

Human Growth Hormone

Q & A



THE AGS
FOUNDATION
FOR HEALTH
IN AGING

Q: What is human growth hormone?

Like other hormones, human growth hormone (HGH) is a powerful regulator of many functions in your body and works in very complex ways. HGH is produced by your pituitary gland, a small, bean-shaped gland in your brain. It plays a leading role in controlling growth and metabolism – the many essential processes that occur in your body, including processes that allow your body to make use of nutrients. Among other things, HGH stimulates the growth of bone and muscle and helps control the way your body uses protein, fat and carbohydrates.

HGH is also known as somatotrophin.

Q: Does your body still produce HGH after you've stopped growing?

Yes. Once you reach adulthood, your body produces less HGH—this is completely normal—but doesn't stop producing the hormone.

Q: Do some people produce too little HGH?

Some children with disorders affecting their pituitary glands or other parts of their bodies may not produce enough HGH. As a result, they may not develop properly and may be very short. The US Food and Drug Association (FDA) has approved injections of synthetic (or manmade) HGH for children who are very short. These injections help these children reach “normal” or near normal height.

Adults may also develop “adult growth hormone deficiency” but this is uncommon. The disorder can be diagnosed with a blood test. Because the levels of HGH in your blood change over the course of the day—they're usually highest just after you fall into deep sleep—these results need to be interpreted very carefully.

Q: If you're an older adult whose HGH levels are normal for your age, can getting extra HGH keep you “young”?

About 20 years ago, scientists studying aging started looking for an answer to that question. Since HGH stimulates muscle and bone growth when we're children and adolescents, and helps us metabolize nutrients, it seemed possible that boosting older adults' HGH levels might stop or even reverse the declines in muscle mass and bone density and the increases in body fat that usually occur as we age.

In a small study that dates back to 1990, 12 older men who seemed to have slightly lower than normal HGH levels got high doses of HGH for about six months. The men added some muscle and their bones got somewhat stronger and they lost some body fat. But their blood pressure and blood sugar levels increased. And there was no evidence that the changes in their muscle mass and body fat had any effect on their strength, or fitness, or quality of life. Other studies have found similar results.

Bottom line: Scientists have yet to find evidence that giving older adults with normal HGH levels will keep them “young.”

Q: Can HGH supplements cause side effects?

Yes. Some studies suggest that HGH supplements may boost your risk of cancer, especially prostate and breast cancer. Other studies have linked HGH use to breast enlargement in men. Supplemental HGH may also boost your risk of diabetes, raise your blood pressure, and cause abnormal growth of your hands, feet, and face. There's still a lot we don't know about how HGH affects your health so there may be other health risks as well.

HGH treatments can also be hazardous to your financial health. They may cost thousands of dollars a month. And Medicare and private insurance won't cover the cost.

Q: Is it legal to prescribe HGH as a way to keep your body from aging?

It's against the law to prescribe HGH for any use that's not approved by the FDA. The FDA has only approved HGH for treating very short stature in children, adult growth hormone deficiency, and severe muscle loss in people with HIV and AIDS.

Q: Is there anything you can do stay healthy as you age that isn't dangerous?

Yes! An effective and safe way to stay as healthy as possible as you age is to exercise regularly and eat a healthy diet. Among other things, exercising and eating well will boost your muscle mass and bone density, help you control your weight and lower your risks of diabetes and many other health problems that get more common as you get older. You should also see your health care provider regularly for check-ups and preventive health tests, such as cholesterol checks, and follow his or her advice.



Foundation for Health in Aging Established by the American Geriatrics Society

The Empire State Building
350 Fifth Avenue
Suite 801
New York, NY 10118
212-755-6810
www.healthinaging.org

The Foundation for Health in Aging builds a bridge between the research and practice of geriatrics health care professionals and the public. The Foundation advocates on behalf of older adults and their special needs through public education, clinical research, and public policy.

The American Geriatrics Society is dedicated to improving the health and well-being of older adults. With a membership of over 6,000 health care professionals, the AGS has a long history of improving the health care of older adults.