



SOUTH COAST MEDICAL CENTER
FOR NEW MEDICINE

Low Testosterone: Not Just Your Father's Problem

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TESTOSTERONE MAY BE THE HORMONE ASSOCIATED most with strength, but it is no match for the powerful punch of modern life. The affects of our fast-paced lives have already begun to take a toll on our health as a nation. Heart disease, stroke and cancer are the leading killers in the United States, and many point directly at lifestyle as public enemy number one. Now we can add one more downside to living the "good life": low testosterone levels.

A recent study from Finland confirmed what Denmark researchers already suspected: testosterone levels in young men have dropped significantly over the past 50 years. Testosterone levels of the average 30-year old man are 20% lower than 30-year olds from their father's generation.

While testosterone levels decline naturally with age (approximately 1% a year beginning in a man's 30s), these new findings suggest that something else is responsible for this shocking new trend. So why are today's men living with less testosterone than their father's generation and is there anything that they can do about it? The answer is complicated, but the solutions are numerous.

The Chemical Revolution

The worst offender when it comes to testosterone is the almighty chemical. Since World War II, tens of thousands of new chemical compounds have been created to improve our lives; yet, since the beginning of this chemical revolution, we've managed to pollute the entire planet with dangerous toxins, most of which have never been tested for human safety or how they interact with one another. Of the thousands of chemicals released into our environment every year, several groups have been identified as hormone disruptors. These chemicals enter your body through the air that you breathe, the foods that you eat and the water that you drink and invade the endocrine system, mimicking and blocking vital hormonal processes.

The endocrine system is comprised of a number of glands, which produce hormones to be sent all over the body, regulating basic functions such as metabolism and reproduction. These hormones act as chemical messengers, traveling throughout the bloodstream and attaching to cells to deliver their directives. Every cell within the body has a series of receptor sites designed specifically for different kinds of hormones. Only the hormone meant for each receptor is allowed to dock and deliver its message. In the case of testosterone, when the body needs to signal a necessary repair or to trigger the release of immune-boosting red blood cells the pituitary gland signals the testes to release testosterone. The hormone then travels to its intended target, docks on to the cell and passes on the message.

In the past 30 years researchers have begun to identify a series of chemicals that are able to dock onto cell receptor sites throughout the body and present themselves as hormones. In some cases, these chemicals mimic hormones, giving instructions to the cell to carry out a certain task, such as cell replication, while in other cases, the chemical is able to block key hormonal processes. When these chemicals are present in the bloodstream, the body is unable to tell the difference between the synthetic chemical and the real deal. For this reason, hormone levels can increase or decrease based on the activities of these hormone disruptors.

Several chemicals that have been identified as hormone disruptors are found in common products that you probably have in your home right now, such as plastic water bottles, microwavable food packaging, bug spray, cosmetics and detergents. The complete list of known hormone disruptors is so large and overwhelming that the Environmental Working Group (www.EWG.org) took on the task of creating a database for consumers to look up their favorite products' toxic chemical load. While some of these known hormone-disrupting chemicals have been banned, many have not, and the banned

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chemicals remain in our environment to this day. Additionally, since only a small percentage of synthetic chemicals have been studied for their harmful effects, there is no telling how many unidentified hormone disrupting chemicals are in the products that we use everyday.

The Solution: When it comes to harmful chemicals, the solution requires you to take action on several fronts. First, learn more about the known offenders (alkylphenols, PCBs, PAHs, Bisphenol-A, DDT, DDE, Dioxin, and heavy metals) and eliminate them from your homes and offices. A good first step is to get rid of plastic products. Plastics may spell convenience but they have been implicated as some of the worst offenders when it comes to your hormones. Plastics are able to leach into foods or liquids, making it easy for toxic chemicals to enter your body.

Foods are not immune from this chemical invasion either. Produce in your grocery store has been sprayed with pesticides, herbicides and fungicides from the farm to the market, contaminating your food at every turn. A good washing won't necessarily make it safe to eat since the chemicals seep into the food. For this reason, spend the extra money and go organic. The food is generally tastier (and certainly more nutritious) when it comes from an organic farm, too!

Don't assume that your meats and poultry are safe from contamination. Chemicals that exist in the environment find their way into animals through the food chain and also by way of the farmers raising them. Hormones are given to animals to "beef them up" and to accelerate their growth, essentially contaminating the food that you serve to your family. Ensure that your meals are chemical free by purchasing grass fed, hormone free meat and poultry.

It's A Lifestyle Choice

Diet, physical activity and body mass all play important roles in testosterone levels. The typical American diet, high in saturated fats, hydrogenated oils, preservatives and refined sugars, and low in crucial fiber, is highly detrimental to hormone production. These diets tend to be lacking in key vitamins and minerals, such as zinc, copper and selenium, which are necessary to produce testosterone.

When you combine this high-fat, nutrient-depleted diet with an insufficient amount of physical activity you are looking at a recipe for obesity, and one of testosterone's biggest enemies is the fat cell. Fat cells capture testosterone and convert it to estrogen, effectively lowering the total testosterone levels and creating a vicious cycle, as high levels of estrogen can also lower testosterone levels! Consider this: Overweight men typically have 25% less total testosterone than men at their proper weight.

The Solution: Men should eat plenty of good carbohydrates, protein and good fats. Approximately 30% of men's calories should come from foods high in unsaturated fats such as nuts, fish and olive oil. These foods are rich in omega fatty acids and help increase your good cholesterol, a key building block for testosterone!

But don't stop there! Pick up the pace and begin an exercise regime. Lifting weights can build muscle mass, thereby increasing testosterone levels. But that's not all. For every 10% that your BMI drops, you increase testosterone levels by 10%. Never have you had more incentive to hit the gym!

For additional hormonal support, I suggest the herbs tribulus terrestris and royal maca. Tribulus terrestris can increase testosterone levels while boosting sex drive and improving erectile function. Royal maca is rich in nutrients and essential fatty acid and promotes hormonal balance.

There are many more factors that can affect testosterone levels, including stress, prescription medications, illegal drugs, and alcohol consumption. If you are concerned about your testosterone levels, see your physician today. Proper testosterone levels can mean an improved sex drive, more energy, strength and endurance, and a healthier body and mind. Natural hormone replacement therapy is available to boost testosterone levels safely, if lifestyle changes don't make a significant enough impact. There is no reason why you must live with lowered testosterone levels!

Dr. Connealy is the medical director of South Coast Medical Center for New Medicine in Irvine, California. The center strives to look at the whole person and explore the effects and relationships among nutrition, psychological and social factors, environmental effects and personal attunement.