

# Brief Guide to Menopause Hormone Balance



by

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# *Brief Guide to Menopause Hormone Balance*

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## **Balancing the Master Hormone**

Since this is a *brief* guide, it offers pointers on the main issues regarding menopause and on natural approaches to solving them. A lot of research has gone into the subject material of this guide and many, many books have already been written about menopause. The best research material on natural approaches to menopause is available in three primary sources, all of which summarize the science behind natural treatment strategies for achieving hormone balance. The first is the landmark book by the late Dr. John R. Lee, with Virginia Hopkins, “What Your Doctor May Not Tell You About Menopause: The Breakthrough Book on Natural Hormone Balance,” revised edition (2004). The second is the expanded 4<sup>th</sup> edition (2003) of, “Disease Prevention and Treatment,” from the Life Extension Foundation. This book contains several chapters that bear on the issues of hormone balance. The third is, “Grow Young with HGH,” by Dr. Ronald Klatz, with Carol Kahn (1997). It shows how the master of master hormones, HGH (human growth hormone), influences a total hormone profile.

These are the best sources for your own reading when you want to learn as much as you can about menopause. Most of the information in these books is relatively current, and most of the details about natural hormone balance in them are correct as far as I can tell (with some exceptions). Newer primary research is appearing every day in medical journals, which you can search in [PubMed](#), the medical research database that is maintained by the U.S. National Institutes of Health. Journals that are summarized on this database are mostly by scientists and for scientists, although you can occasionally glean non-technical information from editorials and news summaries in the medical journals that PubMed reviews.

## **For Starters: A Little Clarity**

Some of the terminology regarding menopause is often misused or ill-defined. The simplest definition of menopause is the complete cessation of menstrual periods. The diagnosis of menopause is less certain, so the medical community has agreed to calling it ‘official’ menopause after 12 consecutive months without menstruation.

By that definition, there is no such thing as postmenopause, although this term is widely used. There is no development that comes after menopause. A woman either has menstrual cycles or she doesn’t.

The overlap between premenopause and perimenopause leads to confusion about what these terms really mean and how to distinguish them. These kinds of terms represent the medicalization of menopause. For practical purposes, this guide uses the term

'transition' to indicate any time period during which symptoms could be due to upcoming menopause. This term is easy to use, has a clear meaning, and is no more ambiguous than the medical terms above.

## **What is *Normal* Transition? - Cultural Evidence**

The incidence of transition symptoms – the so-called symptoms of menopause – is highest in certain western industrialized countries, including the U.S. Other industrialized countries, such as Japan, are characterized by a much lower rate of transition symptoms. Scientists have accepted the role of dietary soy, which contains isoflavone phytoestrogens, as the main source of preventing transition symptoms.

In some isolated cultures, where a long and healthy life past 90 and even into the 100s is normal, the unpleasant symptoms of women's transition to menopause are unknown. The people of four of these cultures are the subject of an excellent book, "Healthy at 100," by John Robbins (2006).

The main point that Robbins makes about these cultures is that their lifestyles are the foundation of their health and longevity. The primary distinguishing features of such healthy lifestyles include a diet of fresh foods that are mostly plant-based, a high level of daily physical activity, relatively little mental stress, and a strong interconnectedness among family and friends.

These observations indicate that the symptoms of transition are due to lifestyle choices. Strategies for reducing or eliminating these symptoms, therefore, entail making different lifestyle choices. You can look at it as undoing the causes of unpleasant transition symptoms, toward recovering the good health that you are supposed to have. It does not, by the way, mean taking drugs or unnatural hormones that hide symptoms or make your hormone imbalance worse.

## **The Main Issues in a Nutshell**

Transition symptoms are mostly driven by a handful of underlying physiological changes that are related to one another. First and foremost is the development of estrogen dominance internally as a result of progesterone deficiency and externally as a result of environmental toxins. Second in line is a deficiency in dietary iodine, which leads to poor thyroid function and the formation of fibroids. Third is weight gain, which has its own influence on hormone balance. Finally, the rate of aging, which is controllable to a great extent, has a big impact on how well you respond to changing hormone levels.

Further explanation of how these factors lead to transition symptoms is important for your basic understanding of their origin and what to do about them, although such explanations are spread out in several books such as those above. For the purposes of this report, the critical information for you to know is how to benefit from the five primary strategies for achieving hormone balance during and after transition to menopause.

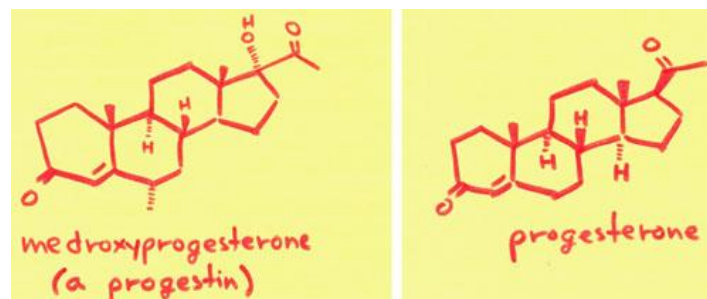
These strategies are:

1. Counteract estrogen dominance with progesterone supplementation.
2. Reduce exposure to toxins that cause estrogen dominance.
3. Raise dietary iodine intake to a sufficient level.
4. Adopt a fat-burning lifestyle that includes appropriate eating, exercise, nutritional supplementation, and stress management.
5. Increase levels of circulating HGH.

## Epidemic of Progesterone Deficiency

The politics of menopause have been well-established by now. Estrogen Replacement Therapy (ERT) started out in the 1960s as a treatment in search of a disorder. Once the miracle of ERT was exposed as a fraud, it was replaced with Hormone Replacement Therapy (HRT). Once again, wild health claims about HRT turned out to be mistaken at best and dangerous at worst. Details about these fiascos are widely available. What most reports fail to emphasize, however, is the underlying role of money. The treatments for transition symptoms never had women's health as the top priority. It was and still is all about the money that drug companies can make.

This is how it shapes up in a nutshell. Synthetic hormones can be patented and owned exclusively by one company for the life of the patent. The differences between a synthetic hormone and a natural one do not have to be huge, as long as the synthetic one is new to science. One example is the comparison of a progestin, which is one of the synthetic progesterones, with the real thing.



This comparison just shows you how clever chemists can be. Medroxyprogesterone, the synthetic, is very similar to natural progesterone. The key is that they are NOT the same in every way. Progestins are the pharmaceutical industry's answer to estrogen dominance. Progestins do, indeed, have the ability to oppose estrogen and create a hormone balance. They were created to be a component of HRT, to counteract estrogen dominance that resulted from ERT. However, synthetic hormones can never simulate natural hormones completely. Indeed, the many side effects of FDA-approved progestins are a big reason why HRT has such a questionable reputation.

The critical lesson from the invention of progestins is that unopposed estrogen must be balanced with an opposing hormone. The natural balancing hormone is progesterone.

Progesterone levels drop throughout life, until they reach a deficiency level during transition to menopause. Dr. John Lee coined the term 'estrogen dominance' to describe the hormone imbalance that occurs when progesterone levels are too low. The symptoms of progesterone deficiency (estrogen dominance) include night sweats, hot flashes, depression, weight gain, and water retention. These are the symptoms of transition that characterize the approach of menopause. Furthermore, the near absence of progesterone during menopause leads to a host of miseries and degenerative diseases.

## **How Best to Raise Progesterone Levels**

Steroid hormones such as progesterone have the advantage that they are fat-soluble. This means that they can be effective topically, as in creams. Oral supplementation, on the other hand, is considered by Dr. John Lee to be less reliable because oral dosages do not pass through the digestive system in a consistent manner.

Most supplement companies have caught onto the importance of delivering progesterone in a cream. In addition, the better products also deliver a measured amount through a pump, so the dosage can be exact. The daily dose is normally 20-25 mg. Products such as [Progesta-Pro Plus by DeVita Professional Skin](#) care represent the best of such products.

One HUGE caution about progesterone creams is that you must scrutinize the ingredient labels to make sure that products do not contain foreign estrogens ("xenoestrogens"). This topic will be explained in more detail below. For now, I will just mention that one class of xenoestrogens that is a common ingredient of creams and cosmetics of all kinds is the parabens. Xenoestrogens will undermine the desired effects of progesterone supplementation. It was therefore pretty shocking to me when I

encountered a progesterone cream product that also contained parabens. This product shall remain nameless here, so I will leave it up to you to screen products for parabens.

## **Yams are *NOT* a Source of Progesterone**

The supplement industry, bless its heart, has invented the term, “bioidentical hormone.” This term is supposed to refer to natural hormones, although what is meant by natural is unclear. Progesterone in supplements, for example, is what chemists call a semi-synthetic compound. This means that a pre-progesterone natural product has been isolated from its natural source and then chemically altered into progesterone in a laboratory.

One of the common pre-progesterone molecules is diosgenin, which is made by yams. Diosgenin was the original source of semi-synthetic progesterone. Otherwise, progesterone is exclusively an animal hormone, made by animals for animals. As a supplement, neither diosgenin nor any other component of yam extracts can be converted to progesterone in the human body. Claims that yams contain progesterone or that they can be a source of ingredients that our bodies can make into progesterone are incorrect. It is unfortunate that many supplement manufacturers, nutritionists, doctors (including naturopathic medical doctors), and all kinds of other health care professionals have accepted this misinformation as the gospel truth and continue to spread it around in error.

Although this mistake does not fool most scientists, a research group at the Baker Medical Research Institute in Melbourne, Australia, did explore whether yams might have any benefit for women at all. They published their results in 2001, in a scientific journal called *Climacteric* (Vol. 4, no. 2, pp. 144-150), under the title, “Effects of wild yam extract on menopausal symptoms, lipids and sex hormones in healthy menopausal women.” Although no single study can be the definitive answer, this particular one found the following:

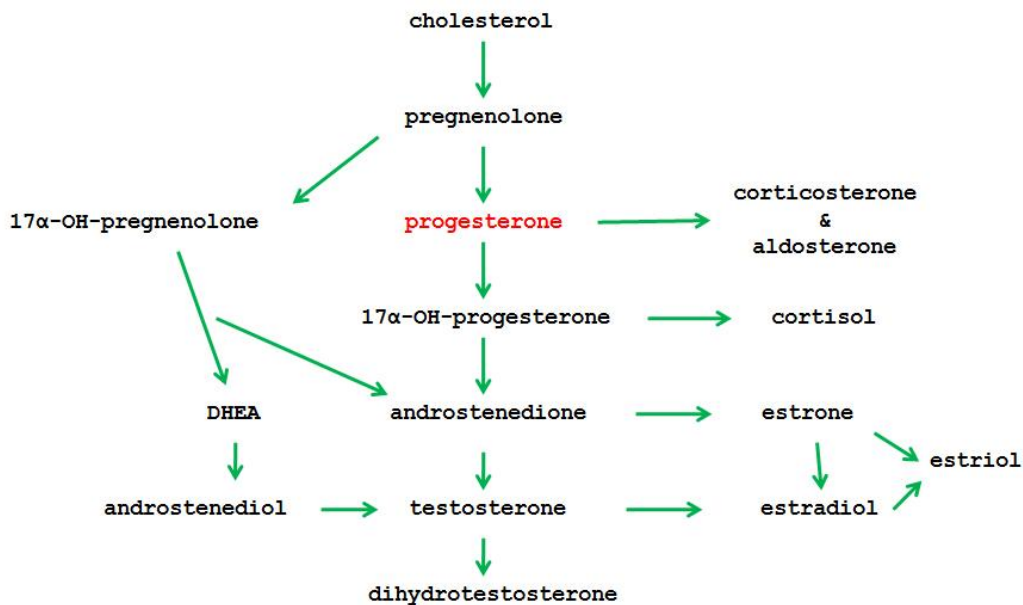
*After 3 months of treatment, no significant side-effects were reported with either active treatment or placebo, and there were no changes in weight, systolic or diastolic blood pressure, or levels of total serum cholesterol, triglyceride, high-density lipoprotein (HDL) cholesterol, FSH, glucose, estradiol, or serum or salivary progesterone. Symptom scores showed a minor effect of both placebo and active treatment on diurnal flushing number and severity and total non-flushing symptom scores, and on nocturnal sweating after placebo, but no statistical difference between placebo and active creams. CONCLUSIONS: This study suggests that*

*short-term treatment with topical wild yam extract in women suffering from menopausal symptoms is free of side-effects, but appears to have little effect on menopausal symptoms. It emphasizes the importance of careful study of treatments for menopausal symptoms if women are to be adequately informed about the choices available to them.*

What this means is that yam extract won't help you and it won't hurt you. Indeed, the "yam myth" is so pervasive that manufacturers, even the good ones, routinely include yam extract in their women's products. It is hard to steer clear of this useless ingredient.

## Other Key Steroid Hormones

We tend to think of hormone balance as involving only the sex hormones – i.e., estrogens and testosterone (and now progesterone). However, our bodies make about 150 different steroid hormones. The key substances are related to one another by how they are made, as depicted in the diagram below. Each arrow designates the formation of one steroid from another.



Hormone imbalance can be due to low levels of any combination of these hormones. By looking at the chart, it may seem that taking progesterone would boost the levels of all of the different substances that descend from it. Indeed, you may even think that more cholesterol would also do the same thing, judging by its position at the top of the chart. However, steroid metabolism is not that simple. Testosterone injections, for example, do not lead to estrogen dominance. Taking a DHEA supplement may boost testosterone



levels or estrogen levels or both. The determining factors associated with your diet, lifestyle, age, and general health status will influence your hormone metabolism.

## **DHEA**

The most common scenario is that you will gradually increase your levels of cholesterol as you age, which is normal. However, in spite of the greater availability of this starting substance for hormone balance, you will experience a gradual drop off in your levels of DHEA and progesterone, until you reach a state of deficiency in both of them.

Progesterone deficiency, as described above, leads to estrogen dominance no matter what your estrogen levels are. DHEA deficiency, on the other hand, is a bit more complicated. This hormone has become a primary indicator of aging. The faster you lose it, the more rapidly you age.

Studies on DHEA supplementation show that it can enhance the levels of testosterone or estrogen or both. Generally, though, when your body uses DHEA to achieve hormone balance, it helps improve mood, neurological functions, immune system, bone growth, energy, and feelings of well-being. It also protects against hot flashes that are associated with low levels of testosterone.

DHEA has been rightly referred to as the youth hormone. Along with boosting your progesterone, supplementing with DHEA is one of the best starting places for achieving hormone balance as you age.

The medical community cautions women with estrogen-dependent cancer to avoid DHEA supplementation because of its potential to stimulate estrogen levels. However, this is an oversimplified view of hormone balance that may have nothing to do with the role of DHEA as a precursor to estrogen. The so-called estrogen-dependent cancers are also associated with progesterone deficiency, iodine deficiency and unchecked fibrin build-up, all of which may be more important in the development of cancer than estrogen.

Most women will benefit from 15-25 mg of DHEA daily, taken early in the day. Some women may need more, so it is important to do a saliva test every 60 days until the desired level is reached. In so doing, you can restore your DHEA level to that of a 25-year old and keep it there. One of the first effects of this strategy is that you will start reducing whatever estrogen-dependent excess fat that you started gaining in your 30s, 40s, and beyond. Indeed, all of the weight-management strategies that I point out at [BellyFatScience.com](http://BellyFatScience.com) will work better when you have sufficient DHEA in your system.

## **Cortisol**

At last, this is one hormone that does not decrease with age. Cortisol and other cortisones respond to stress regardless of how old you are. Stressors that stimulate cortisones include fasting, exercise, pain, emotional stress, and infection. These are important responses for defending yourself against stress, so cortisones are extremely important for survival.

The main problem with cortisol is that too much stress causes excessive production of it. Excessive amounts of cortisol lead to weight gain, high blood sugar, elevated blood pressure, osteoporosis, and susceptibility to infection. Chronic high levels of cortisol create a greater need for DHEA and progesterone.

If your life seems hectic, with too much work or play and not enough time to get enough good sleep or to relax, you are most likely making too much cortisol. While supplementation with progesterone and DHEA will help, your adrenal glands, where cortisol is produced, will eventually run down and maybe even fail if you do not take steps to lower your lifestyle stress. There must be a hundred good ways to do so, from getting better sleep to meditating, relaxing, or even just having a cup or two of chamomile tea every day.

Of all the strategies for optimizing your hormone balance by reducing stress, the absolute best one is to make sure that you get enough good sleep. Many herbs and supplements will help, including: valerian, hops, kava kava, GABA, theanine, melatonin, 5-HTP, and mulungu (new herb that I found from the Amazon – not the online store, the actual Brazilian Amazon – see more here: [Mulungu – Wonder Herb from the Amazon](#)).

## **Avoiding Xenoestrogens is Crucial**

As mentioned above, parabens are environmental toxins that act as xenoestrogens. The net effect of xenoestrogens is to add to estrogen dominance. Exposure to xenoestrogens, therefore, undermines the role of progesterone and can accelerate the symptoms of transition to menopause.



Perhaps the most detailed research on xenoestrogens at the moment involves plasticizing agents that leach into foods and drinks in plastic containers. One specific plasticizer, bisphenol A (BPA), has come under fire from a scientific panel that was appointed by the FDA to evaluate the safety of this agent. In an all too typical response to the recommendations of its own panel, the FDA at first denied the dangers of BPA and cited the need for more research. This was a silly ruse that favored the food industry, and the FDA has now finally started to back down from this position. Meanwhile, Health Canada (equivalent to our FDA) has already banned the use of BPA in food and drink containers. In the U.S., it has been banned only from a few products, mostly those of greatest danger to infants (e.g., formula bottles, sippy cups, plastic and rubberized toys).

An additional class of plasticizing agents, called phthalates, will most certainly be the next type of xenoestrogen to be evaluated. BPA and phthalates are commonly leached into any plastic container or plastic-lined container (most canned foods and drinks) that is heated. Your best strategy is to avoid such containers completely, since you have no way of knowing which ones have been hot. In the Phoenix area, for example, a chilled plastic bottle of drinking water has already spent a certain amount of time sitting in a hot, unrefrigerated delivery truck. This is prime time for leaching plasticizers into the water.

If you ever get a whiff of any kind of food or drink that even has a hint of a plastic odor, then that food or drink is reeking of plasticizing agents. The same goes for any kind of plastic dishware or covering that you might use at home for cooking or reheating food or drinks in a microwave oven. Do not ever, ever, ever use plastic containers of any kind in your microwave oven for this reason alone.

Recent research has also noted that xenoestrogens called PFCAs (perfluorinated carboxylic acids), used in the linings of packaging such as fast-food wrappers and microwave popcorn bags, are leaching into foods. PFCAs are also the breakdown products of chemicals used to make non-stick and water- and stain-repellent products ranging from kitchen pans to clothing to food packaging.

What about other xenoestrogens in the environment? So far you know about parabens in creams and cosmetics, about plasticizing agents, and about PFCAs. To be a little more complete, here is a list of other suspected sources of xenoestrogens:

The majority of hormonal effects from chemicals in the environment come from petroleum-based pollutants. So, as much as you can, avoiding xenoestrogens means avoiding the following:

- Petrochemically-derived pesticides, herbicides, and fungicides
- Car exhaust
- Solvents and adhesives such as those found in nail polish and polish remover, paint and paint remover, and glues
- Emulsifiers and waxes in soaps and cosmetics
- Chemicals used for dry cleaning
- Fabric softeners, air fresheners, and petrochemically-based perfumes
- Noxious odors coming from glues, fiberboard, new carpeting, and new paint
- Nearly all plastics
- Industrial waste such as PCBs and dioxins (VERY dangerous toxins!)
- Meat from livestock fed estrogenic drugs to fatten them up
- Synthetic estrogens and progestins that have been flushed down the toilet and have reached our drinking water and food chain (these are even being found in wild-caught fish!)

This is a tall order. Nevertheless, whatever you can do to reduce your exposure to the xenoestrogens that surround you will help alleviate the effects of estrogen dominance from them. Using organic products and eating organic foods would be a good start.

## **Phytoestrogens are *NOT* Estrogens**

Plants do not make human steroid hormones. Unfortunately, widespread misinformation about this subject undermines the benefits of herbs for your hormone balance. So, to give you a clear foundation based on the real truths about phytoestrogens, here is a brief summary of how hormones work and how non-hormones can influence them.

1. A hormone is synthesized somewhere in your body. The biochemical reactions that drive this synthesis are catalyzed by specific enzymes.
2. The hormone is released from its site of synthesis.
3. It gets transported to a target organ or tissue.
4. It is accepted there at what is called a receptor.
5. Once at the receptor, it causes a response in the target.
6. After the appropriate response for the appropriate amount of time, the receptor releases the hormone.
7. The hormone is eliminated from the body.

This is a simplified outline of the general steps for hormone function. Any plant substance that influences any of the steps of estrogen activity is classified as a phytoestrogen. The lesson here is that phytoestrogens are not just one kind of plant substance and they can have widely different activities, depending on where in the hormone pathway they work.

The most common kinds of phytoestrogen activity occur at step 1, whereby plant substances inhibit or enhance enzyme activity, and even more so at step 4, whereby plant substances fit into hormone receptors. The strength of a phytoestrogen depends on how good the fit is on an estrogen receptor and how long the induced response lasts once it is there.

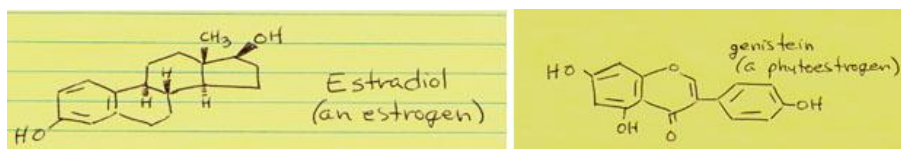
Phytoestrogens are common in plant-based foods. The two most common dietary sources of phytoestrogens are soy and flax. Many foods contain varying levels of phytoestrogens, including the highest amounts in soy products, followed by other legumes, nuts and oilseeds, and a wide range of vegetables. In addition, cereal grains often contain mycoestrogens, which are substances from a mold that contaminates grains and that also fit into estrogen receptors. Grain-based foods, as well as meat and dairy products derived from grain-fed cattle, are the main sources of dietary mycoestrogens.

Based on just the receptor response in certain kinds of assays, the most powerful phytoestrogen is a substance that goes by the name of 8-prenylnaringenin, which is a flavonoid that is made by the flowers of hops plants. As you might expect, the most common dietary source of this phytoestrogen is beer. By some measures, 8-prenylnaringenin is more potent than genistein, which is the main isoflavone phytoestrogen in soy. For comparison, 8-prenylnaringenin is still about 20,000-fold lower in potency than natural estrogens.

Let me repeat, plants do not make human steroid hormones. Phytoestrogens are not steroids at all. Indeed, phytoestrogens are chemically so different from steroid hormones that knowledgeable plant biochemists do not even talk about them in the same breath. So when you see common definitions for phytoestrogens, such as the one below from a supposedly 'credible' source (Wikipedia), you now know that it is just plain wrong.

Typical wrong definition: Phytoestrogens, sometimes called "dietary estrogens," are a diverse group of naturally occurring non-steroidal plant compounds that, ***because of their structural similarity with estradiol***, have the ability to cause estrogenic and/or antiestrogenic effects. [My bold and italics]

See what I mean by comparing the two chemical structures below (sorry, we chemists get really excited about these kinds of things):



The distinctions between structure and function of these substances are very clear. Unfortunately, manufacturers persist in fostering mass confusion about them. In fact, one company that I won't name here offers a product whose label guarantees specific amounts of phytoestrone, phytoestriol, and phytoestradiol. These are fabricated names for nonexistent substances. (If you're really curious to know what company that does this, just look up any of these substances in a Google search.) Pretty amazing, isn't it?

## The Real Benefits of Phytoestrogens

First off, there is no uniform activity for this large group of plant substances. They do many things that influence hormone metabolism. Indeed, the most well-studied of the phytoestrogens, the soy isoflavones, have multiple activities. Some of these activities enhance the effects of estrogens and some of them reduce the effects of estrogens. The key is to know what they can do for your hormone balance and what this does for your health.

Before I point out their main benefits, I want to mention that the worry associated with phytoestrogens and cancer is overblown and is based on weak experimental links to laboratory research, not clinical outcomes. Dietary phytoestrogens are unavoidable, so clinical surveys that compare high-intake levels with low-intake levels are more

meaningful. I will review the science behind this topic at another time. For now, I will just point out that the high incidences of cancers and fibroids in female reproductive organs are much more likely to be the result of iodine deficiency than any other dietary factor that is common in our society. I will also review the latest, and what I believe to be shocking, research on this topic at another time.

The bottom line on the benefits of phytoestrogens, according to published scientific research, is that they protect against several disorders that are magnified by hormone imbalance leading up to and during menopause. In particular, phytoestrogens from soy:

- Prevent cancer at multiple sites
- Prevent gallstones
- Protect kidney function
- Prevent osteoporosis
- Stimulate bone formation
- Lower cholesterol levels
- Inhibit the oxidation of LDL cholesterol
- Inhibit the development or progression of atherosclerosis

The reason that I focus on phytoestrogens from soy is that most of the research on phytoestrogens has been based on soy products. Moreover, these are the most widely available and cost-effective types of phytoestrogens in nutrition stores.

Hundreds of companies offer excellent products containing phytoestrogens from a variety of sources, and every self-respecting nutrition store carries one or more brands of them. The best ones that I have found include [Phytobalance by Pure Encapsulations](#) and [Soy Isoflavones by Thorne Research](#), both of which are formulated by and for health professionals.



The key features for evaluating phytoestrogen supplements are the same as for any kind of supplement – i.e., purity and dosage per serving. Regarding dosage, numerous clinical studies have shown that soy phytoestrogens in doses ranging from 40-160 mg per day lead to rapid and significant reductions in transition symptoms.

## Top 4 Menopause Herbs

So-called menopause herbs have been an important subject in scientific research for decades. A recent search at PubMed yielded 2,783 research articles published on this topic since 1975. In other words, we know a lot about menopause herbs based on modern science. At present the combined perspective of folk medicine and scientific research point to four herbs as the best for alleviating transition symptoms. These are: 1) black cohosh; 2) Dong Quai; 3) flaxseed; and, 4) borage.

### Black Cohosh

This herb is so important that a standardized black cohosh extract, named Remifemin, has been trademarked and offered for sale as a drug in countries throughout the world, (excluding the U.S., of course). Clinical studies have shown that Remifemin alleviates not only hot flashes but also depression, anxiety, vaginal atrophy, and a host of other menopausal-related disorders. The benefits of black cohosh are so remarkable that, unlike the majority of herbs, it has been studied extensively to find out just how it works. Regarding hot flashes, black cohosh suppresses the release of luteinizing hormone. Hot flashes correspond to a surge in this hormone.

The benefits of black cohosh corresponding to clinical research derive from daily dosages of 500-1,000 mg of extracts that are standardized to contain 2.5% triterpene glycosides. These are the weak phytoestrogenic substances that are responsible for the hormone balancing effects of black cohosh.

Recommended product: [Black Cohosh 2.5 by Pure Encapsulations](#)

### Dong Quai

Dong Quai extract is a female tonic in traditional Chinese medicine. Scientists believe that it works, in part, by promoting the release of natural progesterone. Dong Quai also provides muscle relaxant and analgesic effects. Beware that some supplements contain too much Dong Quai, which can be toxic. It works best in a daily amount of at least 50 mg, especially if it is used in a mixed herbal formula. Dong Quai should not be taken by women who are experiencing heavy bleeding.

Recommended product: [FemTone by Integrative Therapeutics](#)



## **Flaxseed Oil**

Flaxseeds contain another class of phytoestrogens, called lignans. The best supplements are, therefore, those with high lignan content (which should be stated on the label). You can get the right dose by grinding 1-2 tablespoons of whole fresh seeds daily in a coffee grinder or by taking a tablespoon of liquid oil. Fresh or liquid flax oil is highly unstable, so you must get it from the refrigerated section of your local nutrition store and keep it refrigerated when not in use.

## **Borage Oil**

Although omega-3 fatty acids from fish oil and flaxseed oil have become important supplements for many reasons, the importance of a balance with omega-6 oils is often overlooked. One particular omega-6 component, gamma-linolenic acid (GLA), has been found to relieve the symptoms of menopause transition, including night sweats, inflammation, fluid retention, depression and irritability. GLA works by influencing the synthesis of a class of hormones called prostaglandins, which help in moderating transition symptoms.

The richest source of GLA is borage oil. Other supplements that offer a good amount of GLA include evening primrose oil and black currant oil. All of these are widely available in nutrition stores in the form of softgel capsules. The recommended dosage of GLA is 200-400 mg per day.

## **Thyroid Confusion**

Thyroid hormone is now the most common of all drug prescriptions. Low thyroid (hypothyroidism) occurs predominantly in women. It is especially common in women who are in transition to menopause, when estrogen is dominant and progesterone is low.

Although the solution to treat low thyroid with thyroid hormone is a simple one, it does not get at the root cause of low thyroid in the first place. The root cause is even simpler: iodine deficiency. This mineral has a long and important history in human health, which was mostly forgotten until it was resurrected by Dr. David Brownstein (see his book, "Iodine: Why You Need It, Why You Can't Live Without It," 2<sup>nd</sup> ed., 2006). He is one of the leading holistic thyroid practitioners in the U.S.

Dr. Brownstein presents some surprising and crucial facts about iodine that you should be aware of regarding your overall wellness as you mature into menopause, as follows:

- 95% of Americans are deficient in iodine.
- Estrogen balance is impossible to maintain when there is iodine deficiency present.
- Iodine deficiency leads to breast cancer, fibrocystic breast disease, prostate cysts and prostate cancer.
- Iodine deficiency may be the single most important unrecognized factor that makes you fat.
- The healthy functioning of the thyroid is essential to maintaining metabolism and preventing the accumulation of body fat.
- Every cell in your body needs iodine to function properly.
- Different organs of your body use either elemental iodine or ionic iodine (iodide).
- Kelp provides only the iodide form.
- The federally defined Daily Value for iodine is pathetically low.
- It is almost impossible to get sufficient iodine from food.

Other symptoms of hypothyroidism include a bad complexion, fatigue, forgetfulness, loss of sex drive, impotence, irritability and unhealthy hair, nails and teeth. An underactive thyroid gland promotes excess weight and cellulite by causing water retention.

Fortunately, you can help normalize an underactive thyroid gland by increasing your intake of the mineral iodine. It is absolutely crucial to work with a knowledgeable healthcare practitioner who knows how to test for and reverse iodine deficiency, not just a doctor who will thoughtlessly prescribe drugs. Although a few brands of supplements provide adequate amounts of both the ionic and elemental forms of iodine, Dr. Brownstein recommends one particular one by the name of [Iodoral](#).

## **Role of Excess Fat in Estrogen Dominance**

One of the well-known consequences of hormone imbalance leading up to menopause is weight gain, specifically fat gain. If this doesn't seem challenging enough, recent research has shown that fat cells also produce and store estrogen. This just means that addressing weight management will benefit hormone balance, and addressing hormone balance will benefit weight management. In regard to weight management, several interdependent strategies, from eating to exercise to supplementation, are important for healthy slimming. These are the focus of my blog at [BellyFatScience.com](#), where you can get a copy of my free belly fat book that explains the most important basics according to recent scientific research.

## Help with Bone Health

Bone health depends on a two-headed process that includes adding new bone cells as well as removing old ones. Drug companies have taken advantage of this process by creating bisphosphonate drugs (Fosamax, Boniva, Actonel) that prevent the removal of the old cells, thereby increasing bone mass. The net result of this strategy is that bones accumulate dead cells. The buildup of dead cells does, however, look good on a bone scan because the bone is denser (NOT stronger!). One of the consequences of these drugs is that they seem to be associated with loose teeth due to weakened jawbones. This is why women are warned to postpone the use of these drugs until after any dental work that they might be planning. Surveys also show that the incidence of hip fractures increases after 5 years of using these drugs.

### Minerals with Phytoestrogens

Calcium for bone health must be in a balance with magnesium and other, minor minerals. The seemingly simple approach to promoting strong bones by supplementing with minerals is not as straightforward as it seems, even if it is accompanied by vitamin D. This is because calcium metabolism can be undermined by estrogen dominance and progesterone deficiency.

The key to bone health would seem to be in addressing hormone balance. Indeed, anything that you can do for balancing hormones will help. For this reason, calcium supplements that contain isoflavone phytoestrogens will be helpful. One new kind of isoflavone is especially useful for bone health. It is what chemists call a semi-synthetic substance, because it is modified from a natural source. Specifically, the soy isoflavone called daidzein is chemically changed into a substance called ipriflavone. Bone health supplements containing calcium, magnesium, vitamin D, ipriflavone, and a variety of other vitamins and minerals can be found in most nutrition stores. When looking for a top product, though, compare whatever you find with the ingredients list in the top product that I have found, [+ Cal + by Pure Encapsulations](#). You will be hard pressed to find a better one than that.

### Strontium: Miracle Bone Mineral?

Strontium has been safely used as a medicinal substance for more than a hundred years. Research on its use for strengthening bones first appeared in the 1930s, and it was listed in the U.S. Dispensatory as late as 1955. The main property of strontium that

makes it so valuable is its similarity to calcium. Although it is about twice the size of calcium, strontium is taken up into bones just as calcium is. The advantage of strontium is that it doesn't do thousands of different things as calcium does. It just mostly goes into bones. In fact, a daily dose of strontium, in the form of strontium citrate, can be expected to have a measurable bone-strengthening effect within about 6 months.

The benefits of strontium for treating osteoporosis have not escaped mainstream medicine. It has just taken quite a bit of time for drug companies to invent a patentable form of strontium that could be developed as a prescription drug. Such a drug, with the chemical name of strontium ranelate, has already been in use for the past few years in some European countries. It is manufactured by a French pharmaceutical company, Servier, under the brand names Protelos or Protos. This same company was awarded a U.S. patent on May 8, 2007, on the synthesis of strontium ranelate. Stay tuned to this story, because it is only a matter of time before American doctors will be prescribing a wonderful "new" treatment for osteoporosis (that has already been known in its non-prescription form for more than three-quarters of a century!).

Strontium citrate is widely available in nutrition stores, from numerous manufacturers. As far as I can tell, they are all equally good. The one that we have at Doctors Nutrition Center is [Strontium Citrate by Pure Encapsulations](#), since this is the professional product line that is designed by and for physicians.

## **Balancing the Master Hormone**

Okay, I have to admit that anti-aging is becoming a much more interesting topic to me as the years roll by. We baby boomers are driving the interest in this topic. It involves the Human Growth Hormone (HGH), which is the hormone that influences aging and all of the hormone changes that come with it.

First off, the term "anti-aging" partly refers to regaining health that has declined with age. Aging is now being referred to as a disease by some researchers, and the FDA has approved certain kinds of treatments for what are called "age-related disorders." Molecular biologists have discovered the causes of aging at the genetic level. Anthropologists have long noted that people in certain cultures around the world live much longer and healthier lives than we do in the U.S. Finally, all kinds of medical research now points to how we can live at least 30% longer and be disease-free and energetic almost right up to our last breath. No symptoms of menopause, no cardiovascular disease, no mental degeneration, no loss of eyesight or hearing, and no other typical problems that we have come to accept as signs of aging.

HGH is truly the master hormone because whatever happens to your HGH levels shows up in just about every other aspect of your physical being. If you have plenty of circulating HGH, your health is probably excellent. If your HGH levels are declining, then your health is degenerating, making it very difficult to achieve any kind of hormone balance. The rate of degeneration corresponds to the rate of HGH dropoff.

The challenge you have with HGH is that it is like so many other hormones in that you make less of it when you age, starting at about age 25. Plenty of research now shows that injections of HGH, in the right amount and at the right frequency, reverse the so-called signs of aging by the equivalent of 20 years or more after a few months of treatment.

By the way, HGH is a protein, not a steroid. Many people confuse the two because they are mentioned in the same breath with the abuse of performance-enhancing drugs by professional athletes. Because HGH is a protein, with a very specific chain of 191 amino acids in just the right sequence, there are no synthetic equivalents like there are for natural steroids.

All commercial HGH is now made by bacteria that have been genetically engineered to include the human gene for HGH. Although it is identical with native HGH, the genetically engineered product is referred to as rHGH (for recombinant DNA). rHGH has emerged as a top anti-aging treatment, even though it is unavailable to most people due to its expense and to government regulations that restrict its use.

Fortunately, people can do a number of things to increase their own production and release of HGH naturally (i.e., without injections). A hard weightlifting session will cause a spike in HGH, as will a good night's sleep. Furthermore, several common amino acids, in sufficient doses, will also help out considerably. The two main amino acids that boost HGH levels are:

- L-arginine
- L-ornithine (as OKG, L-ornithine alpha-ketoglutarate)

One of the best resources on the whole topic of HGH is Dr. Klatz' book, which I cited at the beginning of this report. Dr. Klatz is also the founder of the American Academy of Anti-Aging Medicine, which offers a huge amount of information on this subject.

**CAUTION:** You probably will not be surprised to know that the business of anti-aging is replete with charlatans. One thing I want to caution you about is that HGH is not available as a supplement in nutrition stores. You will, however, discover many products

that have "HGH" prominently on the label in an effort to have you believe that they contain HGH. They do not.

If it seems that I have saved the best for last, this may be true. Supplements that stimulate the synthesis or secretion of HGH and its "affiliate" hormones (called IGF-1 and GHRH) point out the best direction for starting any kind of hormone balancing strategy, for women as well as for men. And all it takes is a few capsules every day, taken before sleep or before a workout, or both, to put you on the right track. (The product that I use is called [Growth Hormone Support by Pure Encapsulations](#). This is another formula that has been designed by and for doctors.) The reason I say this is because plenty of research clearly shows how restoring HGH to youthful levels balances all other hormones, just the way they used to be!

*All the best in natural health,*

*Dr. D*