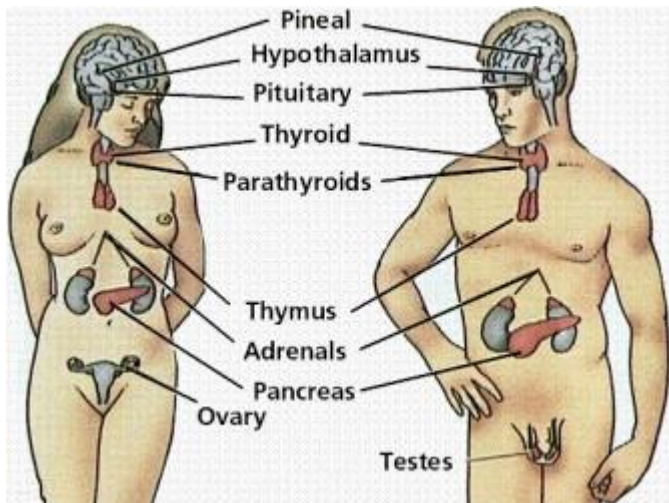


## Growth Factors

By Bryon Verhaeghe



There are many important aspects to a healthy life. Here I am dealing with only the physical aspects of health. Often we hear about age related diseases, and as we age more problems develop. One thing to keep in mind is that any rapid decline of any bodily function is never aging but a disease. Also aging is an active process where the rate is controllable.

One thing most of us are acutely aware of is the hormonal changes as we age. The most obvious is gender related. I would like to talk about hormones in general, and particularly growth hormones. The hormones of the body are known

as the endocrine system. This is where our glands communicate with each other to regulate the body. Some of these glands include the pituitary, thyroid, adrenals, ovaries, and testicles. They regulate mood, energy, body weight, fertility, and the aging process. During puberty there is a peak, it varies individually and declines significantly after our thirties. To me this is the beginning of the aging process.

Many of us will or have noticed a general shrinking with age. Skin and lips get thinner. Our feet are a bit smaller. The body is not quite as tall. It is also noted that our healthy internal parts also shrink. The control of this is known as growth hormone. It is complex and many co-generators and precursors are involved. Also the 'sister' to growth hormone is insulin. Collectively you could call these growth factors.

There are many ways to regulate growth factors. One that is quite safe is through an amino acid known as arginine. The difference between a carbohydrate and an amino acid is the presence of a nitrogen molecule. Amino acids bind together to form proteins. All of our hormones are proteins. If one amino acid is missing, or in short supply, the protein is not made, or is deficient. **Arginine seems to be a limiting item for growth factors.**

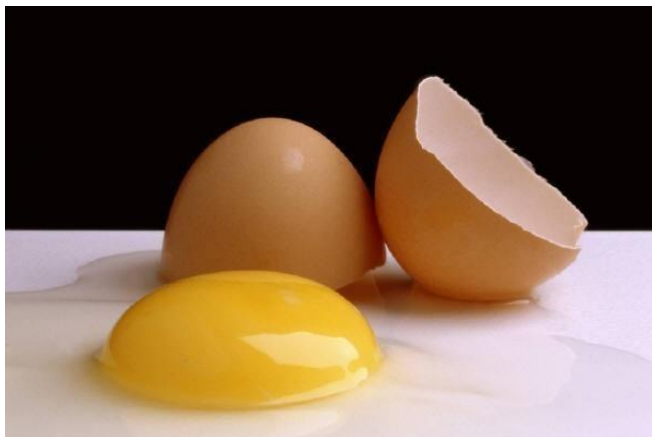
Individual amino acids are only available in Canada through prescription. Certain foods contain high amounts. Certain other amino acids seem to counter the effects of arginine, such as, lysine. Lysine tends to harden the arteries and reduce life span. Arginine helps to make the arteries more elastic and lower blood pressure. **Arginine is used in Hollywood in a cream to plump up lips without collagen injections.**



**Protein**

Whey protein generally has four parts of lysine to one part arginine. Egg protein best matches the amino acid ratios in our body, with a one to one ratio of arginine and lysine. Rice protein has two parts arginine to one part lysine. Almonds are loaded with arginine. The immune system uses arginine to produce a molecule that kills fungus, viruses, bacteria, parasites, and tumors. When you initially take arginine a latent herpes outbreak can result, as the arginine aids in killing the virus.

Arginine also helps to open up arteries and flush out toxins. Some people get temporary headaches from arginine due to an overload of toxins being released from the body. If this happens I suggest greatly increasing water intake. Most North Americans are dehydrated.



When the body releases growth factors is highly variable among individuals. It depends on nutrition, rest, and stress. Generally it is through the night – remember the night time growth pains. A beneficial after dinner snack may include almonds or a rice protein. The commercially available rice proteins have almost all of the carbohydrates removed. You could have a rice protein drink in the evening as part of a fat reducing diet. Also some of benefits include a stronger immune system and a slowing down of aging.