



Commit to These Lifestyle Changes, And You'll Be Healthier and Faster Than EVER!

Source: [Coach Al Lyman, CSCS](#)

What two relatively simple lifestyle changes could you make that would simultaneously improve your overall health, and also drastically improve your chances of having your best season ever? Though there could be quite a few that you might think of, the two that I want to address are these: **get at least 7 or 8 or more hours of sleep each and every night, and avoid eating anything after 6-7 p.m. each and every day.** Phrased more practically it might read **avoid eating at least 3 hours before bedtime, as often as you possibly can.** Now, before I continue, I should first explain that since I've used the words "lifestyle changes" in addressing these issues, it means that I believe for many of you, these two are not already a part of your daily lifestyle. If they are, than keep up the great work and don't bother reading any further. For the rest of you, read on and allow me to explain how these two simple (but not necessarily easy to achieve consistently) variables can have such a HUGE impact on the quality of your health AND on your racing success.

According to some interesting research that I read recently, along with a "just released" paper on weight management by two renowned scientists,(1) it appears that the quality of your sleep AND how close you eat to bedtime both have a dramatic effect of the amount and quality of human growth hormone (hGH) that is secreted in your brain. What is human growth hormone? It's a protein comprised of over one-hundred amino acids that is produced in your pituitary gland that among other things, stimulates the liver to produce insulin-like polypeptides called somatomedins(2) and causes the production of something called insulin-like growth factor-1 (IGF-1) (3).

Human growth hormone [hGH] is the most abundant hormone produced by the pituitary gland in the brain. You may have read about it at one time or another, and heard that it peaks during the rapid-growth phase of adolescence, then steadily declines with age. Additionally, hosts of Internet "entrepreneurs" (charlatans?) are espousing the benefits of [hGH] supplementation, which I absolutely do not and AM NOT recommending! However, as triathletes, you're not really concerned with what happens with [hGH] during childhood, or about the potential benefits of some "magic pill." You want to know how it effects you now. Simply put, since [hGH] stimulates the repair of tissue damage, rebuilds and restores critical muscle protein, and is integral in the synthesis of immune system antibodies, the amount of [hGH] you have floating around in your bloodstream will largely decide how effectively you recover, adapt, avoid viral infection, and improve from your daily training. More than that, it seems it also has a dramatic effect on how much body fat you carry on your hips and waist during your training! Excited yet? Keep reading!

NO SNOOZE? YOU LOSE

What happens when we sleep? In short, as much as 90% or more of all [hGH] is released in 5 short pulses during deep stage REM sleep.(4) (It's also released after exercise). Getting adequate sleep is one of those things that many of us routinely give lip service to, but rarely take action on. If you regularly short-change yourself in the sleep department, your secretion of [hGH] will be less than optimal, and the benefits of maximal [hGH] release will be minimal at best. You won't adapt from your hard training efforts in the ways you would like or expect. Let's face facts: triathletes are busy people. It's very hard to get everything done that we need to on a daily basis. Believe me, I can relate to the problem we sometimes face of just not having enough hours in the day! But just like you, I'm not superman. And just like you, if I don't get adequate sleep daily, I may have to resign myself to mediocre performances in my most important races this season. If you occasionally wonder why you don't feel stronger, fresher, faster, leaner, and ready to rock more often, you may want to look at how many hours of sleep you're getting.

WHAT ABOUT LATE NIGHT EATING?

Why is late night eating potentially detrimental to health and performance? In my opinion, this is where things get REALLY interesting. It seems that the amount of [hGH] release from the pituitary gland will be minimal or perhaps even totally neutralized in the presence of elevated insulin, free fatty acids, or high blood sugar, all of which obviously result from eating. According to one of the researchers, Dr. Misner, "allowing the body to settle into a fasting state(5) 3 hours prior to bedtime totally clears gastric-related digestive activity, allowing the maximum 5-pulsatile human growth hormone [hGH] bolus to be released from the pituitary gland. The mechanism of postprandial diurnal pulsatile growth hormone peak is largely dependent upon lowering blood levels of free fatty acids, blood sugar (including insulin) which in general takes 3 hours before levels reach their respective nadir." The "fasting" as he describes it is intended to describe a 3 hours "no-eating" segment prior to another 8-9 hours no-eating period of multiplestage REM sleep. Combined, this makes a 12-hour fasting state that sets the stage for maximal low blood sugar, low insulin, and increased glucagon(6), with each of these triggering an upswing in the quality and quantity of optimal growth hormone release. The bottom line: if you're eating before bedtime, you may be dramatically undermining your training, slowing or even halting the important adaptive mechanisms that depend on optimal levels of [hGH], and that allow you to be healthier, and get stronger and faster.

That's not all, there's more. It seems that [hGH] released at night has a remarkable effect on the mobilization of fats transferred into the energy cycle rather than being stored as fat. In one of the peer reviewed published studies(7) I alluded to earlier, subjects were fed the same controlled 2000-calorie diet for 120 days. One group was fed the bulk of the calories in the early part of the day with restrictions applied to late day eating, while the other group was told to eat their 2000 calories at the end of the day. The early eaters lost an average of 6 pounds while the late day eaters gained an average of 6 pounds per person. This may help to explain why, especially as we age, it becomes more and more difficult to maintain optimal body fat levels. And maintaining the highest lean muscle mass to fat ratio is EXTREMELY important if you are going to race to your potential. Extra body fat is dead weight and slows you down! If you have experimented methodically with every form of diet ever devised (and even if you haven't) and tried all the weight-loss protocols, pills, and potions and still been occasionally frustrated with your body fat level, this may be the key you have been searching for! Now please keep in mind, I am not recommending that you starve yourself! For example, always try to eat well after training to be sure you take advantage of that "window of time" when glycogen synthesis is more efficient; just try to make that window of time 3 hours or more before you go to sleep, and then try to sleep for 8 hours or so. The conclusion I have come to as a result of this information (along with my own experience) is that "diets" **do not** work, but this "lifestyle change" does. As long as you stay within these guidelines your weight will migrate to its lowest optimal level and your performance will skyrocket!

SOME PERSONAL THOUGHTS

Before I finish with some final "words of wisdom," permit me to interject a little of my own personal experience, which I think explains why I was so excited as I was putting this article together. Years before I became interested in multisport, I was a very serious distance runner. (Not fast, just serious!) Anyway, I always knew intuitively through my own experimentation and training that a couple of things regarding my weight and fitness level seemed always to be true. I didn't have any scientific information that explained to me WHY they were true, but I KNEW they were, just the same. The first was that all things being equal, I knew that as long as I was healthy and had trained properly, the leaner I became for my goal races, the FASTER I would go in those races. In fact, I could track my weight and predict the actual seconds I would "save" at race pace based on my relative "leanness." I wasn't obsessed with my weight mind you, I just knew that if I was leaner, I could go faster with less effort. Obviously, this is a matter of pure physics, but never the less it's an important matter when it comes to being our best at the most important times ("A" goal races). The other thing I discovered was that during the periods of time when I decided to be more disciplined about late night "indulging," I almost always woke the next morning feeling fitter, stronger, fresher, and faster! Even when I sometimes went to bed hungry, I always seemed to feel HEALTHIER and BETTER the next morning. Again, I never knew exactly why (from a scientific standpoint) I felt this way, but based on this information, I think I now know. And now you do too! There really does seem to be some truth to the old adage that we should follow nature's natural cycles and eat like a king at breakfast, like a queen at lunch, and like a pauper at dinner.

YOU MUST COMMIT YOURSELF

For these guidelines to work, they must be made part of your daily lifestyle. I can hear many of your negative reactions now, but remember this, there aren't any shortcuts to any place worth going. Oddly enough, what is so interesting to me is that so many athletes will work and train so hard, nearly killing themselves during workouts and making tremendous sacrifices, but they refuse to deepen their character with a commitment to a lifestyle that guarantees the highest lean muscle mass to fat ratio, and the chance at the performance season of their life. Making a change is very difficult indeed, but if you are willing to commit yourself to be your best, you will surprise yourself AND your competition this season as you go faster than ever! Good luck!

Now....if I can only practice what I've preached.....

References

- 1) Occhipinti, Mark J., M.S., Ph.D., N.D. [candidate], & Misner, Dr. Bill, Ph.D., WEIGHT MANAGEMENT, A IMPORTANT COMPONENT OF HEALTH AND FITNESS, A POSITION PAPER OF THE AMERICAN FITNESS PROFESSIONALS AND ASSOCIATES (AFPA), <http://www.afpafitness.com/articles/AFPAPosWtMg.htm>
- 2) Somatomedins stimulate growth of bone and muscle, help boost the immune system, increase lean body mass, and stimulate neuroendocrine system balance, promoting optimal physical and mental performance.
- 3) IGF-1 is also released by many different tissues throughout the body, and affects almost every cell to some degree. The major target tissues affected by IGF-1 are muscle, cartilage, bone, liver, kidney, nerves, skin, and lungs. Among many things, it is particularly important for optimum uptake of nutrients into cells.
- 4) Van De Graff Ph.D., Rhees Ph.D., HUMAN ANATOMY AND PHYSIOLOGY, McGraw Hill Inc., San Francisco, 1987., p.182-184
- 5) The 3 hours prior to sleep are suggested as "fasting", but not in the traditional meaning of fasting. For example, a fasting blood sugar test, other blood lab tests, and most surgeries, require a minimum of 6 hours not eating after your last bite of food.
- 6) Glucagon is a hormone secreted by the pancreas in response to low blood sugar. In effect, it's the opposite hormone to insulin, in that it stimulates the release of glucose from storage.
- 7) Geliebter A, Gluck ME, Tanowitz M, Aronoff NJ, Zammit GK. CHANGES IN EATING, EXERCISE, AND SLEEP MAY CONTRIBUTE TO THE INCREASED WEIGHT GAIN OF LATE-SHIFT WORKERS[Nutrition 2000 Jan;16(1):27-9.]

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