

The New Growth Hormone Therapy

Recently I came across a drug that has been redesigned and put back out onto the market for people to use for anti-aging medicine. Does it help with weight loss?? Oh yea, baby! It helps particularly for men with the belly fat but it will help all the way around for anyone (male or female) who wants to optimize their weight loss and maximize their physical conditioning.

The drug is called Sermorelin. The official chemical description of it follows: "Sermorelin acetate is the acetate salt of an amidated synthetic 29-amino acid peptide (GRF 1-29 NH₂) that corresponds to the amino-terminal segment of the naturally occurring human growth hormone-releasing hormone (GHRH or GRF) consisting of 44 amino acid residues." This is real scientific lingo stating that while it is not bioidentical GHRH (it is only 29 amino acids long rather than the natural 44 amino acid residues), it is biologically active and will cause a release of your own endogenous Growth Hormone (GH) from your pituitary gland.

Now some of you know that I have prescribed GH (also known as Somatropin) in the past and some are still on it. However, the State Medical Board is being pressured by the FDA to begin to heavily scrutinize any physician who writes for GH when the patient does not meet the strict criteria (that is still being debated) for GH therapy. Sermorelin does not fall into this category and can be written "off-label". This means that if I believe in my medical opinion that you would benefit from taking Sermorelin, then it is legal for me to prescribe it to you without any second-guessing by the FDA or the State Medical Board.

So what is Sermorelin and how is it taken? It is injected into the abdominal fat just like GH is every night at bedtime. It is the hormone (actually the "active part" only) that causes your pituitary gland to release GH into your body. In addition, some research is now showing that Sermorelin enhances sleep by its direct effects on the sleep center in your brain.

How is it different from GH? Sermorelin is the hypothalamic hormone analog that causes the release of GH. Importantly, the negative feedback system is still intact when you use Sermorelin. Along with the GHRH (to cause the release of GH) there is its "counterhormone" *somatostatin*. Somatostatin is also produced in the hypothalamus and its job is to *prevent* the release of GH from the pituitary...all in proper balance. If somatostatin was not in place, you would end up with too much GH and that is definitely not a good thing. (Ask any giant or anyone with acromegaly...think "Andre The Giant").

Thus, you can see that if you use GH injections, you circumvent the GHRH/somatostatin feedback circuit. This means that you can take too much GH (with its effects of excess use) and you will also cause the pituitary to get lazy, i.e., it does not release any GH since you are injecting it.

What are the advantages of Sermorelin over GH? Many! You cannot overdose on this so you do not need to worry about your sugar levels (some of you on GH know what I am talking about). In addition, the incident rate of joint pains is low (again because you cannot overdose on it). Your sleep is enhanced di-

rectly due to the effects of the Sermorelin on the sleep center. And your pituitary gland continues to “think” that you are 30 years old since every night it continues to get GHRH (at least that is what it thinks it is). This last one is actually very important.

The more I practice anti-aging medicine, the more I see that if we can do something to keep an endocrine gland functioning at a youthful state then this is better than just replacing the hormone directly. Sometimes we can do that but there are other cases, e.g., sex hormone replacement, cortisol, aldosterone and thyroid replacement, in which we have no choice but to take the hormone directly since there is a malfunction in the endocrine gland itself. But if we can keep the original gland functioning as it did when you were younger, e.g., taking Sermorelin to continue to stimulate the pituitary gland on a daily basis, this keeps the entire system intact and functioning.

How much do you need? That depends a lot on your sex. Women have a natural resistance to GH due to the estradiol that is in their system. Therefore, GH levels for injections must be higher and thus, Sermorelin doses must also be higher. The big question is...how much higher? Men should start at 200 mcg injected into their abdominal wall nightly. Women, I have been told should start at 400 mcg nightly. Thus, the cost for a woman is twice as much as a man. While this may seem “unfair”, unfortunately it is the only alternative we have to GHRT (Growth Hormone Replacement Therapy).

If you are currently getting Somatropin from me and you do not have “empty sella syndrome” or Sheehan’s Syndrome

or an endocrinologist’s verified GH deficiency (good luck with that diagnosis in this current legal quagmire), then you will be changed over to Sermorelin in the next few months. I cannot justify per their ludicrous guidelines the use of Somatropin and so will need to change you to Sermorelin, since I can justify your use (if you are 30 years of age or older or have fibromyalgia).

Cost is \$140 per 3 mg. Men will need 6 mg per month (\$280) and women will need approximately 12 mg (\$560) per month. This is not covered under insurance and you purchase it (after I decide that you need it) at the front desk. The syringes will be written for you and your insurance will cover the syringes. Refills on the Sermorelin can be gotten at the front desk and do not need an appointment as long as refills are remaining.

Each 3 mg vial will come with sterile water to mix it and will also have a 3 ml syringe to assist with mixing it. Instructions will be given as well both verbally and written.