



CONFUSED ABOUT CHOLESTEROL? JOIN THE CROWD!

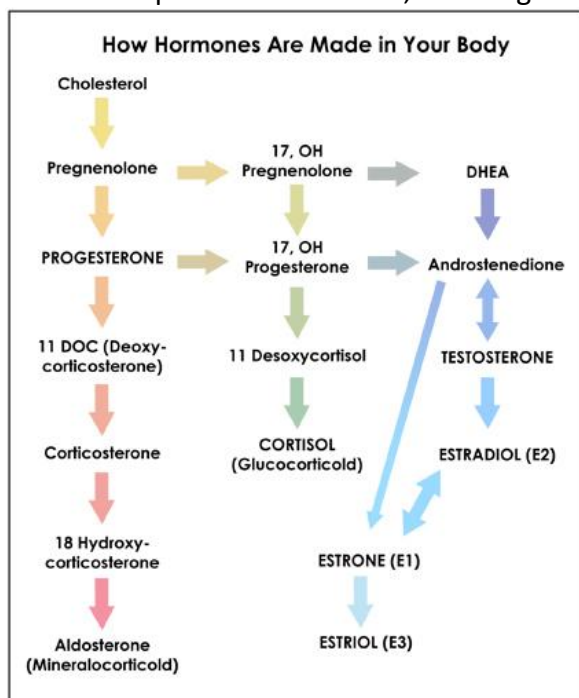
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If there is one **BIG** health topic that might be considered the most confusing of our time, it is the role of cholesterol in disease processes; specifically cardiovascular disease. For years now, we've been thoroughly convinced by the mainstream medical media and popular health press that high levels of cholesterol are responsible for the buildup of plaque in the arteries of those with atherosclerosis, or "hardening of the arteries," causing vessel occlusion and potentially resulting in heart attack or stroke. Just watch a few of the thousands of statin drug advertisements you'll be subjected to in a year of moderate television viewing, and you'll be convinced that cholesterol is a very, very bad "thing" – whatever it actually is – and that having the lowest possible level of cholesterol in your body is a very, very good thing when it comes to maintaining and preserving health.

In spite of all of the press, what many of us don't know is what cholesterol actually is, where it comes from, what its functions are, and why cholesterol levels are higher in some of us than in others. I'd like to do my best to shed a little light in the space of a few informative paragraphs!

WHAT IS CHOLESTEROL, ANYWAY?

First, when it comes to being alive, cholesterol is "the lord and giver of life." Cholesterol is a steroid hormone, and in our bodies most of it is manufactured in the liver. We call cholesterol the most "upstream" hormone, meaning that from it all other steroid hormones are derived.



NOW STICK WITH ME – THIS WILL NOT BE BORING!

Far from being isolated, disintegrated systems, all of our organs interact and depend on one another, some more closely than others. This is especially so when we are talking about the **pancreas** (blood sugar/insulin control), the **adrenal glands** (stress management), and the **thyroid gland** (metabolism). These three organs are crucially interrelated. The adrenal glands play a significant role in regulating blood sugar, for example, and they also help facilitate the conversion of thyroid hormone T4 to T3, the biologically active form we need in order to truly be clinically euthyroid (normal). It is important to realize that when T4 levels are adequate, standard thyroid testing (TSH – thyroid stimulating hormone) will return a normal result, but if the conversion from T4 to T3 is not adequate, clinical results will not be enjoyed. Sure, your TSH number will look fine, but you will still experience symptoms of hypothyroidism, such as difficulty losing weight, dry skin, thinning hair, fatigue, cold hands/feet, constipation, etc. These few things taken into consideration, it is apparent that when the adrenal glands are not functioning optimally, several areas of health can be affected.

THE ADRENAL GLANDS/CHOLESTEROL CONNECTION

The adrenal glands sit one each on top of the kidneys and manufacture the fight-or-flight hormones epinephrine and norepinephrine, known as “adrenalin.” They also produce the prohormones pregnenolone and DHEA (dehydroepiandrosterone) and from there the hormones testosterone, progesterone, the estrogens, cortisol, and the mineralocorticoid aldosterone, which influences blood pressure. Except for the production of estrogen from the ovaries, progesterone from the ovaries, and testosterone from the testes (all which “begin” as cholesterol), the adrenal glands are responsible for the production of our steroid hormones, including all of the “sex” hormones. They need raw material, however, to spin these hormones, and that raw material is none other than the much misunderstood and maligned:

CHOLESTEROL.

THE THYROID GLAND/CHOLESTEROL /GALLBLADDER CONNECTION

Results of numerous studies have revealed a connection between hypothyroidism and high cholesterol. The thyroid gland is responsible for the efficient metabolism of cholesterol, and when they thyroid gland is working suboptimally, cholesterol is less efficiently recycled to the liver from the blood, and blood levels will rise. When cholesterol is returned properly to the liver from the blood, some of it is used in the production of bile from the gallbladder, facilitating digestion. So, you can see here that a low-functioning thyroid can influence not only your cholesterol level but your digestive health. It is not uncommon to find gallbladder and thyroid problems in the same person. Thyroid hormone is so influential when it comes to cholesterol that the cholesterol blood level test has been called the “old man’s thyroid test.”

BUT DOESN'T HIGH CHOLESTEROL CAUSE HEART ATTACKS?

First, it is important to understand that in spite of all of the hype, scientific studies demonstrate that cholesterol levels are not related to heart attack in women at all and only in 5% of men who suffer heart attack – men in their 30s-40s; men with a total cholesterol level higher than

350 ng/ml.(1) Arterial plaque contains only a small amount of cholesterol and is composed primarily of calcium. Plaque forms in the arteries in response to inflammatory damage in an effort to form a “scab” to a damaged area and prevent death.

WHAT CAUSES ARTERIAL INFLAMMATION?

Some of the major causes of oxidative stress and inflammation include:

DIET

Bad fats combined with sugar and grains. Sources of these fats are vegetable oils/polyunsaturated fats, trans fats, sugar, and grains. Wait a minute! Grains? Yes! Because grains are so high in carbohydrate (translated to your body “sugar”), the high levels of insulin needed to handle grain channels all of the omega-6 fatty acids in the grain straight into a very potent, pro-inflammatory pathway that feeds the process of atherosclerosis. Conversely – and this is fascinating - when ANIMAL FAT is eaten and insulin not secreted, the omega-6 fatty acids are channeled instead into a health-protective, anti-inflammatory pathway. Hmm... What d’ya say we take a good long second look at that new FDA-approved food pyramid that places grain as the foundation of a healthy diet!

WEAR N’ TEAR

Another cause of arterial inflammation is the continuous work the arteries must do in the pumping process. The arteries are not mere channels through which blood flows but are constantly active. One source has used the analogy of a hose being stepped on 70 times a minute hour after hour, year after year, etc., and as we get older our collagen levels decrease. Collagen is crucial to the health of the arteries. Nobel Prize winner Linus Pauling stated that to remove plaque without healing the artery first is like removing a scab from a wound. One of the ways we can help protect our arteries from inflammatory damage is to take measures to increase collagen production.

INFECTIOUS ORGANISMS

Still another precursor to atherosclerosis is infectious organisms. Cholesterol is a potent immune system support – specifically LDL, the so-called “bad” cholesterol! It has been demonstrated that men with low cholesterol levels have significantly fewer circulating lymphocytes, T-cells, helper T-cells, and CD8+ than those with high cholesterol. Endotoxin, the primary pathogenic factor of Gram-negative bacteria binds readily to lipoproteins, preventing them from damaging the arterial surfaces.(2)

GETTING TO THE “ROOT” OF THE PROBLEM WINS AGAIN

Remember that stress hormones are “spun” in the adrenal glands from cholesterol. A man in his 30s and 40s is typically under a significant stress-load, as these are the years when he “proves” himself through success in his career and family life. When a man under a great deal of stress has a heart attack and happens to have high cholesterol, it might not be quite as simple as attributing the heart attack to the high cholesterol level. The heart attack could be due to stress alone; the high cholesterol indicating the body’s attempt to manufacture its defense – cortisol – from the adrenal glands. Or... the heart attack might have been due to an occult infection, with the high cholesterol indicating efforts to enhance immune response.

Modern medicine approaches the presumed problem of high cholesterol working at the “branch” level rather than the “root” level. Too much cholesterol? Simply take a statin drug and artificially lower it. Sure, you may still have adrenal dysfunction and/or thyroid problems, you may still have chronic inflammation in the arteries causing damage to the epithelium and inviting the formation of plaque, but you will enjoy the bliss that comes with ignorance, assuming that your lower cholesterol level means you are in better health.

The truth? You are not healthier because your cholesterol levels have been artificially lowered. In fact, you may have unwittingly opened a whole new can of worms when it comes to health problems. Your statin drug will not only turn off cholesterol production in the liver but of carnitine and Co-Enzyme Q10, necessary for producing the energy all of your muscles need to thrive, including your heart! Vitamin D3 production will be curtailed, further weakening immune response. Your too-low cholesterol levels will also impact your sex hormone production, as the supply of raw material needed to make them dries up. Soon, as my pharmacist father E. George Roentsch quips, not only will you be paying for Lipitor but for Viagra or Cialis! “Ka-CHING!”

WHAT DO I DO?

Next time I’ll continue with some potent strategies for preventing – and even reversing – cardiovascular disease. I’ll talk about ways to strengthen the thyroid and adrenal glands. Hey! Ever wonder why some women pass through menopause with hardly a symptom, while others suffer significantly with hot flashes, memory problems, low libido, vaginal dryness, and even develop allergies they never had before, etc.? Look to the adrenal glands. Remember, once the ovaries stop producing estrogen and progesterone, all of your sex hormones are made right there, and... they all trickle down from - **CHOLESTEROL!**

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1. Ravnskov, Uffe MD, PhD. [“The Benefits of High Cholesterol”](#) – Excerpt from [Fat and Cholesterol are Good for You](#). (2009) GB Publishing, Sweden.
 2. [Ravnskov U. High cholesterol may protect against infections and atherosclerosis. Quarterly Journal of Medicine 96, 927-934, 2003.](#)
 3. [Krumholz HM and others. Lack of association between cholesterol and coronary heart disease mortality and morbidity and all-cause mortality in persons older than 70 years. Journal of the American Medical Association 272, 1335-1340, 1990.](#)

For a full list of references, scroll to the bibliography pages of [“The Benefits of High Cholesterol.”](#)