

BIOTECH NEWS

**INSIDE INFORMATION ON IMPORTANT INNOVATIONS IN
BIO-SCIENCE AND TECHNOLOGY**

Age REVERSING Miracle?

All-natural, Anti-aging substance has been clinically-documented to REVERSE aging by as much as 20 years, within as little as 6 months of use!

In **case** you're not up to speed on the matter, **age reversal is now a reality**. In what follows, we will use an interview format in order to let Dr. Richard J. Marsh, M.D. (M.A., B.M., B. Ch., Oxon., MRCP, Churchill Fellow) give you some of the background and details behind **Human Growth Hormone (HGH)** and an all-natural precursor (PHGH), which seems to hold so much promise for those of us who are over the age of **45..]**

Dr. Marsh received his M.D. from Oxford University in England; he also has a degree in physiology. He is a board-certified practitioner. His practice is in general surgery, dermatology, general medicine and anesthesiology. He did all of that prior to going into family practice. He's been a medical advisor to Wyeth Laboratories, implementing the research and the treatment of arthritis. Dr. Marsh has also been a consultant to several international clinics and hospitals. In 1991, Dr. Marsh **was** awarded the prestigious Churchill Fellowship.

Dr. Marsh, can you give us your view on the aging process?

Well, the aging process is a fascinating thing, and a lot of study has been carried out on that in the last couple of decades. I would say that up until about 20-30 years **ago** everyone would have considered aging to be an inevitable process. During the 50's there was a Russian physician named Dr. Dilman who did a lot of research on aging, and who came up with the novel idea that we have an internal body clock that is slowly running down. He suggested that this clock **was** situated in a part of the brain called the hypothalamus, which is related to the pituitary gland, and that through the hormonal system all the systems of the body were set to run down slowly during the course of our lifetime. Other scientists have followed up on this idea

and have researched the mechanisms, and we now know a lot more about the aging process than when Dr. Dilman began his first work and propositions. And it's this subsequent work which has really added to the development of the product that we're going to be discussing.

I think perhaps I had better explain that, working on from what the Russian doctor had discovered, some of these scientists began to investigate the mechanism of the body clock in terms of hormonal control. And what they eventually began to realize **was** that the **Human Growth Hormone [HGH-Ed.]**, Which is released from the pituitary gland in the brain, is the key or the "mastermind", if you like, to all of the cell functions in the body. This hormone which is released, and which is changed in the liver to a thing called **Insulin-like Growth Factor-I [IGF-1--Ed.]**,

masterminds the production of protein, the healing mechanisms and the growth mechanisms of virtually every cell in the body. **That is the key to where aging comes in. With age, it's been found that the release of Human Growth Hormone from the pituitary gland is reduced.** If you actually look at older people you'll find that the percentage release drops from age 21. Now as you know, we all have a growth spurt during adolescence and we reach our adult height. Thus, it's considered that, at the age of 21, you're probably secreting the maximum growth hormone that you should be expected to be secreting.

As you grow older, there is a fall-off in the release of the actual hormone. **It's still produced in the brain, but it's not actually released.** And it's said that there is about a 14% reduction in release of the hormone every 10 years. So, if you reach the age of 60, for example, your Human Growth Hormone production and release may be only 30% of what it **was** when you were an adolescent. And along with that comes the aging process. People who age early have a lower growth hormone level on average. That's what has been discovered.

The whole concept of aging **as** an inevitable event really is not as cut-and-dried as we used to think it **was**. From now on, we really must consider that aging is not actually inevitable. It doesn't actually have to happen. It is now possible to intervene and to reverse some of the effects of aging.

Once your pituitary gland allows the secretion of your own HGH, what might one expect to see as a result of the reversing of this aging process?

This is probably best illustrated in one of several scientific papers that were really quite landmarks in this field. And I'd just like to mention briefly that perhaps one of the most important and prestigious papers that we have for this

evidence was written in 1990 by the late Dr. Daniel Rudman [published in the **New England Journal of Medicine--Ed.**]. Now Dr. Rudman had surmised that the secret of aging, or the problem that we had with **age**, happened to be the level of Human Growth Hormone (which is measured in the body indirectly by measuring Insulin-like Growth Factor-I). And so what he decided to do was to test the hypothesis.

By this time, the drug companies had begun to develop the genetically-engineered Human Growth Hormone, particularly for medical treatment of dwarfs. And Dr. Rudman had the inspired idea of using it on grown adults. So what he did was to take a group of men between the ages of 61 and 81, all of whom were considered to be healthy. They were not particularly obese; they were within about 10-20% of the norm for their age. And he separated them into two groups. One group of these men he **gave** Human Growth Hormone by injection, the other group he used as controls. Then, after 6 months, he observed the difference.

The interesting thing is that when he came to do the measurements again, he found some very significant, startling changes. In the group he treated with growth hormone, he noted that their **lean body mass-that is, the mass of their vital organs, like kidney, heart, spleen, etc., and their muscle mass-had increased by 8.8% on average.** Some of these were quite frail men and they had bulked up. In other words, their muscles were growing stronger and their organs had actually physically strengthened and increased in size. But **at the same time, he noticed that their fat had on the whole reduced by about 14.4%.**

So, in other words, **they were building up muscle and reducing the fat.** The patients involved actually began to notice the slimming of fat from

the waistline. You know how when everyone gets middle-aged they have a problem with getting off those extra pounds that they put on the waist. Well, I've got a secret... the-reason for this is because of the fall-off of Human Growth Hormone. For years, there's been a slimming industry in which people have struggled to reduce those pounds, but now we're finding that it's basically that our body is starting to age and the hormone system is allowing this to happen. Dr. Rudman's work began to show that by administering Human Growth Hormone it could be reversed.

Now, it must be said that, at the end of his study, as a result of measuring things like the blood pressure, the cholesterol, the fat, fitness, the skin elasticity and thickness, etc., he came to the conclusion that his treatment of these men **was** beginning to **reverse their age criteria by 10 to 20 years, and that was remarkable...**

Are you saying the aging process cannot only be slowed down, but can in fact be reversed in some cases?

That's right. For the first time, people have begun to realize that aging is a reversible process. And I think the concept is changing from that of aging being a natural slowing down of the body, to aging actually being **a disease**. Now, I should repeat that -because this takes some believing-I couldn't believe this at first, either. But basically, aging is not so much **a natural process..** it's more of a disease. And if it is that, then the scientist argues, "Well, why shouldn't I be able to treat it?" And, of course, Dr. Rudman's work is beginning to show that this is true.

Can people literally reverse up to twenty years in as little as six months of therapy?

Once again, according to the clinical findings of Dr. Rudman, the

results were startling, to say the least. Working with volunteers **aged** 61-81 at the Medical College of Wisconsin-Milwaukee, Dr. Rudman used synthetically manufactured HGH to replicate what is created naturally in the body's own pituitary gland. The initial observed results: **six months of injections reversed the aging process from 10 to 20 years in the patients who received HGH.** In the controlled group that didn't receive HGH, the normal aging process continued. Since Dr. Rudman's initial findings, thousands of additional studies have supported the fact that **HGH can and does not only retard aging, but also reverses the process as well.**

Another interesting observation regarding Dr. Rudman's study is, despite the fact that those people did not alter their diet, their exercise, or their smoking habits, all of those who were give the Human Growth Hormone gained an average of 8.8% in lean muscle mass while at the same time losing 14% of their body fat. This is a tremendous change in people that have not made those lifestyle changes.

Yes, I understand that for some of those people they didn't actually lose weight. The secret was not in losing weight, it's not a diet treatment. The secret was in the weight distribution; there **was a** change in the balance of fat to lean body mass, or muscle, and that is what you require, because the laying down of fat is not **a good thing** in the way that it happens in middle **age**, etc. And, incidentally, this product is probably going to be **as** effective in maintaining good health in the younger **age** groups for whom the middle-age spread is yet to come. And, I would anticipate that it will be very useful for people like athletes-perhaps in maintaining performance, etc.

Doctor, once again, how long does a person have to take GH before they'll begin to see or feel the results?

Well, the blood testing by the scientists indicated that there's a pretty immediate sort of two to three day response in blood levels, but the person themselves may not experience anything or notice any significant changes for maybe some days, or maybe some weeks. It's a product which is taken on a cyclical basis, that is to say, there's a special way that it is taken to make sure that your own pituitary gland doesn't get lazy. And that is also to insure the effect of the release of the hormone is as natural as possible. Normally, growth hormone is released in spurts at night and particularly in early sleep, what's called the "rapid eye movement" or the REM phase of sleep. So, ideally, it's best to take GH at night but, in any event, it should be taken no sooner than four hours after a meal. So if a person tends to eat later at night, then it may well be of more advantage to take the GH in the morning and then not have anything to eat for two hours. Incidentally, exercise helps to elevate naturally the level of growth hormone.

Would it be your professional opinion that GH is relative/y safe for everyone to take?

Absolutely, absolutely.

What about a person who has diabetes let's say he's on insulin... could GH be a benefit to him?

Yes, it could. In fact, I think a definite benefit. I would, of course, advise anyone with diabetes to take GH under the guidance of their own physician [Once again, it is our policy here at **BioTech** News to encourage you to give this information to your health

care professional and let him or her give you an informed opinion regarding this matter--Ed.] But the thing is, GH works in such a way that it actually improves overall sugar metabolism. Some of the studies have shown that with its use, the blood sugar normalizes---it comes down normal levels. One doctor I have spoken with has noticed an initial rise in blood sugar before it falls, however. But this is quite manageable, providing it is taken under the care of a doctor. This appears to be a safe thing, because the reduction of sugar, as I understand it, is not a rapid effect. So, providing the blood sugar is being closely monitored, and the product is taken under the care of a competent health professional, there should be no problems.

Could GH be of benefit to people who have suffered, say, from a heart attack?

Yes, it could. Once again, they should be under the guidance of their own physician. But, you see, the thing about GH is that it can work by strengthening the power of the heart muscles just as it strengthens all the other muscles in the body. Also, if you do have a patient who is suffering from, say, atherosclerosis--that is, where cholesterol plaque is beginning to block the artery walls--then GH has been shown to lead to a reduction in that damage. After all, hardening of the arteries is one of the side effects of aging and GH works by reversing the effects of aging; thus, it has been known to open the bore [British term, approximately equivalent to our usage of the word, "diameter"-Ed.] of the arteries and improve blood flow.

What about people who have suffered from other diseases, like cancer?

As with any supplementation, it is only prudent that the guidance of a healthcare professional should be sought by anyone suffering with cancer or who is in a known "risk group" for the disease. Some doctors are concerned that GH may act as a growth promoter and drive an existing tumor. However, others have argued, the stimulating effect on the immune system and natural killer cells more than balances any risk, and have observed that cancers tend to occur with low IGF-1 levels. There has been a study which indicated HGH injections improve the survival and quality of life of children undergoing radiotherapy and oblique chemotherapy for brain tumors.

Dr. Edmund Chein, M.D.

[Director, Palm Springs Life Extension Institute-Ed.] and Dr. L. Cass Terry, M.D., Ph.D. [a neuro-endocrinologist from the Department of Neurology at the Medical College of Wisconsin -Ed.] have studied over 800 patients and they have not come up with any problems with regard to people suffering from cancer as a result of taking GH. Incidentally, they are considering a case where they noted a patient with prostate cancer who had a significant improvement once he went on Growth Hormone therapy, and I understand that they intend to write about this for medical science.

GH sounds "too good to be true". Is there anything it doesn't do?

Do you know, I thought the same thing. I thought, when I first started reading about it, "This is too good to be true". But the fact is, that these doctors.. and other studies have shown.. that the measurements are as they've said. And, some of these

patients report an improvement within days, if not within weeks, of starting on GH.

Dr. Marsh, in your professional opinion, how could GH best be summarized?

I would say it is one of the most remarkable things to come along in many years. It is almost too good to be true and it does work in all the areas we have touched on. For example, we know definitely it restores muscle mass. It improves the power and the bulk of the muscles, it reduces fatigue, it encourages energy and improves the sense of well being. At the same time, it tends to reduce the distribution of body fat and sets you back, if you like, in life to when you didn't have that extra few pounds around the waist. With regard to skin, for example, it works to improve the fitness and the strength and the elasticity of the skin and, as a result, you tend to lose the wrinkles. When it comes to the hair, in the case of men, it would appear that it's able to help the hair to regrow. It certainly changes the color of hair. It restores the vitality and the color of hair from the kind of drab graying that occurs with age. When it comes to sexual function, once again there is an improvement. Not only is this a physical improvement due to the action of the product on the blood system, but it is also an emotional and energetic improvement. In other words, it acts also as an aphrodisiac, raising the libido and improving the quality of sex.

When it comes to the heart and blood system, we do know that it improves the strength of the heart. It helps to improve the flow of the blood in the arteries because it appears to reverse the effects of atherosclerosis. In other words, where cholesterol is being laid down as plaque in the artery wall due to the aging process, indirectly GH may well reverse the process, and I

would say that a few years ago many of us as doctors would have thought that would have been impossible. We always accepted that hardening of the arteries was an inevitable thing. Not anymore, not with GH. You also find with age, of course, that many of the organs tend to shrink, like the pancreas, the liver, and the heart, for example, and these will be restored in terms of strength and size. If you have any effects upon the vision then you may well expect to find that your vision is restored in terms of the power.

For those of us who suffer from a poor memory or poor sleep, again, it will be of benefit and, when it comes to blood pressure, we know that there's a normalizing of the blood pressure. And finally, I think perhaps of most interest to me, I know that it works directly on the immune system, and that has to be a good thing because the immune system is the key to many, many diseases. If the immune system works incorrectly in one way, it causes degenerative diseases, like arthritis. If it works incorrectly in the other way and is inadequate in its function then you tend to get overwhelming viral infections and the development of cancers, If you strengthen the immune system, you're going to tackle degenerative disease; you're going to tackle the resistance to infections, and bacteria and viruses and you're also going to be able to tackle the problem of cancer indirectly.

It's marvelous. I've not come across anything like this for years.

Thank you, Dr. Marsh, for this most interesting and exciting information.