

Hormone Havoc: Bio-Identical, Synthetic or None



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Back in medical school over 25 years ago, I was taught that synthetic hormones were safe and useful. Even then, I intuitively didn't trust the arrogant concept that synthetics such as the birth control pill were OK. (Similar to the modern arrogance of altering genes.) I had been awed by the power and subtlety of our hormonal systems. Even today, we honestly know so little about the power of hormones, that it continues to be concern me when we mess with them, even when they're bioidentical (see below).

What Are Hormones

Hormones are chemical messengers. As we evolved from single-cell to multi-cellular organisms, there became a need for these cells to communicate with each other. Like an inter-office memo, one cell sends out a chemical messenger, which is then received by a second cell. That message tells the receiver to, for example, speed up or slow down (thyroid hormone), to take in more sugar or not (insulin), or to turn on or off certain genes.

As organisms evolved to greater complexity, like a high-rise office complex, this system of inter-office memos became too slow; and so a second signalling system developed--the equivalence of an intercom or phone system--the nervous system. Plants use hormones; animals use both hormones and a nervous system. With the nervous system, information is sent to specific places at great speed. Most of our hormones work slower and more generally than the nervous system, effecting every cell of our body by traveling through the blood stream. Each cell has a receptor on its surface that receives the hormone, like a key in a lock. These receptors can increase or decrease in quantity, or be turned on or off by numerous factors (see below).

Hormonal Systems Under Attack

I recently saw data about the most frequently prescribed medications in America. Number two and 15 are thyroid hormones. Although we hear about diabetes, obesity, and cholesterol, there is a hidden epidemic of thyroid disease in the country. Conventional lab tests often miss early thyroid dysfunction. Since low thyroid function can cause weight gain, increased cholesterol, impaired metabolism, and poor immune function, how many people with these problems have early (called "sub-clinical") thyroid disease as the root cause?

All of our hormonal systems are under attack. We know that mens' testosterone levels are declining with each new generation. Diabetes is an epidemic. Vitamin D, long considered a vitamin is actually a hormone of

which many of us are deficient, increasing the risk (or perhaps a cause) of osteoporosis, cancer, autoimmune disease, and depression. The reasons for this attack are multi-factorial: toxins in our food, water, air and TV (the stress of materialism), poor sleep, lack of proper exercise (even too much aerobics can be a stressor), poor quality foods, confusion about the data, etc.

Bio-Identical Hormones

"Bio-identical" hormones are identical to those made by our bodies. In contrast, Premarin, one of the hormones most-used by menopausal women until recently, is synthetic. It was named after it's source: "Pregnant Mare Urine". These horse molecules were further processed by a drug company and marketed heavily to physicians and women, with huge profit.

The reason so many people have not heard about bio-identical hormones is that they are not heavily marketed as are synthetic forms. This is because drug companies cannot own them--the patent is held by God.

Therefore, there is no money to be made on their manufacture or advertising. (Some novel, patent-able delivery systems have enticed some companies to develop some bio-identical hormone products). Medical research on bio-identical hormones is scant (I have done lots of literature searches) because, again, there is no money to be made on the research. Drug companies try to link the concerns about synthetic hormones to bio-identical hormones, keeping the public confused and preventing the spread of enthusiasm for a relatively cheap, effective alternative to synthetic hormones. However, the negative effects of these synthetics don't extend to the bio-identical forms. Many decades of experience by holistic practitioners suggest that these natural hormones are vastly safer than the synthetic versions.

Are There Down-Sides to Bio-Identical Hormones?

The honest answer is, "there is no free lunch". Our hormonal systems are extremely complex and interactive. Each hormone has several forms. For example, thyroid hormone has at least three or four forms, each with a different role. The body adjusts the ratio of these different forms depending upon multiple factors. Many hormones also have "binding proteins", which essentially grab and store the hormones, temporarily rendering them inactive. The amount of binding hormone, and it's affinity for it's hormone, depends, again, on numerous factors. When we measure hormones, we have to know how much is free and how much is bound. Most hormones vary with the time of day, so tests need to be done at specific times. When treating with bio-identical hormones, each has an

optimal formulation for absorption--such as by mouth, skin, injection, or other means. Finally since most hormones affect each other, prescribing the proper amounts of one or several is extremely challenging and often needs frequent monitoring and adjustment.

This complexity was pointed out to me by a male friend who had started taking bio-identical testosterone replacement after discovering that his levels were low. While he felt great on this treatment, his testicles began to shrink! And when his implantable pellets began to run out at the end of the month, he would begin to feel horrible--and would have to rush to the doctor to have new pellets implanted. In essence, he had become a "testosterone addict".

Even conventional medicine knows that when we give the body hormones, such as cortisone, the producing glands take a vacation. Externally provided hormones can't be stopped abruptly, but must be gradually withdrawn to enable the related glands to ramp up their factory.

Hormones during Menopause and Andropause

As a women approaches menopause, the ovaries stop making female hormones, and the adrenal glands need to take over most of this function. Men experience "andropause", an analogous decline in testosterone levels with increased adrenal demand.

Some people sail through this transition, while others experience numerous difficulties. This variability is dependent in part upon how the adrenal glands are working (as well as other health factors). If the adrenals cannot respond to the demand for increased production, a host of common symptoms ensue, including fatigue, poor healing, depression, low or high blood pressure and increased glucose and cholesterol.

So What Are We To Do?

My conclusion is that when it comes to hormones, the mantra should be "less is more". In addition, I return to "paleo-logic", in which I assume that our bodies expect to do what they did 20,000 years ago. Back then, all that we needed was provided by our lifestyle. All our nutrients are provided by the environment. There were fewer toxins. Periods of stress were followed by periods of rest. We had seasons of light and warmth followed by seasons of dark and cold.

I also assume that the body has a wisdom greater than mine; so my job as a holistic physician is to remove the obstacles to the body's self-regulation, and let it come back to its own balance.

Therefore, by eliminating toxins (food, water, air, TV), getting good nutrition (organic foods and proper balance of supplements), good sleep, good exercise (such as yoga and walking), good stress reduction by achieving balance in work, community and spirit, people feel better without having to add hormones.

Acupuncture, homeopathy, and other energy treatments can also be helpful.

However, if, after six months of gentle support, there is insufficient improvement in symptoms (and lab tests), we have the option of special tests, special herbs and supplements, and if necessary, small amounts of hormones and other compounds that supports the glands in their return to balance. Treating with hormones is complex, since most hormones affect each other, in a web-like fashion.

IMPORTANT NOTE: This general information should not be used to make decisions about medical care without the involvement of an experienced practitioner.

For More Information

- O See Dr. Cheikin's related articles on: Listening to Your Pain, Journaling and others
- O Dr. Cheikin's website, www.cheikin.com, has helpful articles on related topics
- O Dr. Cheikin offers workshops on topics such as Chronic Pain, Journaling, Nutrition, Weight Management, and classes in yoga, meditation and other wellness methods. Please call to be placed on his contact list or if you wish to host a Workshop.
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- O Campbell, TC & Campbell TM: [The China Study: The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss and Long-Term Health](#). Benbella Books, 2005. ISBN: 1932-100-385.
- O Pizzorno, Joseph: [Total Wellness: Improve Your Health by Understanding...](#) Prima, 1997, ISBN 0761-510-94X.
- O Sivananda Center: [The Sivananda Companion to Yoga](#). New York: Simon & Schuster, 1983. ISBN: 0684-87000-2.
- O Hanley, JL et al: [Tired of Being Tired](#). New York: Putnam, 2001. ISBN 0399-147-497.

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