

Georgia Hormones, P.C.

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INTRODUCTION TO BASIC HORMONAL PHYSIOLOGY

An Holistic Approach:

It would be nice if life were simple. It would be good if the best pathway in hormone management were well worked out; everyone responded the same and the best treatments were clear. The American College of Obstetrics and Gynecology and the North American Menopause Society rate the quality of published research. The studies they like best are double blind, placebo controlled studies of large groups of women. Unfortunately, these studies lump together many women with very different problems, different physiology, different needs and very different reactions to whatever medication regimen was chosen. Small but statistically significant differences may only be confined to certain segments of the whole population studied. The WHI is a good example of the problem. **We need to look more closely at individuals.**

The human body is complex. There is vertical integration. The upper brain, hypothalamus, pituitary and ovary are integrated together. With the ovary, there is interplay of theca, granulosa and germ cells. There is also horizontal integration. Thought patterns, nutrition, physical and emotional stress acting directly on the brain and through the adrenal gland affect hypothalamic and pituitary control of ovarian output. Estrogen, progesterone and testosterone levels affect carbohydrate craving, eating patterns, fat distribution and metabolism and conversion of thyroid hormone T4 into the more active T3. Cortisol output affects thyroid output and effectiveness. Insulin levels stimulate IGF-I receptors all over the body and stimulate estrogen effects and create estrogen effects of its own. There are multiple activins, inhibins, growth factors, stimulating factors, necrosis factors all running around the body. Diet and exercise patterns are all involved in hormone production and metabolism.

Learning the major interactions of the various hormones and how they affect our patients takes a little time but the common problems tend to be common. Once the patterns are learned, patients tend to fall into various groups and types. Sorting out their individual issues becomes easier. For your patient's health and happiness, it is well worth the study. You have to look at the whole patient but, if you will listen to your patient's story, she will tell you what needs to be done.

Under construction:

I have decided to build the clinical aspects of the Professional Resources first. I will be adding the segments on physiology as I have the time. My own practice is driven by knowledge of the physiology. If you want more extensive reading than I offer here, I can recommend some important resources.

Where to start:

What Your Doctor May Not Tell You About Menopause, John R. Lee, MD Warner Books

What Your Doctor May Not Tell You About Premenopause, John R Lee, MD Warner Books

These are the original bioidentical hormone texts. The physiology is sound, the writing is clear and there is a vast amount of good information. I disagree with Dr. Lee about two points. Progesterone does not have to be given as a topical cream, other routes work just fine. Also, I find that there are certain weaknesses to salivary hormone levels. These books are a good place to start. I have tried many of the therapies described by Dr. Lee and followed the patient reactions and lab work. The results have been most gratifying and my patients tell all their friends.

Clinical Gynecologic Endocrinology and Infertility, Seventh Edition by Leon Speroff and Marc A Fritz., Lippincott, Williams & Wilkins

This is an incredible book. **It must be the new 7th edition.** I purchased the sixth edition, used, because I desired understand the relationship between Metformin use and PCOS. The sixth edition was printed in 1996 and the new research had not yet been done. I went on line to see if there were a newer addition, and there was. When I received my copy of the seventh edition, copyright 2005, I went straight to the chapter on PCOS. It begins on page 465. They were talking about Inhibin B and Inhibin A, IGF-1 and IGF-2, receptors, binding hormones and much more. I had no idea whatever what they were talking about. I kept going to the index and then to the referred pages in the early, basic physiology chapters. **It soon became clear that I was going to have to start with page one.** It is very dense material. It took me nearly four months before I arrived back at page 465 for the second time, but I was a changed man. Virtually all the things Dr. John Lee had said about progesterone and hormone balance were confirmed by Speroff and Fritz. Unfortunately, Spiroff and Fritz still use mostly synthetic hormones in their recommended patient therapies.

I have great respect for Leon Spiroff. When everyone else was losing their heads after the WHI findings were released, Dr. Spiroff quietly proceeded with deliberate and reasoned analysis of the data. He is the calm at the center of the current menopause storm. His knowledge is vast and deep. I just wish I could get him on the bioidentical hormone bandwagon. His text is a guidebook to the physiologic use of real hormones.