. The medical profession simply ignores the problem, because they simply don't know what to do. All they can do, and all they've been trained to do, is throw a little T4 medication at the patient, and hope for the best. If you're lucky, this will work. If you're not, this is where the doctors usually prescribe anti-depressants to you and send you off to the psychiatrist. If you're one of the unlucky ones, it may be that you're screwed and nothing will help resolve your problems completely. But there are a few other approaches you can try, which *may* help. No guarantees – but it's always worth a try.

The Thyroid Axis provides homeostasis of iodine in the body:

Remember, one way to look at the thyroid axis is:

The entire thyroid axis exists for the purpose of capturing, storing, and distributing iodine molecules to every cell of the body.

Long ago, before humans or even invertebrates evolved from the sea, single celled organisms got all their iodine needs just from living in the ocean. They didn't have thyroid glands, or a thyroid "axis"; they simply absorbed the iodine they needed in some simple ways directly from the sea water. Supply of iodine was never a problem because there's a hell of a lot of iodine located in sea water. And for whatever reason, this iodine was necessary for survival of these cells and for evolution of higher life forms to occur.

Once animals evolved into leaving the ocean, they still needed iodine to survive. But there's not anywhere near the amount of iodine on land, as there is in the ocean. Especially the farther you get

away from the ocean, the less iodine exists in the soil and water. So how did animals evolve to continue getting this iodine so necessary for life?

Well, introducing the “thyroid mechanisms” or “thyroid gland”, or “thyroid axis” as we know it. Thyroid axes literally evolved to make sure we would always have iodine available to us, even when we left the sea water. An analogy would be the following: If you leave your house to go on a trek through the desert, you’re going to pack up pouches or containers of water so you can carry this molecule so necessary for your survival with you to last you the duration of your trip. In the same way, when animals left the sea, they developed “pouches” or “containers” to carry iodine, so necessary for survival, with them at all times in the form of a thyroid gland. Now, life didn’t have to exist limited to single celled organisms in the sea. As long as you had a thyroid axis, which usually included some type of “thyroid gland”, you could store all the iodine you needed for a long time in the gland and live outside of the water. The body would then distribute it on an “as needed basis”. It grew into an incredibly complex system in people – but a very, very efficient one. When the whole system worked as normal, it was amazing. When it didn’t work, that was also amazing – since every single cell in your body needs iodine, there are a wide variety of symptoms that can develop depending on where the problem is in the system. Having enough iodine can literally be a life or death matter.

Let’s say a normal person with a working thyroid axis takes a vacation and visits the coast, and eats kelp and sushi every day. They will be ingesting many milligrams of iodine every day. In fact, some coastal populations get an average of about 13 milligrams of iodine every day from their diet if they eat kelp and seafood. The thyroid gland will grab what it needs, and store it for later use when it’s needed. And then any extra iodine will simply be excreted by the body. And the person will never feel this happening in their body. The fact that they’ve suddenly ingested so much iodine won’t even affect them. Their body and the thyroid axis just does this automatically.

Now let’s say the person is kidnapped and trapped inside a prison with poor food for months on end in the middle of the country, where there’s no or low iodine. Well, first of all, it turns out that the thyroid gland can get by with a pretty low amount of iodine per day – 150 micrograms, in fact. Note how that’s MICROgrams, not the MILLIgrams I talked about in the previous paragraph. “Micrograms” is a pretty small amount compared to “milligrams”. So as long as you get about 150 micrograms of iodine per day, your thyroid gland can convert this into the thyroid hormone you need to provide iodine to the cells in your body. But let’s say you get zero iodine in your diet while in prison. How long will you last? Well, eventually, you’ll run out of iodine, and the thyroid gland can’t make any more. But before that happens, your body will start excreting less, and recycling more, and your thyroid gland will work harder and harder. It will swell, and get larger and larger as this happens (this is what a “goiter” is). I’m not sure exactly how long you will last with zero iodine coming in, but I’ve heard it’s somewhere around 3-4 months. And as long as you get some iodine, even smaller amounts like 50 micrograms per day, you can last a lot longer. You’ll eventually start to feel it and suffer though. If you never get iodine again, it could be a long, slow, miserable physical and psychological decline into hell and finally death. Iodine, and thyroid hormone, is that important for life. The number one cause of mental retardation in babies in undeveloped countries is due to not enough iodine. Never underestimate the psychological, as well as the physical, impact of too little iodine, and thyroid hormone.

In developed countries, this is why they started adding iodine to salt. Often times, the soil is depleted of iodine due to intensive farming practices over the centuries. And people weren't getting much iodine. Interestingly enough, I remember my mother saying when she first arrived in Bavaria during the war, "everyone" had large lumps on their neck. Bavaria must not have much iodine in the soil, and during the war, people were starving anyway for all kinds of nutrition, and iodine must have been one of those nutrients they were missing. Note how 100 - 150 ug of iodine per day is the RDA requirement listed for the general population, and that 100 -150 ug/day thyroid hormone medication replacement is the average needed for the average thyroid patient. This is no accident. Remember, those iodine molecules attached to thyroid hormones have to come from somewhere. And they're either going to come from your diet and be made into thyroid hormone by your thyroid gland, or be supplied ready-made with thyroid hormone medication.

Anyway – when the thyroid axis is working perfectly, you can get by with as little as 100 – 150 micrograms iodine a day without a problem. On the other hand, you could suddenly ingest a hundred times that much on the coast without a problem too. The thyroid axis just works automatically to regulate iodine in your body, partly in the form of thyroid hormone, no matter how much you get, without you ever really feeling it. At least, this is how it works for "normal healthy" people with "normal healthy thyroid axes". But when there's a problem with the thyroid axis, and things aren't working well, there can be some big problems, and anyone with thyroid problems knows this. This "homeostasis" mechanism is disrupted. As I said before, depending on where the problem is, thyroxine alone may solve the problem if you're lucky. So, for example, as long as these lucky thyroid patients take somewhere around 100 -150 ug of T4 per day, they can get their iodine needs for their entire body met adequately. If you still have problems even while on T4 though, then it may mean there are additional problems somewhere in your thyroid system. And this is where trying additional approaches may help.

The two ways you can get iodine into the cells of your body:

There are two general ways to get iodine into every cell in your body:

1. Via thyroid hormones. The protein hormones will circulate around in the bloodstream and "carry" the iodine to where it's needed, when it's needed. The protein hormones can come directly from the thyroid gland, or, you can take them in the form of medication. Usually T3 is the more biologically active hormone that works on cells. But T4 has a variety of functions too. These protein hormones not only "carry" the iodine to where it's needed, they are also a form of ready-made "storage", holding iodine safely and keeping it "inactive" while it's circulating around in your body.
2. You can take iodine directly. Many, if not all, of your cells still retain the ability to utilize iodine directly, much as when we first "came from the sea". If you flood your body with iodine, all your cells will be exposed to this iodine, and have it available for use. In other words, you can

“bypass” the protein hormone component if necessary and get the iodine the old way – directly into the cells.

- Question: A logical question is, why can't we just take iodine alone and survive off of that, without the protein hormones?
- Well, in theory, you might be able to. And anecdotally, some people reportedly have done this, although I admit, I don't know how much I believe if these anecdotes are true. And I definitely would never recommend anyone try this, because there would be numerous problems with trying to “live off iodine alone”. For starters, iodine attached to tyrosines, such as with all the “iodothyronines” (T1, T2, T3, T4, rT3 and more) are really really important for all kinds of functions in the body, not just energy production. Tyrosine plus iodine –or any other iodinated proteins, including intermediates, are important as a whole for their own reasons. These tyrosines can't work by themselves in the same way without iodine, but at the same time, iodine alone can't work by itself for all these various functions; it needs the protein component too. That is why the entire thyroid hormone axis exists in the first place, to utilize both of them together. So iodine alone is not the answer. Also, when it comes to energy, Iodine is metabolized rather quickly. If you don't have ANY thyroid hormone as a back up, once your cells run out of iodine, that's it – you crash HARD. You would have to have iodine on hand all the time, to make sure you take it and never “crash”. There is no automatic “homeostasis” using this method -- you must carry the iodine with you at all times and make sure you take some if you start to feel low. Remember, one purpose of the protein hormone is to “carry” and “store” the iodine molecule around safely in your bloodstream until you actually need it, thereby helping to create homeostasis of this necessary molecule. So “living off iodine alone”, without the hormone component, could cause all kinds of other problems. I'm not sure why it is that cells can seem to utilize iodine alone. But whatever the reason is, I tend to think of it as a “supplemental” form of energy from iodine, in addition to the energy thyroid hormones can provide – not instead of them.

Why taking Armour and Iodine may help some people:

1. *You will be getting enough T4.* Although I am focusing only on the iodine functions of thyroid hormones, as I said before, nature does not like to waste. And there are no doubt a variety, or multiple functions, for the protein components of thyroid hormones (ie, cholesterol control is one obvious one). So having enough T4 in your system is important for most people.
2. *You will be getting enough T3.* T3 is considered the “biologically active” component of thyroid hormone, meaning this is the one that provides energy to your cells and mitochondria. Most of the T3 in your body is actually made from your T4 in multiple tissues on an as-needed basis.

Problems can develop if your cells and tissues cannot make T3, or enough of it, from T4. When taking Armour, you will be providing enough T3 to make up for this.

3. *You will be getting additional iodine directly.* For some people, some of their cells can't seem to utilize, or extract, the iodine from the hormone properly. They've got enough T4 and T3 hormone floating around, and yet, can't seem to really get the full benefit of it. Here's where the iodine can help. If there are any cells that can't utilize T4 or T3 properly, they can use the iodine directly. By "flooding" your body with iodine, these cells have another option to get the iodine they desperately need.
4. *You will be getting T1, T2, calcitonin, and possibly other as of yet unknown factors that may benefit you:* Some people believe that these additional substances help thyroid patients more than is currently recognized. This will only occur if you take the "natural" thyroid medications, such as Armour, Naturethroid, and whatever other names they may go by. There are now synthetic "analogs" of Armour synthesized by the pharmaceutical companies in an attempt to replicate natural thyroid medication. However, be aware these only contain T4 and T3 in the appropriate ratios, and will not include the T1, T2, calcitonin, etc.
5. *By using Armour and Iodine, you will essentially be doing a form of what's called "Block and Replace":* This is an important concept, and will be covered later in this paper. Iodine can be used to help "block" your thyroid gland, so this is where the iodine can help in yet another way.

In summary, the reason Armour (or Naturethroid, or any of the naturals) and iodine may be worth a try for some people is because you're basically "covering more of your bases". This approach attempts to address several different potential problems that could be existing in the thyroid axis. Cells that need T4 can get enough, cells that need T3 can get enough, and any cells that can't utilize T4 or T3 can still get iodine directly. By supplying all three, your body has three different mechanisms to work with now in the form of T4, T3, and iodine. So you're essentially increasing your chances of success, more than if you only take T4, for example. You'll also be doing a form of "Block and Replace", covered later in this paper, to help prevent flares from occurring. Again, this approach does not work for everyone, and I'll cover some of those reasons later on. But it may help some people who so far have not found relief using T4 only or the synthetics, and it may be worth a try for this reason.

Iodine: the double edged sword:

Some words of caution are necessary about iodine:

Supplemental iodine is a very very controversial topic. Some people think it's the cause of all thyroid problems, other people think it is the solution to all thyroid problems. The reality is probably somewhere in the middle. If you research iodine on the internet, including PubMed, you'll find everyone has a different opinion. And there are plenty of PubMed papers to "prove" these opinions, no

matter what side they are on. All this controversy really tells you only one thing: no one really understands iodine very well at all. So that's something to keep in mind with all this.

There's no doubt iodine is important to the thyroid axis; if we didn't need iodine, we wouldn't need a thyroid axis. No one will argue that. But there has always been a raging battle as to what is too much, or too little iodine, in the diet, and how that affects the thyroid gland. Pretty much everyone agrees that if you get too little iodine, you'll eventually have a problem. However, many people believe that getting too much iodine can cause problems too, including damaging the thyroid gland. The fact is, a normal, healthy person with a normal, healthy thyroid axis can handle a wide discrepancy in amounts of ingested iodine. Remember, people with healthy thyroids can go visit the seaside and eat a ton of iodine for 2 weeks without a problem, and then return home and maybe hardly get any iodine for the next several months, and be OK with this. It's only when the system is "broken", that this homeostasis is lost. The question, of course, is what "breaks" the system in the first place? Well, there are a lot of proposed causes, including genetic and environmental causes, but some "experts" believe that too much iodine is one reason. This doesn't explain the healthy populations who live on the coasts and eat a lot of iodine though, so I'm not sure how they justify this. Still, it's good to be aware that some people believe this.

Does this mean you should just go out and start taking iodine for your health? NO. Iodine DOES affect the thyroid gland greatly, in that the thyroid gland is the major organ for capturing, storing, and distributing iodine. But when the thyroid gland or thyroid axis is "broken", iodine can act in negative ways and have some unwanted effects, some of them serious. So if you've got a thyroid problem, it's never a good idea to just go out and start taking some iodine without understanding a few things first. All the issues with iodine are beyond the scope of this paper. So I recommend anyone interested in iodine do their own research. It also helps to have a good practitioner you trust who is experienced with iodine to help you make your decisions with it.

For the purposes of this paper though, there are several points that I think are important to know.

1. There are several different forms of iodine. Some forms of iodine can be toxic. Potassium iodide is considered to be the relatively benign form of iodide, and is found in kelp. There are also potassium iodide tablets one can take. Lugol's solution is a mixture of the potassium iodide and elemental iodine (elemental iodine can be toxic in large doses). Iodoral brand tablets is the Lugo's mixture in a tablet form.
2. Most people who take supplemental iodine, will take either potassium iodide alone, or Lugol's. Some iodine practitioners have found that taking Lugol's iodine, which contains the mixture, to be more effective than pure potassium iodide.
3. In the "old days", both potassium iodide and Lugol's were used to treat Grave's disease, which is hyperthyroidism. This is because *large* doses of potassium iodide can "shut down" the thyroid gland either temporarily or permanently, or enough so that the person was not hyperthyroid anymore. This is an important point to remember.
4. Currently, patients undergoing thyroidectomies may be given potassium iodide in large amounts for 10 days before the surgery, and right before surgery. If it's an emergency surgery, a large dose will also be given before surgery. Again, this is because large amounts of potassium iodide

will “shut down” the thyroid gland and *prevent thyrotoxicosis* (hyperthyroid flares) during surgery. How much potassium iodide will be given? Different protocols will vary, but one example is 50 mg (yep, that’s MILLIgrams) three times a day for 10 days before surgery, or 150 mg/day. That’s a lot of iodine – *way* more than the 150 ug (MICROgrams) recommended per day for the general population. In this case, it’s being used to prevent thyrotoxicosis (hyperthyroid flares). But another point to take home from this, is that in general, for most people, the rest of the body can handle these large amounts of iodine without a problem.

5. Here’s another important point to remember: A large amount (milligrams) of potassium iodide will “shut down” the thyroid gland. It’s almost like the thyroid gland saying “Hey man, we’ve got enough iodine here in the factory, we’re gonna shut down production!” But a little amount of potassium iodide – usually micrograms, like the small amounts we get in our daily diets – is used by the thyroid gland to manufacture thyroid hormones. Remember, the motto of the normal healthy thyroid gland is “Take what you need and leave (excrete) the rest” when it comes to iodine. Why is this important to know? *As long as your thyroid gland is functioning at all, it’s going to grab onto iodine and produce hormone.* And in a “broken thyroid gland”, this can produce “flares” or “thyrotoxicosis events”. In some people, the tiniest bit of iodine can cause their thyroid gland to go “crazy”, and spit out hormone in the form of “flares”. These flares are never a good thing, as anyone experiencing them can attest. So how do we stop them? Well there are several ways we can try to minimize or stop flares from occurring. But one of those ways, is to take large enough doses of potassium iodide continuously, to help “shut down” the thyroid gland, just like they do before surgery. So this is yet another reason to take iodine: with this protocol, not only will iodine be available for use directly to every cell in our body, we will also use it to “shut down” the thyroid gland and “block” those nasty flares from occurring.

Two ways to “Block” the thyroid gland:

In general, there are two ways to “shut down”, or “block” the thyroid gland:

1. The first, we’ve just talked about: taking large amounts of potassium iodide.
2. The second way, is to take enough thyroid medication, that the thyroid gland stops production. For example, if you are supplying all the thyroid hormones your body needs with thyroid medication, your body says “Hey, we’ve got all the thyroid hormones we need, stop production!”. And that’s exactly what will happen. Your thyroid gland will stop making any thyroid hormones. After all, why make them, when you already have enough in the form of medication?

How will you know when you’re taking enough thyroid hormone medication to completely “shut off” or “suppress” your thyroid gland? Well, in general, you’ll start to feel pretty good clinically when this occurs. But you can also use lab values to help you with this one. *When your thyroid gland is shut off or suppressed completely, TSH should consistently be ZERO.* There are some exceptions to this, and I’ll cover them later, but for the most part, when your thyroid gland is shut off completely, your TSH will be zero. This is another important point to know and remember. And in case you’re not aware of this

now, this is where you may run into a lot of problems with a lot of traditional doctors, or doctors who don't understand how this works. Especially doctors who treat only based on lab numbers, and not how the patient is actually feeling physically. They will want your TSH to be higher than zero. They will be very very unhappy if your TSH is that low, and will give you all kinds of reasons as to why your TSH must be higher than zero. But a practitioner who is familiar with working with Armour or the other naturals, won't be afraid of a TSH of zero. *They won't be afraid to drive that TSH down to zero and keep it there, as long as you're feeling good physically.* They won't treat based just on using a TSH number. They know that the way to tell if you are hyperthyroid is really quite easy: if your hormones are too high for you, you will have *symptoms* of hyperthyroidism. If you don't get symptoms of hyperthyroidism, then you're not hyperthyroid, regardless of what your TSH is. It's basically that simple. You don't need a lab test to tell you how you're feeling. You listen to your body. This is what the "old time" practitioners did before all the lab tests were available. If you're feeling great, no matter what your TSH is, then you're on the right dose of thyroid hormone for you, meaning you're not too high or too low. If you're feeling great, you won't develop heart problems or osteoporosis because you won't be hyperthyroid, regardless of what your "numbers" say.

Somewhere along the way, many modern doctors seem to have forgotten this simple concept. They will tell you that you're too high or low on thyroid hormone based on lab numbers. Remember, these lab numbers are based on what 95% of normal, healthy people with functioning thyroid axes have. If you're reading this paper, something is wrong somewhere with your thyroid axis and you're already out in that 5% where the numbers may not apply. You already have more unusual problems that aren't responding "the normal way". So "numbers" that apply to other people, may not apply to you. Your body has its own way of telling you when you've got the right amount of thyroid hormone: you'll feel better. And that's what treatment is all about, really. It's about how you *feel*, not some numbers.

Replacement Dose: another way to describe the "blocking dose":

Another way to describe the amount of thyroid hormone you need to shut off or suppress the thyroid gland completely is "replacement dose". Replacement dose is the dose necessary to "replace" the amount of thyroid hormone your particular body needs to function. It's how much your thyroid gland would produce if it were working normally and you were healthy. So "replacement dose" is really the same as the "blocking dose" of thyroid hormone. And in general, when you've blocked your thyroid gland, and replaced the hormones your body needs with its "replacement" dose, your TSH will be zero.

- **Question:** WHY do we want to shut the thyroid gland completely OFF?
- **Answer:** To stop any flaring and hormone production and fluctuations that are occurring. Frequently, thyroid patients that are having a hard time regulating themselves with T4 or any thyroid medication, are experiencing thyroid flares, whether or not they realize it. These can be little flares throughout the day, or bigger flares that can last days, weeks, or months. These flares can be minimal, and simply annoying, or they can be large and devastatingly disabling no

matter how little or long they last. If there is a single little thyroid follicle left functioning, it will grab whatever iodine it can and take off with it. A TSH above zero means a part of your thyroid gland, no matter how small a part it is, still wants to work. Your thyroid axis may be “broken”, but make no mistake about some of the thyroid cells in your thyroid gland: they WANT to work and they will, given the chance. A little bit of iodine is their fuel, and it can be like throwing gasoline onto a fire in some cases. If you ever have any doubt about this, just research the poor folks who thought they had complete thyroidectomies done, but then found out later the surgeon either missed a few bits and pieces or left some in because it was too dangerous to remove them all during the surgery. How did they find that out? Because they’re still flaring and producing thyroid hormones, sometimes enough for their entire body! Those “bits and pieces” can still function and spit out thyroid hormone and create havoc for patients who thought that getting rid of the thyroid gland solved the problem. It’s a testament to the survival strategy of the body as to how little of the thyroid gland is really necessary for plain survival – not healthy or happy survival, but survival none the less.

- *“My doctor says my TSH should be at 1-2 no matter how I’m feeling, because that’s the TSH of the normal population”.* Yes, in a healthy person with a healthy thyroid axis, the normal TSH will be around 1-2, and the body will get their full replacement dose on this TSH. TSH *must* be greater than zero in a thyroid – healthy person, because TSH is the stimulus to make the thyroid gland produce the hormones. The thyroid gland won’t work without TSH. But those of us reading this probably don’t have a “healthy thyroid axis”. We don’t need TSH to tell the thyroid gland to make more hormones. We’re going to supply all the hormones we need with medication. Not only do we not need TSH to make hormones for us anymore, we don’t *want* TSH to make hormones for us anymore, because this is what causes hormone fluctuations and the “flaring”. If you’re one of the lucky people on T4-only with a TSH in the 1-2 range and you feel great, good for you, don’t change a thing. But if you’re reading this, it’s probably because you’re one of the unlucky ones where the T4-only approach hasn’t worked. And in this case, your TSH is not reliable anymore for a number of reasons. The success of this protocol depends on turning your thyroid gland OFF, and replacing your body’s thyroid hormone needs with the full REPLACEMENT DOSE of hormone. And in the process of doing that, that means driving your TSH down to ZERO.

Block and Replace Using Armour and Iodine

OK, if you’ve gotten this far in reading this paper, you now know:

1. The importance of iodine to your body
2. That thyroid hormones exist to store, transport, and carry this iodine to every cell and mitochondria in your body
3. That large amounts of iodine will “shut down”, or “block” your thyroid gland, while tiny amounts of iodine will “fuel” your thyroid gland
4. That a “replacement dose” of thyroid hormone medication will also “shut down”, “suppress”, or “block” your thyroid gland

5. That when your thyroid gland is blocked and you are on the correct replacement dose for your body, you'll feel better clinically, you'll stop flares from occurring, and your TSH will most likely be zero.

So, you're ready to start on Armour and iodine to do Block and Replace. How do you do it?

1. I recommend running basic lab work before starting this protocol or changing from your current treatment. This includes a full thyroid panel with TSH, both frees, rT3, and all antibodies if possible (TPO, TgAB, TrAb, TSI, TBII). I know – after all that talk about numbers not being as important as doctors make them out to be, now I'm recommending lab work. I personally like lab work, and a lot of it. I use the numbers as a guide and as support, comparing them to my clinical symptoms, to help me determine what's working and what's not in any approach I use. I understand that numbers are never "the final answer" to anything, because there are many things that can influence those numbers. However, this does not mean they are not useful. On the contrary, using your numbers thoughtfully and appropriately can be another useful tool to help guide you or your doctor. I personally also believe that knowing what antibodies you have – or don't have – is also very important, as these influence quite heavily the flaring that may occur (and therefore your T3/TSH number at any one point in time). Some of these antibodies may influence your TSH value directly as well – an important point to understand and remember.
2. If you've never had any of the following checked, I also recommend checking additional basics such as Vitamin D, B12, iron, ferritin, DHEA, cortisol, basic sex hormones, etc, but that's up to you and your doctor. Correct any deficiencies. I also would run antibody and genetic tests for Celiac disease before starting on the protocol if you've never done so just to help rule out this condition as a cause of your symptoms. Also note: there are rare cases of patients starting thyroid medication of any type, and "unmasking" adrenal insufficiency. Both you and your doctor should be aware of this, and the symptoms to look for.
3. In general, patients who are not on any thyroid medication, will start out with 1 grain of Armour once a day in the morning. Pay attention to how you're feeling when you take the medication.
 - Do you feel a little "revved up", or as if you have an energy burst? That's a good thing. That means your body is responding to the T3 that is in Armour.
 - Do you feel no different than you've been feeling? That's OK too, for now. You're just getting started on this journey, and it takes time.
 - Do you feel a little of any or all of the following: shakiness, anxious, sweating, heart pounding, heart palpitations or increased pulse and temperature? This isn't necessarily a bad thing, but it does mean your body is not used to having a sudden burst of T3 in it. Wait a few days, to see if these symptoms resolve or improve. If they do, you are ready to raise your dose. If they don't, wait a little longer, maybe up to a couple of weeks, to see if the symptoms resolve with time. Or, you could try lowering the dose to ½ grain. *If these symptoms don't subside within 2 weeks, it may mean you are not able to tolerate the T3 in Armour and you won't be able to take it or use this protocol.*
 - Be aware that the T3 in Armour has a short half life – meaning it's in and out of your system relatively quickly. After you take your medication, T3 will peak about 2 hours

later, then slowly metabolize off. This means you may feel changes in your symptoms every hour, as the T3 first builds up, then peaks, and then metabolizes off. After a few days, you will most likely start to recognize “patterns” to your symptoms after you take your Armour.

- Also note: it’s a good idea to take your Armour separately from any other meds or supplements for a while. This is because you are trying to feel exactly how the Armour, in particular right now, the T3 in Armour, is affecting you. Space your Armour and other meds and supplements out. Notice how your other medications may be affecting you differently now that you’re on Armour as well.
4. In general, you want to raise the dose as fast as you can tolerate. This means, as long as you don’t have persistent shakiness, anxiety, sweating, heart pounding, heart palpitations, elevated pulse and temperature, or other negative effects, you can raise your dose ½ grain at a time. For some people, they will be able to raise their dose every 3-4 days. For other people, they may only be able to raise their dose every 2 weeks or so. You really don’t want to wait longer than two weeks to raise the dose though. If you’re still having some of the negative symptoms of shakiness, anxiety, sweating, heart pounding or heart palps, *or any other negative effects*, it may mean that you cannot tolerate the T3 in Armour, and you can’t tolerate this protocol.
 5. Let’s say you’re somebody who tolerates Armour well though. You don’t have any of the negative symptoms, and either feel no different or maybe even a little better for an hour or two each day. Within 3-4 days, add in ½ grain in the afternoon, maybe at around 1-4 pm.
 - Note: because of the ½ life of T3, you cannot take Armour only once a day. You *must* take it at least twice a day to “spread out the T3 dose a bit”. Some people will take it 3, 4, or even 5 times a day to spread out the T3 dose more. In general, taking Armour once in the early morning, and once in the early afternoon will suffice for most people. Some people cannot tolerate taking Armour later in the evening or at night because the energizing effects of T3 can prevent falling asleep. The important thing to remember about Armour or the other NDT’s, is that the T3 part has that short ½ life. Everyone will metabolize it differently, and you will figure out a schedule of how often you need to take it to prevent high/low swings throughout the day.
 6. OK, now you’re up to 1.5 grains/day – wait another 3-4 days, to see if you’re tolerating it well. If you are, time to raise your dose by another ½ grain, adding it to the afternoon dose. So now, you’re at 1 grain in the morning, and 1 grain in the afternoon.
 7. You will continue to raise your dose in this fashion, ½ grain at a time. The next raise will be adding ½ grain in the morning. The next one after that, will be ½ grain in the afternoon. And so forth. You will continue to raise as long as you tolerate the Armour well. If you ever feel shaky, anxious, sweating, heart pounding, heart palpitations, elevated temperature or pulse, or any other persistent negative effects, stop raising and wait a while to see if these symptoms resolve. If they do resolve, continue to raise. If they don’t, you may have maxed out on the dose for you.
 8. In this way, you will determine the Armour dose that is necessary for you. If you get to a dose that causes symptoms of shakiness, anxiety, heart pounding, sweating, heart palps, or other negative effects which don’t resolve, back down ½ grain and wait again. Let your symptoms guide you as to whether you need to raise or lower. T3 has a short ½ life of anywhere between

4-24 hours depending on the individual, so those symptoms should resolve within a few days if they develop.

9. Note: Practitioners experienced with using Armour are well aware that replacement dose tends to be much higher than when using T4 alone. Some patients will require up to 5-6 grains before feeling clinically normal. Patients will use their own symptoms to determine whether to continue to raise, stabilize, or lower their own dose. Also, because multi-dosing is necessary with Armour, patients may want to take a larger dose in the morning, and smaller doses in the afternoon, or experiment with three time a day dosing by adding a very small dose in the early evening. Every patient is different, and it's only through this experimentation that you find out what works best for you. Physicians experienced with Armour recognize and understand that the patient is an active participant in guiding and determining their own replacement dose, and that such experimentation is part of the process.
10. When you start taking Armour, at the same time, start taking potassium iodide (KI), Lugol's iodine, or Iodoral, also once or twice a day. How much iodine? You want to take enough that you block your thyroid gland. No one really knows how much is needed for each individual, and it may differ among individuals. Remember, some people hardly get any iodine in their diet and others may be eating a lot of sushi and kelp and still have well functioning thyroid glands. In my own case, blockage occurred at only 3-4 mg using Lugol's. Many "pro-iodine" folks say to start out much higher. My guess would be 6.25 – 12.5 mg twice a day would probably cover most people. I recommend you work with a practitioner experienced working with iodine to help determine your dose.

Question: Why does the dose need to be raised as fast as possible?

Answer: Because the faster you raise your dose, the faster you will get to your replacement dose and "shut off" the thyroid gland. *As long as your thyroid gland is still working, you are vulnerable to antibody attacks (if you have the antibodies) and flares due to an elevated TSH.* If you are on iodine, hopefully you are on a large enough dose that is helping to block these flares from occurring. But make no mistake about it: until your thyroid gland is SHUT OFF COMPLETELY, you are vulnerable to "flare attacks". And those flare attacks can be substantially disabling, especially the closer you get to replacement dose.

Question: What would stop me from raising my thyroid dose every 3-4 days?

Answer: Some people are unable to tolerate the higher amount of T3 that Armour has. It is the T3 during this initial raising time that limits how fast you can raise your dose. If you are very sensitive to T3, you will have to raise your dose slower. You will use the symptoms I mentioned to guide you in this. In some cases, some people cannot tolerate the amount of T3 in Armour at all, and therefore cannot use Armour and this protocol.

Question: Why should Armour be multi-dosed?

Answer: Armour has a high T3:T4 ratio. In general, T3 is considered to be the "biologically active" hormone that provides energy to all your cells, including mitochondria. With its short ½ life of 4-24 hours, it does what it needs to do and then leaves your system quickly. If you take Armour only once a

day, you will get too much T3 all at once, and it will drop fairly quickly and then you'll have too little for later on (some patients experience this as the "T3 wobble"). By taking it at least twice a day, you can help alleviate this imbalance. Some people will take it three to five times a day to even this out even more.

Question: What are the symptoms that tell me I should stop raising and maybe lower my dose?

Answer: If you develop shakiness, anxiety, sweating, heart pounding, heart palps or elevated pulse or temperature that persist or worsen, you need to lower your dose. You may experience only one or all of these symptoms. You may experience additional symptoms unique to you. For example, some people experience a feeling of "head pressure", dizziness or disorientation, ear pain, eye pain, and even vertigo from the T3. If this occurs, it is unlikely you will be able to utilize this protocol. For those of you tolerating the Armour well, you will get the hang of things as you progress, and will become quite good at adjusting your dose.

Question: When should I take the Iodine in relation to my Armour?

Answer: You can take them at the same time.

The Concept of "Saturation":

If everything goes well and you have tolerated the Armour and Iodine well, you will soon start to feel improvements. However, it takes at least a minimum of about 6 months before you really start to feel good. Why is this? There is a concept which I'll call "saturation". This is when not only your serum levels are normal, but your cells and tissues have enough iodine in them too. Recovery happens really slowly with the thyroid axis. I always say it works at "glacial speed". Even traditional doctors won't check your blood levels after a dose change for at least 6-8 weeks, because it takes that long for blood levels to normalize. Most traditional doctors realize that it takes another 2-3 months after that for symptoms to "settle out". This is because even though your blood levels will normalize first, it takes a while for all your cells and tissues to start incorporating this newly found iodine and thyroid hormone available to them. A good example to think of is your hair. If you have thin, dry, brittle hair which has fallen out as a result of being hypothyroid, and you start the medication, you won't suddenly develop a full head of healthy hair within a few days of taking the pills. It will take a while for the hair follicle cells to take up the iodine or hormones, and then slowly start to re-grow. And as you know, hair can take a year just to grow a few inches. A similar thing is happening with all the cells in your body. They have been starved for iodine and thyroid hormones for a long time. Once they get it, your body will slowly start to heal and recover itself, as old cells die off and new cells incorporate the iodine and hormones. When both your blood levels as well as all your cells and tissues have enough thyroid hormone and iodine available to them again, then your cells and tissues will be in "equilibrium" with your blood levels. And this is when "saturation" occurs.

You'll know when saturation occurs, because you'll really start to feel good by then. Patients describe it as an amazing feeling, an overall feeling of well being, both physically and emotionally.

I do recommend repeating blood work at about the 3 month mark, and then the six month mark. For most people, when they are feeling good, their TSH will be at zero. Frees might be anywhere in the range, and sometimes above range. Here are some things to consider about lab values:

1. If you have antibodies such as TSI, TrAB, or TBII, your TSH may not go down to zero. I am not sure about this though. Some of these antibodies may stimulate TSH regardless of what your free levels are (i.e., they don't respond to the negative feedback mechanism). Again, I'm not sure about this. It would be great if people following this protocol tested these antibodies every time they did labs, because we might get some more information on this then.
2. For some people, Iodine will increase the TSH. This is true for some people not on any medication. I am not sure if this is true as well for people on medication. In theory, replacement dose of medication should make TSH go down, but again, I'm not sure if iodine alone may be counter-acting that in some people. It would be great to have more data on this as well.
3. The good news is, if you're on this protocol and you're feeling better, it won't matter what your TSH is. Most times this protocol will drive it down to zero. But if it's not zero, and you're feeling good, then that doesn't matter either. Once you reach replacement dose and are "saturated", you are on a good dose for you. If your TSH is not zero, it may be because of point 1 and 2 above. I am not sure about this, but I would think that at this point in time, since you are saturated and on a full replacement dose, your thyroid follicles would be atrophied and thyroid cells shut off, and therefore non-responsive to TSH.
4. If, after reaching saturation, you have a TSH of zero and your frees are actually above range, be prepared for your traditional physician to "freak out". *But remember, as long as you don't have any hyperthyroid symptoms, you are not hyperthyroid, no matter what your numbers say.* And if you are not hyperthyroid, you will not develop heart disease or osteoporosis or any other malady attributed to subclinical hyperthyroidism either. Having said that, I do feel it's wise to try and get on the lowest dose of medication possible while still maintaining saturation. So at this point in time, you can try decreasing by ½ grain, and see what happens. You may feel uncomfortable initially a bit, because any change in thyroid meds will bring on some immediate symptoms. Wait three months. If the symptoms go away and you still feel good and saturated, then test again to see where your numbers are. And then you can try decreasing by ½ grain again. If you notice you don't feel quite as good for the entire three months, then you'll need to increase by ½ grain again. In this way, you'll know what the right dose is for you.
5. Here is something important to remember: The time of your blood draw when you check your labs is important when using Armour. Again, the ½ life of T3 is fast – it rises and falls pretty quickly. You don't want to take your medication, and then test 2 hours later. Your T3 will be high, and your physician will freak out again. Instead, test in the early morning *before* you take any medication. Your last previous dose would have then been the afternoon or evening before. This will give your T3 levels time to settle down.

6. In general, when people are on the right dose for them, and they test at the appropriate times, their TSH will be zero, fT4 will run around 50% or a little higher, and fT3 will run about 80 – 90% of range. These are just generalities though. Your numbers may differ. Remember, when you *feel* good, you're at the right dose, regardless of your numbers.

Additional things that will help your Armour and Iodine to work:

When you first start your Armour and Iodine, there are some things you can do to really help determine that any symptoms you are experiencing are, in fact, due to the Armour and Iodine and not other stressors. I am not a big diet guru, but many people with autoimmune and thyroid conditions are, and have found certain diets to help tremendously . For the first six months, or at least until you hit saturation, I do recommend changing to a low carb diet. If you search this on the internet, you will find a wide variety of information on it, but in general, it mostly includes vegetables, meats, healthy grains/beans, nuts, some fruit, healthy oils for fats, and water. There is no dairy at all (no cheeses, yogurt, etc), no processed foods, no processed salt, no gluten, no alcohol, and no excessive carbs. Organic is great if you can afford it. Yeah, diet changes are hard. But in this case, during this time, there are some good reasons to do this while you're ramping up on your Armour. You will be learning about your symptoms and how Armour and Iodine will change those symptoms during this time. By getting rid of the extraneous "noise", or other stressors that may be causing your symptoms, you can be assured that any change in your symptoms is therefore being caused by the Armour and Iodine. This is important, because your symptoms will be guiding you in terms of telling you how fast to raise your dose, and when you reach replacement dose. In general, a low carb diet will be:

1. Low glycemic, and therefore, an anti-inflammatory diet. It is a well known fact that inflammation can exacerbate autoimmune conditions, as well as cause all kinds of other problems in the body. If you have any thyroid antibodies, remember, these are a form of "inflammation". Preventing blood sugar swings is also important to help prevent inflammation. Preventing inflammation will help prevent flaring of your thyroid gland while you are still vulnerable to flares.
2. Gluten free. If you have any thyroid antibodies, there is research showing that some of these will cross react with the gliaden antigens. By removing these antigens from the diet, some people have managed to lower their thyroid antibody status as well as their negative symptoms. Again, this will decrease inflammation in general, as well as decrease flaring.
3. Low iodine diet. If you are on large amounts of iodine, the smaller amounts of iodine you are getting from your diet won't be so much of a problem. However, it's always nice to control your iodine content and essentially limit it to the iodine you are supplementing, and not getting it from multiple random sources in your diet. If you are taking only Armour and no iodine, then a lower iodine diet will be helpful for you to prevent flaring. Remember – while ramping up on Armour, until you reach replacement dose, you are susceptible to flares. And if you are not taking large amounts of iodine to suppress these flares, then the tiny amounts of iodine in your diet will be like adding fuel to the fire for the thyroid cells that still want to work. If you eat a

low carb diet with sea salt (no processed traditional salt), you will naturally be eating a lower iodine diet, along with the other benefits of low glycemic, anti-inflammatory, and no gluten. But if you're going to try and sneak in other foods, search the Internet to find out which low iodine foods are available to you, or at least avoid high iodine foods, such as seafood, kelp, milk and eggs. Unfortunately, this means no eating out in general also, because restaurant foods are heavily salted, most likely with traditional processed salt with iodine added. You can try eating a higher iodine food, but pay attention to how you are feeling afterwards. If you start flaring, you'll have a good idea of why. If you're not taking the large amount of supplemental iodine, then you want your iodine to come from Armour only, and the little bit that is found in the natural foods. If you don't remember why, go back and review "Iodine: The Double Edged Sword, #5".

4. Vitamins and supplements. In general, I am not a big fan of lots of excessive supplementation. Some supplements, just as with traditional medication, can directly or indirectly affect the thyroid axis and may possibly interfere with your process of trying to determine your correct replacement dose of medication. You won't need any supplements to "help your thyroid work better", because your thyroid gland will be shut down and not working anymore. You won't need any supplements to "help you convert T4 to T3", because you are providing both in the form of medication. A healthy diet with the proper dose of replacement thyroid hormone should go a long way in terms of getting you healthy and keeping you healthy. Supplements I use regularly include a multivitamin with minerals (with selenium and zinc, but no iodine), extra Vitamin D and Vitamin C, Magnesium, and the fatty acids (Omega 3-6-9, flaxseed oil, borage oil, and hold off on the fish oil if you're trying to limit iodine). Also, if you don't like to salt your food, make sure you get enough sea salt (not processed salt). I add it to empty capsules and take a couple of capsules a day.

Question: Am I gonna have to stay on this diet forever?

Answer: Well, it's not a bad idea, because it is a healthier diet overall. But I'm a major carb lover myself, and used to do plenty of "carbo loading" before those 50 miles bike rides. I think it's extremely helpful to be on a consistent but healthy limited diet for the first six months or so, until you reach saturation. But after you reach saturation, and you're feeling pretty good, there's no reason to not start slowly adding in the foods you love again. Once you have adequate iodine and thyroid hormone in your system, your body and gut won't be anywhere near as sensitive to foods anymore (as long as you don't have other autoimmune issues). Don't simply start binging on pizza and beer again though. Slowly add in the foods you want, and test them out. Keep the ones that make you feel good, and that you can tolerate well, and discard the rest.

- Regarding Iodine: Once you reach saturation, your cells and tissues will be "flooded" with iodine and thyroid hormone available for use. Your thyroid gland will be SHUT OFF and NON FUNCTIONAL. So getting iodine from your diet isn't really going to be a problem anymore. Think of your body as being this big pool of iodine, and now you throw a few micrograms from your diet into the pool – you'll never notice it or feel it anymore. It's only when your body and

thyroid gland are starving and reacting to iodine, that you get those extreme reactions from the tiny amounts in our diets.

- Regarding carbohydrates: you can start adding non-gluten carbohydrates in slowly and see how you feel at this point in time as well. One thing I can tell you: I've tried every supplement out there to help lower my blood sugar, but nothing ever even came close to working as well as iodine. Some people use iodine to control their diabetes. It's a fact that every diabetic or pre-diabetic should be checked for thyroid problems, because diabetes, pre-diabetes, and metabolic syndrome can be secondary to thyroid disorders. At any rate, carbohydrates with spiking glucose, which can cause inflammation, most likely won't be a problem anymore. But pay attention to how you feel, and use a glucometer if you're not sure.
- Regarding Gluten: Lastly, if you really want it all back, you can try adding in gluten again. If you have the TPO and Tg antibodies, these will most likely slowly decrease over time, because your thyroid gland should be shut off and non-functional. If production of thyroid hormone stops → production of TPO and Tg stops → no need for antibodies such as TPO and Tg antibodies. However, be aware that there might be cross reactions of these antibodies or other thyroid related antibodies that you don't know about with gliadin or other antigens, and they may cause you problems even if your thyroid gland is shut off. Also be aware that it can take years for antibodies to get down to non-measurable levels, and, as with most antibodies, may never leave your system completely. If you've still got a thyroid gland, these antibodies may still want to attack what's left of it, even if it's non-functional. If you try adding in the gluten again, and feel bad, you'll have your answer. If gluten doesn't bother you, then it's probably OK to eat again.

Question: What about exercise? I feel great and want to run a marathon!

Answer: As you start to feel improvements, savor them and enjoy them, but don't over do things during your six month "ramp up" period. Take leisurely walks, some gentle swimming, limited bike rides as you feel up to it. But don't run a marathon, start pumping iron, or ride 100 miles on your bike just yet. Your body has literally just been through a war, for some of you, that war has been raging on many many years. Give it at least six months to try and recover! Now is the time to let your body heal fully. It takes time for the cells of your body to start incorporating this new iodine and thyroid hormone and to start building new cells, tissues, bone, muscle, hair, skin, ect. Give your body the time it deserves to let it heal fully before you start pushing it. You will be paying careful attention to how the Armour and Iodine are making you feel, and now is not the time to add additional stressors such as severe exercise, and the diet topics I already talked about.

Question: I'm reading a lot about adrenal fatigue and how I need to support my adrenals if I'm going to take Armour.

Answer: There's a lot of information on the internet about this, with a lot of different opinions. I personally do not recommend starting cortisol until or unless you have a definitive diagnosis of full blown Addison's or repeated saliva testing shows you are low on cortisol despite thyroid hormone correction. Adrenal glands have a lot of iodine receptors on them, and once you start correcting your thyroid deficiencies, if there are problems there, I think they will often correct themselves once you hit

saturation. Other people will disagree with me on this, and if the Armour protocol is not working, one of the first things they'll look at are the adrenal glands. It is a monumental change to literally take over one endocrine axis, the thyroid axis. Be aware that when you take over a second one, the adrenal axis, it becomes much harder to determine what's causing what. What I recommend is testing cortisol before starting the protocol, and at the 3 and 6 month mark if you have questions about this to see what the trends are. Otherwise, leave them alone, and give the Armour and Iodine a chance to work. If you truly believe that you are suffering from adrenal fatigue, and that this is blocking your ability to tolerate or do well on Armour, then I recommend you find an experienced practitioner to guide you in using both.

Question: I can't or won't take Iodine, can I still benefit from taking only the Armour?

Answer: Yes, many people only take Armour and feel improvements or recover completely.

Remember, taking a replacement dose of Armour is also a blocking dose. Additionally, since Armour and the other NDT's are basically ground up thyroid gland, there's bound to be some free iodine in there as well as intact hormone. You will eventually reach "saturation" of iodine with just Armour as well, but it may take longer (because the medication will now be the main source of your daily iodine). Until you reach saturation, you might want to limit your intake of dietary free iodine though: don't forget that a little bit of iodine not attached to the protein hormones causes those flares until your thyroid gland is shut off completely.

Question: I have Hashi's, and "everyone knows iodine will make Hashi's worse".

Answer: As long as your thyroid gland is completely SHUT OFF, taking iodine won't affect it anymore, and this includes people with Hashi's. In fact, if you are able to take large doses of Iodine along with the Armour, this will help not only block the thyroid gland, but make those antibodies decrease. When you block and replace, you prevent flares and shut off the thyroid gland. When you shut off the thyroid gland, you shut off production of TPO and Tg. And when you shut off production of TPO and Tg, you essentially shut off the need for the antibodies to those, so they will decrease too. There are some cases where people cannot take iodine and shut off their thyroid gland – see "When Armour and Iodine Won't Work" in the next section.

Question: Will the Tg/TPO in Armour act as antigens and make things worse for Hashi's patients?

Answer: I don't really know. In theory, they should not, and research supports this. I am bringing this up mostly as a hypothetical potential, but having said that, it is a potential possibility in my own case. The reality is that plenty of Hashi's patients have successfully taken Armour, with or without Iodine. Armour as well as the other NDT's consists of ground up thyroid glands – which will include not only intact T4 and T3, but most likely things like free Tg and TPO as well as free iodine. I suppose there is a possibility that for Hashi's patients, these TG and TPO antigens they are consistently getting within the medication could keep their antibody status active and at a higher level. As to how this would ultimately affect these patients, I don't really know. Provided the thyroid gland is shut off and atrophied, it shouldn't make a difference in that regard. However, these particular antibodies could be cross-reactive, affecting the body in other ways which are currently unknown and keeping the immune response active. Again, plenty of Hashi's patients in the past have used Armour successfully, so as to

how much of an issue this might be, if at all, I can't really say. It would be great to have more research in this area as well (ie, serial measurements of antibodies for patients on Armour only).

Question: Does Flourine, Bromine, and other toxins, such as antibiotics, accumulate in the thyroid gland? What does this mean for the "naturals"?

Answer: I don't know the answer to this. I do know that some people believe that many of these substances and other toxins do accumulate and destroy the thyroid gland. If you believe that fluoride, bromide, and other toxins (such as fluoroquinolone and other antibiotics) accumulate within the thyroid gland, you may not want to use NDT replacement therapy. Unfortunately, there's just not a whole lot of "natural" left in our antibiotic, growth hormone laden factory farm pigs from which most NDT comes from these days. I believe there may be an option to order "organic" NDT from overseas, which I assume is quite expensive. Many people do quite well on NDT replacement, so I tend to think that these toxins don't accumulate within the thyroid gland. However, I certainly have no proof either way. NDT is ground up dessicated thyroid gland, and there is no "filtering" or "cleaning up" or "removal" of specific toxins that I know of that goes on at the manufacturing process level. The pros – and possible cons – of using NDT is that you are getting *everything* in the gland – which hopefully does not include ground up toxic substances.

When Armour and Iodine won't work:

So far, everything I've covered is for the folks who are experiencing smooth sailing on this protocol. As was mentioned in the very beginning of this paper, unfortunately, this protocol does not work for all people. There are probably as many reasons as there are individuals as to why it works for some and not others. However, here are some general reasons why some people may not be able to take Armour and Iodine.

1. The first big group of people this may not work for, are patients with any heart conditions that would prevent them from taking higher doses of T3. NO ONE with a heart condition should start taking Armour or Iodine without working with a good practitioner. Having a heart condition doesn't necessarily preclude one from taking T3 or Armour; I'm just saying make sure you are working with a knowledgeable and trustworthy practitioner before starting.
2. Some people are very sensitive to T3 overall and simply can't tolerate the level of T3 in Armour. With Armour, both the T4 and the T3 are a matched set: you can't take one without the other. So if the ratio of T3 is too high for you, and you experience the negative symptoms discussed in the "Block and Replace" section persistently, you will not be able to use Armour or the other "naturals" as your sole source of medication.
3. Although most people can handle large amounts of iodine just fine, some people are really sensitive to it. If you have any heart problems, your heart may not be able to handle large amounts of iodine suddenly all at once, just as with T3. Another example is people with true iodine allergies (causing anaphylactic shock), in which case you should never take supplemental

iodine in any form (and you probably can't eat any shellfish and a host of other iodine containing foods either).

4. If you have one or more "autonomous nodules" or thyroid cancer cells that don't respond to the negative feedback system of thyroid hormone control, you will NOT be able to "shut off" your thyroid gland using Armour or any other thyroid hormones. These rogue cells spit out hormone whenever they want, no matter what your TSH or free levels are, and tiny amounts of iodine can fuel them like a raging fire. Sometimes large doses of iodine will shut them off – which is why iodine was originally used as a treatment for hyperthyroidism. But sometimes nothing works. This is rare, but is a possibility. In this case, you're not able to shut down your thyroid gland and hormone production, which means you will always be susceptible to flares and fluctuating hormones. *Severely restricting iodine* while treating with a replacement dose of Armour might be an approach to try for benign autonomous nodules (but it's hard to live with such a restricted iodine diet permanently). Some people try thyroidectomies. Certainly if it's cancer, research the internet and talk with your physician to see what your options are.
5. If you are a person who is sensitive to either T3 or iodine, and you find you have to raise your dose very slowly as a result, this can cause problems in the form of flaring. These flares might be small ones and simply annoying. But you also can experience large flares, which can be devastating, and make you want to understandably give up on the Armour/Iodine protocol. If you are continually flaring, you simply won't be able to raise your dose to the appropriate level. Remember, a "flare" is a sudden "dump" or increase in both T4 and T3 into your bloodstream. This extra hormone is occurring on top of the medication you are supplying, making you feel potentially "hyperT" and miserable until the extra hormones metabolize off. The better you tolerate T3 and Iodine, the faster you can raise your dosages to block and replace, and the better the results.
6. If you have thyroid antibodies, you may have additional known, and/or as of yet unknown antibodies, that tend to "run with" these thyroid antibodies. These may or may not be contributing to your symptoms. If you have other autoimmune or medical conditions, they may be contributing to your symptoms. Correcting the thyroid abnormalities can clear up an amazing number of symptoms and conditions, as the thyroid axis is central and intertwined with every other system in the body. Iodine alone can lower antibodies and inflammation, and this may include antibodies for other autoimmune conditions. But I don't think it's the "miracle" cure that some folks think it is. If you can tolerate Armour and Iodine, and you follow the diet recommendations, I would think you would experience vast improvements, if not outright recovery. *Do be aware that sometimes correcting the thyroid deficiency can "unmask" other conditions, such as Addison's disease or Myasthenia Gravis, so both you and your practitioner should know what to look out for.*
7. If you are on a lot of other medications or supplements, this can make it more difficult to determine whether or not Armour and Iodine is working for you. Many traditional medications have side effects that can mimic or exacerbate the very symptoms we are trying to alleviate. Receptors for thyroid hormone interact with and overlap with a variety of other receptors that are targets of many medications. For example GABA can help alleviate anxiety and physical symptoms of hyperthyroidism because, among other mechanisms of action, it reduces the

amount of T3 and flaring of T3. All of the neurotransmitters are intimately related to thyroid hormone action, and changing one will change the other. The same is true of over the counter supplements, as many of them have similar mechanisms of action and target similar receptors as the traditional meds. If you are on medication, you definitely need to be working with a practitioner who not only understands Armour and Iodine, but understands how this may interact with your other medications. Never stop your medications on your own or abruptly (cold turkey). I am not sure how to handle other medications, but I would guess that if you are able to tolerate Armour and Iodine and reach saturation, at that point, you could probably start weaning down on them slowly one at a time.

8. If you are on T4-only treatment, and want to switch to Armour, be aware it could be a rough transition. You will be losing some T4 and gaining some T3 when you first switch. For some people, this will be a godsend, and they'll feel great. For others, such as those sensitive to T3 and/or T4, the loss of T4 along with the gain of T3 can be brutal. Sometimes people in this category have some success adding in their synthetic T4 medication during the initial phases of starting Armour. They then slowly "wean" themselves off the synthetic T4 and they increase the Armour. Only time and trying it will tell if you will be able to tolerate Armour.

Why I can't use this protocol:

Yep, the author of this paper is not able to use this protocol. I've tried twice, and both times were disasters. So the irony of me writing this paper has not escaped me. However, I certainly learned a lot during my attempts, which helped formulate my opinions written here. Below is my list of reasons why I couldn't do Block and Replace Using Armour, and if you've read and understood this paper so far, you should understand the reasons why.

1. My heart was very sensitive to T3 and iodine. I simply could not take high amounts of T3 or iodine all at once. For me, a "high amount" was the amount found in 1 or even ½ grain of Armour, for example. I could not take the Iodoral tablets for the same reason. Symptoms started out with feeling my heart pounding in my chest, progressing to tachycardia, and, if I kept going, to A-fib. I was eventually diagnosed with a heart condition called "Inappropriate Sinus Tachycardia". This was no surprise to me, as I had already figured out this sensitivity during my trials with Armour and Iodine.
2. My "head" was very sensitive to T3 and Iodine. I would feel intense pressure within minutes after iodine start to build up, along with a variety of other CNS symptoms. No amount of salt or other supplements helped alleviate this.
3. This is not something I talked about in this paper, but for me, taking Lugol's Iodine was like taking T3, both clinically and symptomatically. In other words, the metabolic actions of T3=Iodine for me; it was as if they were the same substance. This is not true for all patients, but for some reason, it is true for me. I had a hard time taking EITHER iodine or T3 alone because of my sensitivities; taking BOTH at the same time felt like I was "doubling up" on the T3. This gave

me not only the heart symptoms, but the shakiness, anxiety, sweating, weakness, and overall feeling of “hyperthyroidism” as well.

4. Because of this sensitivity to both T3 and iodine, I could not take the larger amounts needed fast enough to “block and replace”. The last time I tried an NDT, I tried to go very slow, which meant breaking up 1 grain tablets into quarters and dosing 4 times a day to give myself time to get used to the T3 and slowly ramp up. I also was not on any iodine. The problem with this is, I had to go so slow, that my T4 levels were decreasing, and I didn’t have large amounts of iodine on board blocking my thyroid, leaving me vulnerable to flares. Which is exactly what happened. Things were going well, until suddenly, they weren’t; I had one hell of a nasty flare; it was like suddenly, my thyroid axis got the word that we were low on the thyroid hormone, and I envisioned my Hashi’s (and probably Graves) antibodies kicking into action, dive bombing my thyroid to get the hormone my body needed. Labs confirmed within range but low ft4 and TSH around 6 when this flare occurred. Once this initial massive flare occurred, my system continued flaring for months, making it impossible for me to try to regulate with any thyroid hormone, much less Armour with its higher levels of T3.
5. I eventually became aware that I had had underlying autoimmune neuromuscular disorder, most likely a form of Myasthenia Gravis. It became apparent this was one reason I was so sensitive to both Iodine and T3, and I why I could not tolerate higher doses of either. Increasing T3 or Iodine exacerbated and “unmasked” this underlying condition in me. It also appeared to cause an immediate and severe “autoimmune” reaction within minutes to as little as ¼ grain of NDT added to my dose of synthetic thyroid hormone replacement. I assume this was most likely against the TPO and Tg antigens within the NDT’s, even though they are not supposed to be antigenic for most people.