

# What Is Hormone Deficiency?

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Hi, I'm Dr. Thierry Hertoghe. I'm a physician located in Brussels, and I thank Dr. Mercola for giving me the opportunity to talk here. I want to talk to you about what I'm doing. I work with hormones, I work with hormone supplements, I work with nutritional supplements as well as diet, and I treat a lot of people with hormone deficiencies.

What is hormone deficiency? Hormone deficiency is a deficiency in a nutrient that your body is not able to make, which goes to all tissues and directs the action of those tissues. If that makes that, you look better, you feel better. Hormones, actually when people age, what you mostly see is the effect of hormone deficiencies due to aging. The glands, the endocrine glands that make the hormones, they decrease.

For example, if you have a deficiency in sex hormones, your hair is flat, you look pale, your eyes are dry, you have lower energy, and you even become more depressed or with a lower mood. When you provide the hormone supplements, that normally take care of those problems and you feel better with even a better and greater sex life. That's what hormones can do.

Now, did you know: if you want to improve your hormones, the first thing to do is not to take a hormone supplement; it's to improve your food and to even take nutritional supplements that can improve your hormone levels. What is the good food globally to improve most of your hormone levels? The good food is the food that people ate in the Paleolithic time. The Paleolithic time is the period of mankind when agriculture did not yet exist.

The Neolithic is the period when agriculture started to exist. We invented a lot of foods that actually are not fit for our body and that decrease our hormone levels. When you take those new foods – for example, sugars, sweets, or grains that are not sprouted like bread or pasta – you decrease hormone levels. You decrease about seven hormone levels – seven of the 12 most important hormones in your blood.

The first thing to do is to eat correctly. The good food is actually eating vegetables, eating fresh vegetables. Not those in canned foods and things like that with preservatives – the fresh vegetables, if possible organic, without any pesticides.

Eat fruits. But then not any fruits, [but] mostly the low sugar-containing fruits, because too much sugar, especially in fruit juice, decreases hormones. It has been shown, for example, that children who receive fruit juice every morning, they have four times more risk of obesity and they grow two centimeters less, which is almost an inch less per year. In five years, they are five centimeters less. It's about a little more than two inches less in growth just because they took a fruit juice and they didn't eat the whole fruit. You need to eat the whole fruit, so that slowly the sugar gets into your body and there's no peak of sugar that blocks the secretion of hormones.

Also, alcohol has been invented. Alcohol decreases your growth hormone. The most powerful, I would say, age-reversing hormone, growth hormone, is decreased by 75 percent if you drink a glass or two of alcohol every day. Even coffee increases a hormone (insulin) that makes you fat and decreases two hormones that make you slim, thyroid hormone and growth hormone.

You need to really eat the right food. The right food is eating meat, fish, or chicken, but cooked at a low temperature. So many people grill their foods. They cook it in oil or butter. But you know, if you cook even in olive oil, you have an increase of elaidic acid, which is an overcooked fat, a burnt fat, a trans-fatty acid, that impairs your health. It can increase the risk of cardiovascular diseases and even of

cardiovascular mortality in men. We need to eat meat and fish cooked at a low temperature, much below the temperature of boiling water. It takes more time to cook in the oven, for example, or if you cook the food with water. That's quite okay.

You need to eat those fruits and vegetables. And you can eat grains, but only sprouted grains. It's a world of difference. Grains that are not sprouted, they have chemicals that block digestive enzymes and that block even metabolic reactions in your body even though it's sort of a pesticide, a natural pesticide, that's made by the grain to protect itself against predators. We need to sprout the food, so that it's a food that is digestible and good for our hormones. In sprouted grains, you have plant hormones, which you can use also for your health positively.

Basically, the first step when you want to improve your hormone levels is to improve your food. Even if you eat organic food, whole food, good food, you still might have deficiencies because even organic food or organic vegetables are grown always on the same fields, agriculture fields. The ground is exhausted in magnesium, in calcium, for example. You often need to take magnesium supplements. It's easy to know a vegetable that has poor magnesium but should have had a lot of magnesium; it's light green. A vegetable that is dark green has a lot of magnesium. We need to take magnesium supplements.

But did you know? Magnesium supplements improve sex hormones. Testosterone, for example, is more in a form that can be absorbed by the cells or in a more bioavailable form when you take more magnesium. Magnesium also increases the growth hormone levels, the hormone that makes your body firm with a lot of muscles and low in fat. Testosterone does that also. But growth hormone does that in a more major way.

If you have big wrinkles, large wrinkles, you really have atrophy, and you're getting a lot fatter, you're most probably low in growth hormones. The first thing is, of course, to improve your food. The foods that increase growth hormone are meat and fish proteins. Protein helps to have higher or more efficient growth hormone activity. Also taking magnesium supplements may help.

Also, taking amino acids. Proteins are made from amino acids. They're complex amino acids. I mean, you can't take them separately. Some amino acids improve the growth hormone levels. If you take supplements of amino acids, you can improve your levels. For example, seven grams of arginine can help it. That's a lot, but it does help. Glutamine is a very good one. Two grams of glutamine per day can significantly, if you take it before bedtime, improve your growth hormone levels. There's a lot we can do to improve our hormone levels.

Let me talk to you about hormones, what happens with hormone deficiency, and what happens with hormone treatment to motivate you to eat better, take nutritional supplements, and improve your hormone levels. Let's start with a hormone you might not have heard about and that you might even be afraid of but is a major hormone: growth hormone. Growth hormone is that hormone that made you tall. If you wouldn't have growth hormone, you would be two-thirds or half of your size. Thanks to growth hormone, you've been tall.

But once your tall, you still need to keep your growth hormone level or the secretion of this hormone that is sufficient to maintain your tissues' tightness. If you don't, your tissues become thinner, atrophied, or sagging. Sagging cheeks, for example, is a typical physical sign of growth hormone deficiency. Also, droopy eyelids are a typical sign of growth hormone deficiency. If you're growth hormone deficient, you have thinning of the hair, for example. You get also more fat at the abdomen, on the belly. You also get cellulite. Women get cellulite when they get low in growth hormone, for example.

Also, typical for growth hormone deficiency is a feeling of anxiety. When you're really deficient (that happens to all people who get older – they sooner or later get more and more growth hormone deficient,

because the pituitary gland, the gland in our brain that secretes growth hormone, dies off or tears and wears), slowly you get more and more tired. But the tiredness you get from growth hormone deficiency is very great. It's exhaustion. If you really have a severe growth hormone deficiency, never anymore in your life will you be fit again. Even if you sleep 16 hours per night, you won't recover enough because you need growth hormone to recover.

Growth hormone treatment becomes, sooner or later, necessary. It counters aging maybe more than any other hormone. There's one maybe, called insulin-like growth factor 1 (IGF-1), that has almost the same effect or even greater efficacy. Those two hormones are the ones that are known to be able to in some aspects (not so few; it's rather more) reverse aging. They are major hormones.

Now, what happens when you have a deficiency in sex hormones is that actually you have a constant tiredness that is not so severe as in growth hormone deficiency, but is there all the time and increases with physical activity. You also become lower in mood. Also, you become sexually less interested when you're low in sex hormones.

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But it does a lot on your physical aspects: little wrinkles appear on your face when you're deficient in sex hormones. When a woman is deficient in estrogen, one of the two female sex hormones, she loses her hair, especially on the top of her head, and it thins out quite a lot there. There's a lack of volume of the hair, because estrogens are there to give a lot of volume to the hair.

Equally, when there's a lack of progesterone, there's more abdominal obesity in women. Progesterone is the other female hormone. It prevents women to have breast cyst, to have ovarian cyst, and to have fibroids in the uterus. When there's not enough progesterone, which happens when women approach menopause... There are eight years in a hormone imbalance. There are too much estrogens in most of the women and too little progesterone. They develop cyst in the breasts, cysts in the ovaries, or fibroids in the uterus – typical signs of progesterone deficiency.

That can be helped by adding progesterone. But you know, you can also improve the progesterone by the food [you eat]. The more you eat, the more progesterone, and the better a woman ovulates, the more progesterone she makes. Also, eating more protein-rich food like fish meat will improve ovulation, which will improve progesterone secretion. We need to do things adequately and to feed ourselves with the right food of the right nutrients for that.

Progesterone can also be increased by several nutritional supplements. We have talked about magnesium and what it does. But apparently, vitamin A can also improve ovulation. Enough vitamin A is necessary. Fat-soluble vitamins often help the sex hormones to be more secreted.

Let's also talk now about adrenals. Adrenal hormones, those are little glands above the kidneys that make cortisol, dehydroepiandrosterone (DHEA), and aldosterone. Those are the three fundamental hormones for us to resist stress, to have the punch to work, to have the punch to perform, and to be able to cope with stress in a way that you find you're active and not paralyzed.

When people get cortisol deficiency, they become stressed all the time. Even minor stress is too much. They don't have the punch to react, because cortisol gives a lot of energy. Without the cortisol, they are tired, especially in a stressed condition. If they are on the beach in the summer, it's not a problem. But if they have to do some physical activity or to be confronted with stress, they need to have more cortisol. If they don't, they suffer from the stress. People who are always cortisol-deficient are also much more complaining. They also accuse others of being the problem, although it's their own health that is deficient.

When you are lacking DHEA, you have other problems: you have a moderate fatigue, a moderate anxiety, and a moderate low mood. DHEA is necessary to be secreted by the adrenal glands to protect against excess cortisol. We need to have a good balance. With aging, what happens is that cortisol levels decrease a little bit. But DHEA decreases very strongly and very severely. There's an imbalance.

Cortisol creates energy by consuming tissues, and DHEA protects against the consumption of tissues. When DHEA is low, the cortisol will cause premature aging, so we need to always keep our DHEA levels high. Again, the food that helps that is to eat more protein-rich food. It also counters any breakdown effect of cortisol. The more protein you eat, the more you can tolerate cortisol.

Now, also a very unknown hormone is aldosterone. People with low aldosterone, [when] they drink water, they have to go quickly to the toilet, because aldosterone is a hormone that keeps the salt in the body. If you don't have enough, you not only lose the salt in urine but also water, because salt retains water in our body. When you drink water and you have to go quickly to the bathroom, it's probably because you're aldosterone-deficient.

You generally also have a low blood pressure. You feel like fainting any moment, especially in a stressed condition where you should have high levels of aldosterone and you don't have it. It is important to have good aldosterone levels. Again, [not only] protein-rich food but also fat-rich food – egg yolk, lard, and butter – helps to optimize aldosterone levels as it does for cortisol, DHEA, and even sex hormones, too.

Those are important hormones that we see. Other hormones that are not so well-known but they really determine your life a lot, which may be the reason why you want to listen to me also, are hormones like oxytocin. Oxytocin is the hormone I wrote a book on, called *Passion, Sex, and Long Life: The Incredible Oxytocin Adventure*, because I found it so important that people must know more about oxytocin.

Oxytocin is a hormone that colors you (gives you a red flush) and increases your emotion (emotions of warm-heartedness). It's the hormone that makes you sociable, that makes you like to socialize with people, come into action with other people, and like people. If you're low in oxytocin, you find that others are disturbing you. You don't like them so much. You'd rather be left alone. But if you're rich in oxytocin, you really like to come into action and to have contact with them; you really like them.

Oxytocin is also a hormone we need in our life. It has apparently protective effects against endometrial cancer, breast cancer, and ovarian cancer, at least in laboratory culture cells. It has other effects. It seems to protect also the heart against heart attacks. Sooner or later, people will need to take more oxytocin. But did you know you have very good ways to increase your oxytocin levels? If you get a hug, for example, your oxytocin levels will increase. If you sing, your oxytocin levels will increase. There are many things you can do to improve your hormone levels without taking hormone supplements. Do those things first.

Last but not the least, I will talk to you about vasopressin. Vasopressin is that hormone that keeps water in the body, like aldosterone. Aldosterone keeps the water in the body during the day. Vasopressin keeps the water during daytime but even more at night. If you have a lack of vasopressin, you have to go the bathroom several times at night to urinate large volumes. It keeps the water. Look at older people. They have little wrinkles all over, very little folds all over, because they lack water in the skin. That's lack of vasopressin, vasopressin deficiency.

When you take vasopressin – a little tablet sublingually in the morning and in the evening in small quantities (50 to 100 micrograms) – that goes away. It works better than a Botox, the poison that Botox is. You don't need that poison. You can take, I would say, your body's own molecules, and you improve the situation. Vasopressin helps. People sometimes look dehydrated not because they have vasopressin deficiency or they have a slight vasopressin deficiency, but just because they don't drink enough water.

Again, here, I propose you to do something first before any hormone supplement, e.g. to correct your diet. The first thing is to drink enough water, not sparkling water but still water, because still water will already hydrate your body much better that the little folds in your skin will disappear. If it doesn't work enough and you still have a big deficiency, you can always go to the doctor and make him prescribe the hormone supplements you need.

This is my message to you. I really thank you for listening to me. I hope you have learned this message that you can do a lot by yourself. You have to be your own doctor. It's not the doctor who has to be your physician; the doctor has to be your medical advisor. Of course, if ever he has to prescribe you hormone supplements, you have to be there. But there are a lot of things you could do, and also some nutritional supplements you can take on your own and can safely be taken so you don't overdose.

Thank you for your attention.

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