

How training can stimulate growth hormones

By Paul Hutinger, ASCA Level IV Coach Paul Hutinger, 2004 IMSHOF Inductee, 2010 FL LMSC Coach of the Year

Paul Hutinger is a veteran Masters swimmer who swims and coaches with the Florida Mavericks. He is a great advocate of swimming for health. Hutinger was a professor of exercise physiology at Western Illinois University for 28 years and he conducted research on swimming and longevity.



Growth hormones provide anabolic (tissue building) effects and decline after age 25, by 25-50% every seven years. That is why some professional athletes spend over \$1000 per GH injection to keep their performance at a high level. Your swim training may have a similar effect. The benefits are keyed into the "lactate threshold," which can be measured by a level of 90% of a trained athlete's max heart rate (HR), which is 220 minus your age. To take your HR, check your pulse for 6 seconds and add a zero.

EXAMPLE: A 60 year old would have a max HR of 160.

- One way to determine the 90% level, is to multiply 160 by 90%, which would equal 144, in my example.
- Another way is to add 10% to your best time for a 50. If your best time is one minute, ten percent more would be 1:06.
- Swim a set of 4 x 50's at the same pace. Take an equal amount of rest after each 50 . Check your heart rate after your 4th 50. Are you close to your target rate? (for the 60 year old this would be 144). Build to a set of 10 x 50's. You need longer rest to do quality swims and maintain the same target heart rate.

This program will generate optimal Growth Hormone (GH) secretions during exercise, which is the physiological result of working at your lactate threshold. You don't have to compete at an elite level to reap the benefits of this type of training. ALL swimmers can benefit, just make adjustments to your age, heart rate and effort.

When you maximize your natural GH, you help keep a balance of other hormones, which will enhance your body and maintain health and fitness. The plentiful GH of youth are associated with strength, good health and vitality. However, given the high costs and mixed results of GH injections, optimizing training choices to enhance GH production may represent the most intelligent way to benefit from this youthful hormone.

I have not had my GH tested, but it parallels the testosterone level which is needed by men and women. This type of training program has been responsible for my high level of testosterone that was first measured in 1983 at the Mayo Clinic (age 59) for my research study. The test was 720 ng/dl on a max scale of 582, which was 138 above the scale. As an 84 year old, I had an 869 ng/dl on a scale of 827, which was again, above the scale.

I do not take any testosterone supplements. I have always trained using the above program for lactate threshold.