part one

managing your symptoms

"I suddenly have a hot flash. I know that I am beet red from the neck up and the perspiration is starting to run down my forehead. Someone suggests, 'It's very warm in here today,' and I am truly mortified. I have just broadcast to my younger male colleagues that I am menopausal!"

hot flashes and night sweats

"The strange thing about hot flashes is that you don't realize what they are until you start noticing that on a regular basis, you are the only one in the room perspiring from the heat."

Hot flashes are, without a doubt, the most commonly reported symptom of menopause—indeed, hot flashes are often the first sign that menopause is approaching. Between 60 and 85 percent of North American women experience hot flashes at some point during the perimenopausal or post-menopausal years. Ten to 15 percent of these women experience hot flashes so severe that they interfere with daily life. On average, hot flashes persist for two to three years, but in 50 percent of women who experience this symptom, they last for up to five years. A small group of women get hot flashes for periods of 15 years or longer, sometimes experiencing them into their 70s and 80s.

anatomy of a hot flash

Hot flashes vary considerably among women with respect to their frequency, intensity, and duration. A warning signal often precedes a hot flash. This signal may take the form of an "aura," similar to that experienced by migraine sufferers. The aura may manifest as pressure in the head, a headache, or a wave of nausea. A sensation of heat then starts in the head and neck and spreads to the torso, arms, and entire body. Sweating follows and is most intense in the upper body. Clothing may become soaked, particularly if hot flashes occur during sleep. Some women experience heart palpitations, dizziness, or feelings of tension and anxiety. Hot flashes, as I explain in more

detail below, actually cool the body, and chills or shakes may follow the flash as a result of the drop in body temperature it has caused. The entire event can last anywhere from a few seconds to several minutes; it can then take up to an hour for the resultant chills to subside. I have some clients who experience hot flashes as often as one every hour, while others report as few as several per week. Hot flashes may disappear for months, only to return when you least expect them. Many women report that stressful events or warm temperatures or warm rooms aggravate hot flashes. Consuming caffeine and alcohol, or even eating a spicy meal, can trigger hot flashes in some women. Fortunately though, hot flashes usually resolve with age and as your body adjusts to the changes of the menopausal years.

Night sweats are another term for hot flashes that occur during sleep. Often nocturnal hot flashes can be severe enough to disrupt sleep and cause insomnia, fatigue, and irritability. Chapters 2 and 3 cover natural treatment of these symptoms.

To understand hot flashes better, let's take a closer look at the hormones involved.

HORMONES

A hormone is any chemical substance produced in the body that has a specific regulatory effect on the activity of certain cells or organs.

Estrogen

The term estrogen is a generic word for a group of female sex hormones, including estradiol, estriol, and estrone. You form estrogens in your ovaries, brain, and fatty tissues. At puberty, estrogen stimulates breast development and other female characteristics. Estrogen also stimulates the uterine lining (endometrium) to grow during the pre-ovulatory phase of the menstrual cycle, to prepare you for possible pregnancy.

Follicle stimulating hormone (FSH)

This hormone is produced by your pituitary gland, which is inside your brain. For the first 14 days of your menstrual cycle, FSH stimulates the follicles in your ovaries to produce estrogen. When estrogen levels have risen adequately, the pituitary gland turns off FSH production. After menopause, when your ovaries no longer respond to FSH, your blood levels of FSH stay high. During the perimenopausal years, your FSH levels can fluctuate.

Luteinizing hormone (LH)

This hormone is also produced in your pituitary gland, and like FSH, it acts on your ovaries. LH is released once your estrogen levels rise and FSH is turned off. When your level of LH is at its highest, your ovarian follicle releases an egg (ovulation).

Progesterone

Once you ovulate, your follicle (now called a *corpeus luteum*) produces progesterone in addition to estrogen. Progesterone acts to build up the uterine lining. When progesterone and estrogen levels drop, your body sheds its uterine lining by having a period, and your pituitary gland starts releasing FSH once more.

WHAT CAUSES HOT FLASHES?

We are still trying to understand exactly what happens in the body to cause a hot flash. Hot flashes begin in the hypothalamus, the region of the brain that houses the body's temperature control center. It decides that you are too hot (even though your body temperature is normal) and attempts to cool you down by increasing your heartbeat and sending more blood to your skin, especially the skin of your head and neck. As a result, blood vessels in your skin dilate, your skin flushes, and you sweat. The overall effect is that heat escapes from your body. Paradoxically, hot flashes are your body's way of cooling down—even though you don't need to. What might cause the hypothalamus to become confused about your actual temperature and trigger a hot flash?

As you enter the menopausal years, estrogen production drops and ovulation begins to become irregular, and then comes to a stop altogether. Without enough estrogen, your body can't thicken the lining of your uterus. You'll get irregular periods and eventually your periods will cease. Without ovulation, progesterone levels fall. But remember, low estrogen and progesterone levels tell your pituitary that it's time to release FSH and then LH. But now your ovaries are no longer able to respond to FSH and LH. They can't produce much estrogen or release an egg, so your hypothalamus keeps telling your pituitary gland to make your ovaries ovulate. As a result, your pituitary gland keeps releasing more and more FSH (that's why FSH levels are high during menopause). Your hypothalamus is so busy constantly signaling your pituitary gland that its temperature control center can malfunction, setting off a hot flash even though temperature adjust-

ment isn't needed. Experts also believe that a drop in estrogen levels may trigger your hypothalamus and as a result, your body's temperature control system malfunctions.

COPING WITH HOT FLASHES

It is interesting to note that hot flashes don't exist in some cultures. In the Japanese language, for instance, there is no word for "hot flash." Women in traditional cultures generally make the transition into the menopausal years experiencing very few, or none, of the distressing symptoms suffered by women in our Western culture. Research indicates that women in these cultures tend to view menopause as a healthy, natural part of aging, rather than as an unwanted medical condition. And researchers have learned that there is definitely a link between a society's attitude towards menopause and the symptoms commonly experienced by women in that society. With today's focus on beauty, sexiness, and thinness, many women find themselves at odds with menopause. They are afraid that menopause means becoming "old" and "useless." I remember vividly listening to one client as she described her anxieties about menopause as a fear of "becoming old," "becoming fat," and "knitting all day long." It seems common for women to be afraid they won't be valued by society after they pass through menopause.

So how does all this relate to my original question—what can we do about hot flashes? Well, we can start by learning from women in Eastern and other traditional cultures and adopting a more accepting and respecting attitude towards our bodies' natural life cycle changes—and we can pick up other hints from them as well. Japanese women eat plenty of soy foods and fish and very few high-fat animal foods. Their diet certainly contrasts with our North American fare of meat, potatoes, and processed food. The Japanese woman's lifestyle demonstrates that clearing up menopausal symptoms generally requires more than just a shift in attitude—but often less than a prescription for hormones. Over the years, many of my clients, the ones who have been unable to deal with hot flashes simply through minor lifestyle adjustments, have asked me if there is something they can take to alleviate this troublesome symptom. A vitamin or herb perhaps? Specific foods? The answer is yes. Making changes to your diet and your surroundings can definitely help you feel better. Below, I describe the natural approaches for treating hot flashes that I often recommend in my practice. Not only do my clients report improvement, but scientific studies also support the ability of these remedies to ease hot flashes.

dietary approaches

SOY FOODS AND ISOFLAVONES

Foods made from soybeans are certainly getting plenty of attention these days. (If you're wondering what these foods are, you'll find a list on page 7.) Scientists are learning that not only do soy foods have the ability to help protect us from heart disease, osteoporosis, and perhaps even cancer, but they can help ease menopausal hot flashes. A 12-week Italian study looked at the effects of soy protein on hot flashes in 104 women aged 48 to 61 years. The study found that, compared to the placebo group, the women who consumed 60 grams of soy protein powder daily reported a 26 percent reduction in the average number of hot flashes they experienced by their third week on this regimen, and a 33 percent reduction by the fourth week. At the end of the three-month study, the soy group had a 45 percent decrease in the number of hot flashes experienced daily. In comparison, the placebo group experienced only a 30 percent reduction.[1] Another study, carried out by researchers in North Carolina, found that women whose daily diet included a total of 20 grams of soy protein reported significant improvement of hot flashes as well as of other menopausal symptoms.[2]

Now I don't want you to think that soy is the magic cure for hot flashes. It's true that a daily intake of soy has helped a number of my clients ease their hot flashes. But overall, studies don't find it to be a stupendously effective remedy. While it does tend to decrease both the frequency and severity of hot flashes, the effects are modest. And all the studies find that participating women who receive the placebo also experience some improvement. If a study finds that women who eat soy every day have 20 percent fewer hot flashes than women taking the dummy treatment, some experts might question the clinical relevance of the finding. Will a 20 percent improvement mean that much to your symptoms? Will it mean moving from 11 hot flashes per day down to 9? Don't get me wrong. I am a very big fan of soy foods, but I just don't want to overstate the effect soy has on hot flashes. On the other hand, I meet many women in my practice who tell me that any improvement is welcome.

You might be wondering what makes soybeans so special. Soybeans contain naturally occurring compounds called "isoflavones," which are a type of phytoestrogen (plant estrogen). Genistein and daidzein are the most active soy isoflavones and have been the focus of much research. Isoflavones have a molecular structure similar to that

of the human estrogen hormones and as a result, have a weak estrogenic effect in the body. Even though soy isoflavones are about 50 times less potent than human estrogens, they are able to offer women a source of usable estrogen and, along with that, some of estrogen's protective effects. If a woman's estrogen levels are low enough to cause hot flashes during the perimenopausal or post-menopausal periods, a regular intake of foods like roasted soy nuts, soy beverages, and tofu may help to alleviate the situation. Foods like tofu and soy drinks can be eaten in delicious recipes and still be just as beneficial—the phytoestrogens in soy don't break down when heated.

How much should you eat?

Just how much soy you need has yet to be determined. You may have noticed that some experts recommend eating a certain amount of soy protein each day, while others specify an amount of phytoestrogens. Because soy foods can vary considerably with respect to their phytoestrogen content, I recommend getting a specific daily dose of phytoestrogens. Most studies that find soy foods helpful in treating hot flashes use enough of these foods to provide 40 to 80 milligrams of isoflavones daily. What's more, soy isoflavones seem to work best if they're taken twice per day. Depending on what type of soy food you eat, the isoflavone level in your bloodstream reaches a peak four to eight hours later. So it makes sense to get 30 to 40 milligrams of isoflavones two times daily to keep your blood levels up. Dr. Kenneth Setchell, a world-renowned expert on phytoestrogens at the University of Cincinnati College of Medicine and the Children's Hospital Medical Center in Cincinnati, believes that a daily intake of 50 to 90 milligrams of phytoestrogens is probably needed to help alleviate hot flashes and reduce other health risks associated with menopause and aging.

Here's a chart that will help you plan your soy food consumption so that you get at least 50 milligrams of phytoestrogens per day.

Soy Food	Serving Size	Isoflavone Content
Roasted soy nuts	1/4 cup (50 ml)	40–60 mg
Soybeans, cooked or canned	1/2 cup (125 ml)	14 mg
Tempeh, uncooked	3 oz. (90 g)	45 mg
Soy flour	1/4 cup (50 ml)	28 mg
Tofu, firm	3 oz. (90 g)	28 mg

Continued on next page

Texturized vegetable protein, dry	1/2 cup (125 ml)	30–120 mg
Soy beverage, So Nice™ brand	1 cup (250 ml)	60 mg
Soy beverage, most brands	1 cup (250 ml)	25 mg
Soy sauce		none
Soya oil		none

Types of soy foods

The chart above might be more confusing than helpful if you're unfamiliar with soy foods. Here's a quick introduction to what these foods are, where you can get them, and how they're used in the kitchen.

Soybeans You can buy these already cooked (in cans) or dried. Dried soybeans need to be soaked in water overnight before cooking. Add cooked soybeans to soups, casseroles, chilies, and curries, or mash them and add them to burgers. For a real treat, order *edamame* (green soybeans) as an appetizer in a Japanese restaurant.

Miso A traditional Asian flavoring, miso is a paste made of a fermented mixture of soybeans and grain. Miso is excellent added to soups at the end of cooking, or in marinades and sauces. For vegetable soup, use one-quarter cup miso (50 milliliters) for every quart (or liter) of water.

Soy Flour Soybeans can be defatted and finely ground to make a flour that is sold in health food stores and some grocery stores. Because soy flour contains no gluten, the wheat protein that adds structure to baked goods, it should be mixed with other flours in baking. Substitute soy flour for up to one-half of the wheat flour in breads, muffins, loaves, cakes, cookies, or scones.

Soy Beverages These are made from either the juice of ground soybeans or from isolated soy protein. You'll find many different brands and flavors in grocery and health food stores. Try a few brands to find one with a taste you like—but be sure to buy a brand fortified with calcium and vitamin D. Use soy beverages just as you would milk—on cereal, and in smoothies, coffee, lattes, soups, and cooking and baking.

Soy "Meats" These ready-to-eat or frozen soy foods resemble meat and can be used in place of burgers, hot dogs, deli cold cuts, and ground meat. You'll find them in the freezer, deli, or produce section of grocery stores. Remember that soy burgers and dogs

are already cooked. Overcooking will dry them out and probably discourage you from trying them again. All they need is reheating on a hot grill.

Soy "Nuts" Also called roasted soybeans, this snack food comes in plain, barbecue, and garlic flavors. Of all the soy foods, soy nuts have the highest amount of isoflavones per serving—two tablespoons pack roughly 42 milligrams! The good news for those of you who tend to like salty snack foods—these munchies have less salt, less fat, and more fiber than actual nuts, yet they're tasty and satisfying.

Tempeh You'll find this traditional Asian soy food sold in small bars in the refrigerated or frozen food section of health food stores. Made of a fermented soybean-grain mixture, tempeh has a nutty, delicious flavor. Slice it and add it to casseroles and stir-fries or grill it in kebabs and burgers. Tempeh is tastiest and most digestible when you simmer it in a marinade for 20 minutes before incorporating it into other recipes.

Texturized Vegetable Protein (TVP) TVP is made from defatted and dehydrated soy flour. It's sold in packages of granules or small chunks. Rehydrate TVP with an equal amount of water or broth, then use it to replace ground meat in pasta sauces, lasagna, chili, and tacos.

Tofu Tofu is made by using minerals or lemon juice to coagulate juice from soaked, ground, and briefly cooked soybeans. Tofu readily picks up flavors during cooking. It comes in soft (silken) or firm varieties. Use soft tofu in smoothies, dips, salad dressings, lasagna, and cheesecake recipes. Firm tofu is best for grilling and stir-frying—or add cubes of it to soups for a protein boost.

Cooking with soy foods

I can understand that if you've never tried soy foods before, you might feel hesitant about what to do with them. Tofu, especially, seems to have a bad reputation—many of my clients aren't used to eating soy foods and when I mention tofu I usually see noses turn up. You'd have thought I had just recommended eating brussels sprouts. Then again, let's face it, a cake of soybean curd doesn't look that appealing and it's definitely a hard food to sneak into the family dinner. It might help to look at this as an opportunity to be adventurous. To assist you, I've prepared the following Nutrition Tip, "Ten Ways to Enjoy More Soy." If the tips don't help, try one of the recipes in Appendix 3. They all come highly recommended by my clients!

NUTRITION TIP

Ten ways to enjoy more soy

1. Use a fortified soy beverage on cereal or in a breakfast smoothie (see recipe in Appendix 3).
2. Use a fortified soy beverage in cooking and baking, for instance in soups, casseroles, muffins, and pancake batters.
3. Cube firm tofu and add to soups.
4. Grill firm tofu on the barbecue. First marinate tofu in balsamic vinegar or brush with hoisin sauce, then make tofu kebabs with vegetables.
5. Substitute soft or firm tofu for ricotta cheese in lasagna and cheesecake recipes.
6. Use silken tofu in creamy salad dressing or dip recipes.
7. Replace one-quarter of the all-purpose flour in a recipe with soy flour.
8. Snack on roasted soy nuts—they come in plain, barbecue, garlic, or onion flavors.
9. Replace ground meat with TVP (texturized vegetable protein) or soy ground meat in chili, pasta sauce, and tacos.
10. Try veggie burgers (with soy protein) and veggie dogs cooked on the grill. When buying veggie burgers, make sure you see "soy protein" listed as one of the first few ingredients on the label.

Soy protein powders

If you've tried my recipe ideas and you're still not convinced that soy foods are welcome in your daily diet, consider using a high-quality soy protein powder. It's easy to throw a scoop of soy protein powder into a homemade breakfast smoothie or a glass of orange juice. I have many clients who use these powders to ensure they get their daily dose of soy isoflavones.

Before you rush off to the health food store, however, keep in mind that soy protein powders vary in quality. Depending on how the manufacturer extracts the protein from the soybean, you can end up with a little or a lot of isoflavones. Look for products made with isolated soy protein. Soy protein isolates offer the purest form of soy protein available—the protein is completely separated, or isolated, from the carbohydrate and fat portions of the soybean. Most soy protein isolates are made using a water extraction process, which preserves the naturally occurring isoflavones. I don't recommend buy-

ing soy protein concentrates. Many of these are made using alcohol to extract the protein from the bean. Alcohol extraction causes a loss of naturally occurring isoflavones. If you're uncertain how the soy protein you're contemplating for purchase is made, call the manufacturer. Here's how the two protein extraction methods compare.

ISOFLAVONE CONTENT OF WATER- AND ALCOHOL-EXTRACTED SOY PROTEIN POWDERS

Type of Soy Protein	Serving Size	Isoflavone Content
Soy protein isolate (water extraction)	2 rounded tbsp. (30 g)	29.3 mg
Soy protein concentrate (water extraction)	2 rounded tbsp. (30 g)	30.6 mg
Soy protein concentrate (alcohol extraction)	2 rounded tbsp. (30 g)	3.7 mg

Source: USDA-Iowa State University Database on the Isoflavone Content of Foods 1999 Release 1.1

My advice is to buy a product made with Supro® brand soy protein. Manufactured by Protein Technologies International using an isoflavone-friendly process, Supro® soy protein isolate contains plenty of isoflavones. It's also the soy protein isolate used in scientific studies. Products that use Supro® include Genisoy Protein Powder, TWINLAB Vege Fuel®, GNC Challenge Soy Protein 95, GNC Challenge Soy Solution, Nutrel Soy Serenity and Soy Strategy, Naturade Total Soy, and Interactive SoyOne.

Isoflavone supplements

If you've been to your local health food store lately, you might have noticed a number of isoflavone supplements on the shelf. These supplements are made with isoflavones that have been extracted from soybeans or red clover plants. For many of you, I'm sure that popping an isoflavone pill with your multivitamin seems more appealing than eating a plate of stir-fried tofu. But the question is, do these supplements relieve hot flashes? Although the studies completed to date have been limited in number, the evidence suggests that isoflavone supplements might help relieve hot flashes in some women.

One small study conducted at the Massachusetts Institute of Technology in Cambridge, Massachusetts, found no significant change in the number of hot flashes or night sweats experienced by post-menopausal women who took a soy isoflavone

extract each day. Two Australian studies also found that isoflavone supplements had no effect on hot flashes. In one of these studies, 37 post-menopausal women were divided into three groups and given either placebo or 40 milligrams or 160 milligrams daily of isoflavone extract derived from red clovers (called Promensil™). In the second study, 51 post-menopausal women took 40 milligrams of Promensil™ daily (one tablet) for three months and reported no difference in menopausal symptoms.[3]

Despite the fact that earlier studies revealed isoflavone supplements to be ineffective in treating hot flashes, recent findings have been positive. A double blind, randomized, controlled trial from Brazil followed 80 post-menopausal women for four months. Half received a 100-milligram soy supplement and the others took a placebo. The women taking the supplement experienced significant improvement in symptoms. Researchers in France found similar results. They compared the effect on hot flashes of a soy pill containing 70 milligrams of isoflavones to a placebo in 75 women. The women taking the soy extract experienced a 38 percent reduction in the number of daily hot flashes after just one month of treatment. After four months, the women taking the soy supplement had a 61 percent reduction in hot flashes, compared to 34 percent in the placebo group.[4]

When it comes to determining if isoflavone supplements from red clover ease hot flashes, the findings are mixed. While one Australian study found no difference in the number of hot flashes among post-menopausal women taking a red clover supplement or a placebo pill, Dutch researchers observed a 44 percent reduction after three months of supplementation. Both studies used a branded red clover extract sold as Promensil™ (Novogen).[5]

So what should you do? Eat isoflavone-rich food or pop a pill? At this time, most experts agree that there has not been enough research conducted to give the green light on isoflavone supplements. Most studies have been of short duration, so we don't know if taking these products over the long term is safe. Isoflavones, in food or pill form, behave like estrogen in the body. For this reason, women with hormone-sensitive cancers, endometriosis, or uterine fibroids should avoid supplemental doses. I certainly advise that women at high risk for breast cancer stay away from isoflavone pills (read Chapter 10 for more information on soy and breast cancer risk). Until we know more

about the safety and effectiveness of isoflavone supplements, I recommend that you incorporate phytoestrogen-containing foods into your diet.

vitamins and minerals

VITAMIN E

If you're eating for a healthy heart, then chances are you're already familiar with this antioxidant vitamin (you'll read how vitamin E helps protect you from heart disease in Chapter 9). It seems that vitamin E might also help to reduce hot flashes. Unfortunately, very little research has been done on this subject, and much of it dates back to the late 1940s. Although these studies were not placebo controlled, they did find the vitamin to be effective in reducing hot flashes. I have managed to find one recent study from the Mayo Clinic and Mayo Foundation in Cleveland. During the first four weeks of the study, the researchers gave 120 women with a history of breast cancer 800 international units (IU) of vitamin E daily. After taking vitamin E for four weeks, the women were given an identical looking placebo pill. The women did report fewer hot flashes when taking vitamin E, but the effect was not dramatic. Despite the limited amount of research, a survey of 438 American women conducted by researchers at Columbia University in New York revealed that 57 percent who had hot flashes took vitamin E and 27 percent of these women felt that it helped.[6]

How the vitamin works to reduce hot flashes is not completely understood. Vitamin E has been reported to prevent excessive production of follicle stimulating hormone (FSH) and luteinizing hormone (LH). As discussed earlier in this chapter, the higher the levels of these two hormones in your body, the more your blood vessels dilate. This dilation, in turn, increases blood flow to the skin, causing you to feel hotter.

While there's not a lot of scientific support for vitamin E as a therapy for hot flash relief, I am in favor of adding it to your nutrition regime. As you'll read later in the book, vitamin E has other important health benefits and it's impossible to get high amounts in your daily diet. The richest sources of this vitamin are vegetable oils, nuts, seeds, and wheat germ. Leafy green vegetables like kale and collards are also good sources. But when you consider that one tablespoon of olive oil gives you a measly 2.6 IU of the vitamin, and two tablespoons of toasted wheat germ only gives you 4 IU, you can see why you must rely on a supplement to get 400 or 800 IU.

BIOFLAVONOIDS AND VITAMIN C

Bioflavonoids are natural chemicals found in plant foods. They are especially plentiful in the inner peel of citrus fruits. They have been reported to have a very weak estrogen-like effect—they are about 50,000 times less potent than your body's own estrogen.

Over the years bioflavonoids have been used to treat hot flashes, as well as vaginal dryness and fluid retention. They're most often given together with vitamin C. It makes sense that the two work best together, since citrus fruits are rich sources of both. Despite the fact that I could not find any published clinical studies supporting their use for hot flash alleviation, bioflavonoids and vitamin C are worth a try. They're both relatively easy to get in the diet, and if taken in appropriate amounts in supplemental form, they pose no risk to otherwise healthy women.

To get more citrus bioflavonoids and vitamin C into your diet, aim to eat at least one citrus fruit, such as an orange or grapefruit, each day. Or drink a glass of unsweetened citrus juice. If you make your juice at home, you can also juice the fruit rinds. If you decide to try this, you may want to stick to unwaxed, organically grown fruits. And make sure to add freshly grated citrus peel to fruit salsas, green salads, salad dressings, and home baked muffins or loaves.

NUTRITION TIP

Boosting your C

Vitamin C is needed to synthesize collagen, a protein that provides support for blood vessel walls, scar tissue, and bones. Vitamin C also bolsters the body's immune system and strengthens resistance to infection. And it's needed to help the body absorb iron from whole grains, fruit, and vegetables. In fact, if you drink a glass of orange or grapefruit juice with your iron-fortified breakfast cereal, you'll absorb up to four times more of the iron.

Since the body can't store vitamin C, you have to consume enough every day through your diet. The recommended daily intake for healthy adult women is 75 milligrams. If you're a smoker, however, you need to get an additional 35 milligrams each day.

Getting enough vitamin C from your diet is relatively easy. For example, having one glass of orange juice at breakfast, a green salad at lunch, and a stalk of broccoli

and baked potato with the skin at dinner will supply more than 300 milligrams of the vitamin. A one-half cup (125-milliliter) serving of raw or cooked broccoli, brussels sprouts, or red pepper, or a one-half cup (125-milliliter) serving of cantaloupe or strawberries all provide more than 50 milligrams of vitamin C.

If you find it difficult to get adequate amounts of vitamin C and bioflavonoids from food, try a vitamin C supplement with added bioflavonoids (if bioflavonoids have been added, this will be stated on the label). Take a 500- to 600-milligram supplement once or twice daily—depending on the brand, one pill will give you approximately 50 to 100 milligrams of bioflavonoids. When you're choosing a vitamin C supplement, buy a product containing a special form of vitamin C known as Ester-C®. This is a patented form of the vitamin that laboratory studies have found to be up to four times more available to the body than regular vitamin C (called ascorbic acid or ascorbate). Many supplement companies offer Ester-C®.

herbal remedies

BLACK COHOSH ROOT

Also known as squawroot, bugbane, and snakeroot, black cohosh (*Cimicifuga racemosa*) has long been used by Native American peoples for treating menstrual and menopausal symptoms. It's also popular in Europe, especially Germany. In Germany it's been used for over 40 years by more than 1.5 million women. Both my clinical experience with clients and the findings from controlled scientific studies indicate that black cohosh is definitely the most promising herbal remedy for treating menopausal symptoms.

When it comes to relieving hot flashes, some research suggests black cohosh to be just as effective as estrogen therapy. How the herb works, though, is currently under scientific debate—in other words, we're not really sure!

Experts do agree that naturally occurring active compounds in black cohosh are able to lower levels of luteinizing hormone (LH)—as you'll recall, high LH levels can trigger hot flashes. These active compounds are called triterpene glycosides or, more generally, phytoestrogens, and are thus in the same class of compounds as the isoflavones found in soybeans. Where the experts don't agree is how these triterpene glycosides actually lower LH levels. Many German studies seem to indicate that they work by acting like weak

estrogen molecules and binding to estrogen receptors. However, recent research has demonstrated that the herb does not have an estrogenic effect and instead, it may lower blood levels of LH by acting on receptors in the brain (remember, it's the hypothalamus that tells your pituitary gland to make LH).[7] Regardless of how black cohosh works to ease hot flashes, its effectiveness has helped many women through menopause.

The advantage black cohosh offers in treating hot flashes is that it doesn't have the side effects associated with hormone therapy. Black cohosh should be your first treatment of choice if estrogen therapy is not an option because of uncomfortable side effects or because you have a higher risk of developing breast cancer. Of course, those of you who have had estrogen-positive breast cancer will likely have an important question to pose here. If black cohosh acts like estrogen, will it increase your risk of getting breast cancer again? The answer is no. A recent study found that black cohosh does not cause estrogen-positive breast cancer cells to grow. Furthermore, the researchers showed that the herb was able to inhibit, rather than promote, the growth of cancer cells.[8] The only side effects that have been reported in a small number of women are mild stomach upset and headache.

RESEARCH FILE

Black cohosh and hot flashes

Need some scientific evidence to help you decide whether or not you'll try an herbal remedy? I certainly don't blame you. In fact, I always make sure that carefully designed scientific research has been done that demonstrates the effectiveness of any herbal remedy I recommend to clients (that goes for vitamins and foods too!). When it comes to black cohosh, the research is not lacking, and positive results have emerged from well controlled studies. At the time of writing this book, ten clinical studies have been reported. Here's a look at a few of the findings:

- **1987, Germany** In this randomized trial, 80 perimenopausal women were given black cohosh root (Remifemin®), standard estrogen therapy, or placebo. After 12 weeks, only the black cohosh extract had significantly improved hot flashes (as well as vaginal dryness and mood changes).
- **1988, Germany** This study followed 60 women under 40 years of age who had had a hysterectomy. Women were randomly assigned either one of three estrogen medications or a standardized extract of black cohosh root

(Remifemin®). After six months, all groups had experienced a significant decline in menopausal symptoms. In this study, the herb was just as effective as estrogen in reducing hot flashes.

- **1991, Germany** Researchers compared black cohosh to placebo with respect to its ability to affect hormone levels in 110 women with menopausal symptoms. After six months, there was a significant drop in the levels of luteinizing hormone (LH) in the black cohosh group. Again, Remifemin® extract was used.
- **2002, Germany** In this controlled, randomized double blind trial, 150 peri- and post-menopausal women were given Remifemin® daily. After six months of treatment, the majority of the women reported a 70 percent reduction in physical and emotional symptoms. [9]

As stated above, I often recommend buying the herbal product used in the scientific research, which in the case of black cohosh is Remifemin®. This product is available in supplement stores, health food stores, and some pharmacies. There are also many other brands that use top quality ingredients and make an effective product. Here's a rule to follow when buying almost any herbal remedy: always buy a product standardized to contain a specified amount of the herb's active ingredient. When an herbal remedy has been standardized, each pill or capsule is guaranteed to give you the specified amount of the active ingredient responsible for the herb's effects. By choosing a standardized product, you're making sure you get your money's worth. Unstandardized brands could contain little, or no, active ingredients. With black cohosh, you're looking for the words "triterpene glycosides." High-quality brands state on the label that each tablet or capsule provides 40 milligrams of black cohosh standardized to contain 2.5 percent triterpene glycosides.

While Remifemin® is sold in 20-milligram tablets, most other brands of black cohosh are sold in 40-milligram tablets. This is because almost all of the studies done with menopausal women used either 40 milligrams twice daily or double this amount, 80 milligrams twice daily. I recommend that you start with 40 milligrams twice a day. Improvement is usually noticed four to eight weeks after you start taking the herb. If you don't notice any change in your hot flashes after six weeks, increase your dosage to 80 milligrams twice daily, but keep in mind that as you increase your dose, you may experience mild stomach upset.

THE bottom LINE...

Leslie's recommendations for relieving hot flashes

1 Eliminate from your diet foods that can make hot flashes worse. Foods and beverages that contain caffeine are prime culprits. Keep your alcohol intake down to no more than one drink per day. Avoid alcohol altogether if you're experiencing hot flashes or if you're under stress. Finally, stay away from spicy foods.

2 Add one serving of soy food to your diet each day.

3 Ensure you're eating 50 milligrams of isoflavones each day.

4 If you're having trouble eating enough soy foods to give you 50 milligrams of isoflavones daily, add 1 to 2 tablespoons (15 to 25 millilitres) of a soy protein powder (made from soy protein isolate) to milk, juice, or a homemade fruit smoothie daily.

5 Start taking 400 IU of vitamin E each day and increase your dosage to 800 IU if necessary. Buy natural source vitamin E. Vitamin E is fat soluble, so take it with a meal that contains a little fat to help its absorption. Don't take vitamin E if you're on blood thinning medication. Check with your physician first.

6 To get more bioflavonoids and vitamin C, add one citrus fruit to your diet each day. Add citrus zest to recipes where appropriate.

7 Take a 500- or 600-milligram supplement of Ester-C® (a special form of vitamin C) with added bioflavonoids once or twice daily. Or, buy a separate bioflavonoid supplement of 250 to 500 milligrams.

8 If you've done all this and your hot flashes are still bothersome, take a standardized extract of black cohosh root. Start with 40 milligrams of the herb, twice daily, morning and evening (40 milligrams is usually the amount found in one tablet or capsule). If you don't find the herb effective after six weeks, take two 40-milligram tablets twice daily. Some high-quality products combine a standardized extract of black cohosh with other ingredients that have been shown to help ease menopausal symptoms. Kyolic® Estro Logic is a supplement developed by gynecologist Dr. Kathleen Fry. In addition to black cohosh, it contains soy isoflavones and other herbs that may improve sleep disturbances and mood swings.

restless nights and insomnia

"I started waking up to find my body soaking wet and cold and the bed sheets literally drenched. I found myself in a constant state of exhaustion. I had to find a cure for these night sweats if I was going to be able to perform properly during the workday."

2

How many of you have woken up feeling hot and bothered, your bed sheets soaking wet? Night sweats cause disrupted sleep in a good number of women in their peri- and post-menopausal years. While many women have no difficulty falling back to sleep, some simply cannot. Night after night of little sleep leaves them feeling exhausted, and that's when many other menopausal symptoms can emerge. Fatigue can lead to irritability, depression, and forgetfulness. But don't get me wrong—I'm not saying that insomnia is the only reason for these symptoms. Hormonal fluctuations that accompany the perimenopausal years can be responsible too. You'll learn more about these fluctuations and their overall potential impact in Chapters 3 and 4.

While insomnia may be the result of nocturnal hot flashes in some cases, some experts believe that something else, something unrelated to hot flashes, interrupts sleep in many peri- and post-menopausal women. Whatever is causing your sleepless nights, you can take action without resorting to prescribed sleeping aids (or a belt of scotch!) before tucking in for the night.

dietary approaches

CUT DOWN ON THE CAFFEINE

No doubt you've heard this before—eat and drink fewer caffeine-containing foods and beverages and you'll sleep better. Still, it's advice that bears repeating. Caffeine stimulates the central nervous system. While one or two cups of coffee in the morning may give you that gentle lift you were hoping for, the fourth or fifth cup can overstimulate your system and cause insomnia (not to mention irritability). My first recommendation to clients wanting to cut down is to avoid caffeine in the afternoon. Replace caffeine-containing beverages with caffeine-free or decaffeinated beverages like herbal tea, mineral water, unsweetened fruit or vegetable juice, or decaffeinated coffee.

How much caffeine is too much?

A daily consumption of 400 to 450 milligrams of caffeine does not pose any risks for healthy people.[1] But remember, this recommendation is based on studies that have investigated the effect of caffeine on blood pressure and other health conditions, not on your ability to sleep soundly. While the upper limit of 450 milligrams won't harm your health, it may keep you up at night—and that may harm your health! Studies have shown that as little as one or two cups of coffee in the morning will affect the quality of your sleep that night. Other studies have found that as little as 100 milligrams of caffeine (the amount found in four ounces or 125 milliliters of coffee) can delay sleep when taken before bedtime, especially in people who don't normally consume caffeine.[2] Caffeine blocks the action of adenosine, a natural brain chemical that slows the body down. If you're having trouble getting to sleep, or you're waking up during the night, aim to consume no more than 200 milligrams per day, and preferably much less.

NUTRITION TIP

Minding your caffeine

Use this chart to find out how much caffeine you're consuming. (And remember that the "Grande" sized cup at Starbucks contains a lot more than six ounces!)

CAFFEINE CONTENT OF COMMON FOODS AND BEVERAGES (MILLIGRAMS)

Coffee, filter drip, 6 oz. (187 ml)	110–180
Coffee, instant, 6 oz. (187 ml)	60–90
Espresso, 2 oz. (60 ml)	90–100
Tea, black, 6 oz. (187 ml)	35
Tea, green, 6 oz. (187 ml)	25
Cola, 12 oz. (375 ml)	35
Dark chocolate, 2 oz. (60 g)	40–50
Chocolate cake, 1 slice	20–30
Excedrin®, 2 tablets	130
Anacin® or Midol, 2 tablets	64

ELIMINATE ALCOHOL

Unfortunately, there are no two ways about it—the effects of alcohol are detrimental to sleep and consuming alcohol will worsen insomnia. Even if you're not suffering from sleep problems, a few drinks certainly can affect the quality of your sleep. Swiss researchers have found that taking a moderate amount of alcohol six hours before bedtime reduces sleep time and increases wakefulness twofold. I know that if I enjoy a couple of glasses of wine in the evening, I inevitably wake up a few times that night. Or worse, I wake up at four in the morning, and can't get back to sleep. Then I'm forced to drag myself through the next day feeling tired and lethargic. Sound familiar? I can remember the good old days when a few drinks wouldn't bother me—I could stay out late and feel great on less than eight hours of sleep. Well, being the good nutritionist I am, I now save my alcohol for the weekend when I can grab a few extra hours of sleep each night. For the sake of sound sleep, a healthy body, and a productive mind, I recommend the same to all my clients.

Do you ever wonder why alcohol affects sleep the way it does? Once absorbed into the bloodstream, alcohol is metabolized (or processed) by the liver at a set rate. If you drink more alcohol than your liver can keep up with (about one drink per hour), alcohol arrives in the brain where it interferes with brain chemicals called neurotransmitters, which are responsible for the transfer of messages from one nerve cell to another.

The neurotransmitters need to be in proper balance for deep, restful sleep to occur. Alcohol has also been reported to impair the REM portion of sleep, a sleep phase very important for physical, emotional, and mental restoration.[3]

At the same time that alcohol robs you of rest, it also tires you further by dehydrating you. Alcohol's dehydrating effect is due to its ability to depress the brain's production of antidiuretic hormone. Without enough antidiuretic hormone, you lose water and minerals through the kidneys. This, in turn, can increase your feeling of fatigue. That's because water makes it possible for you to digest, absorb, and transport nutrients throughout your body. So when you're dehydrated after an evening of drinking alcohol, your cells receive nutrients less efficiently. You also need water to help regulate your body temperature. If you drink too much alcohol (even just a couple of drinks) your body will have trouble properly regulating its temperature. If you're well hydrated, your body has enough fluid to release heat that builds up due to normal metabolism and exercise—every day your body releases heat through your skin in the form of sweat. If you're dehydrated because you're not drinking enough fluids, or you've enjoyed a little too much wine, your body can't release built up heat as efficiently because it doesn't have enough fluid to produce sweat. As a result, you may find your hot flashes get worse after imbibing.

How much alcohol is safe?

If we're talking about health protection, I recommend no more than seven drinks per week for women. This recommendation is based on our current knowledge regarding cancer prevention. But if you're suffering from insomnia, or you want to be at your peak the next day, I suggest you eliminate alcohol from your diet. Instead of having a glass of wine, pour yourself sparkling mineral water and spruce it up with a slice of lime. Or try some of the nonalcoholic wines or beers available. If you're looking for a cocktail, I suggest a virgin Caesar, tomato juice, or a splash of cranberry juice in soda water.

You can also use a few tricks to lessen the effect of alcohol on your sleep:

Drink alcohol with a meal or snack. If you drink alcohol on an empty stomach, about 20 percent is absorbed directly across the walls of your stomach and reaches the brain within a minute. But when the stomach is full of food, alcohol has less chance of touching its walls and passing through them, so the effect on your brain is delayed.

Drink no more than one drink every hour. Since the liver can't metabolize alcohol any faster than this, drinking slowly will ensure your blood alcohol concentration doesn't rise. To help you slow your pace, try alternating alcoholic and nonalcoholic drinks. By the way, one drink is equivalent to 5 ounces (150 milliliters) of wine, 12 ounces (375 milliliters) of beer, 10 ounces (310 milliliters) of wine cooler, or 1.5 ounces (45 milliliters) of liquor. A pint of beer (500 milliliters) counts as two drinks!

EAT CARBOHYDRATE BEFORE BED

If your mother ever told you to drink a glass of warm milk to help you sleep, she was smart. A snack rich in carbohydrate, like a glass of milk, a small bowl of cereal, or a slice of toast, provides the brain with an amino acid called tryptophan. The brain needs tryptophan to manufacture a neurotransmitter called serotonin. And serotonin has been shown to facilitate sleep, improve mood, diminish pain, and even reduce appetite.

I don't often recommend snacks after dinner, especially for clients who are trying to lose weight. But if you follow this suggestion in the spirit I've intended, you won't gain weight. If you want to find out whether carbohydrate helps you fall asleep, eat a small amount of carbohydrate food, or drink a glass of low-fat milk or soy beverage one hour before going to bed. Try this strategy for a week. If your insomnia does not improve, look at other factors that may be disrupting your sleep.

vitamins and minerals

VITAMIN B12

Many studies have found that vitamin B12 promotes sleep, especially in people with sleep disorders. Researchers in Japan have used 1.5 to 3 milligrams of the vitamin each day to restore normal sleep patterns in patients. When vitamin B12 was withheld for two months, sleep disruptions reappeared. A German study found that sleep quality, ability to concentrate, and "feeling refreshed" were significantly correlated with B12 blood levels in healthy men and women.[4]

Exactly how this B vitamin works to influence sleep is not completely understood. Some researchers believe it interacts with melatonin, a natural hormone in the body. Melatonin is involved in maintaining the body's internal clock, which, in turn, regulates the secretion of various hormones. In so doing, melatonin is also thought to help

control sleep and wakefulness patterns. Melatonin production is stimulated by darkness and suppressed by light. It seems that vitamin B12 directly influences melatonin release and metabolism and may prevent disturbances in melatonin balance.

The established recommended dietary allowance (RDA) of vitamin B12 for healthy adults (women and men) is 2.4 micrograms per day. In 1998, the Food and Nutrition Board of the National Academy of Sciences, an organization of American and Canadian scientists who set RDAs for North America, made a new recommendation regarding vitamin B12, saying that people over the age of 50 should get their B12 by eating foods fortified with the vitamin, or by taking a supplement. The board made this recommendation because it is known that up to 30 percent of older adults have lost the ability to properly absorb naturally occurring B12 in foods. To absorb vitamin B12, we must first separate it from food molecules with stomach acid. As we get older, we start to produce less stomach acid. It's estimated that 30 percent of older adults produce very little or no acid, a condition called achlorhydria.

What about a vitamin B12 supplement?

Vitamin B12 is found in all animal foods—meat, poultry, fish, eggs, and dairy products. If you are eating these foods every day, chances are you are meeting your need for B12. Foods fortified with the vitamin include soy beverages, rice beverages, and breakfast cereals (you'll have to check the label to be sure). If you fall into one of the following categories, however, I do recommend you take a B12 supplement:

- You're over 50 years of age.
- You're taking antacid medication for reflux (heartburn) or a stomach ulcer.
- You're a strict vegetarian who eats no animal foods.

Vitamin B12 supplements come in 500 or 1,000 microgram sizes. To ensure you're meeting your requirements, I recommend 500 micrograms once a day, with a meal. The active form of vitamin B12, called methylcobalamin, is preferred over cyanocobalamin.

NUTRITION TIP

Boosting your B12

Nutrition authorities agree that you need 2.4 micrograms of vitamin B12 each day. Are you getting enough? Well, here's a list of foods high in B12 that will help you boost your intake in no time.

VITAMIN B12 CONTENT OF COMMON FOODS (MICROGRAMS)

Beef, flank, cooked, 3 oz. (90 g)	2.8
Pork center loin, cooked, 3 oz. (90 g)	0.5
Chicken breast, cooked, 5 oz. (150 g)	0.3
Chicken leg, cooked, 6 oz. (180 g)	0.2
Salmon, sockeye, cooked, 3 oz. (90 g)	4.9
Tuna, canned and drained, 3 oz. (90 g)	2.5
Mussels, cooked, 3 oz. (90 g)	20
Milk, 1 cup (250 ml)	0.9
Yogurt, 3/4 cup (175 ml)	0.9
Cheese, cheddar 1 oz. (30 g)	0.2
Cottage cheese, 1%, 1/2 cup (125 ml)	0.7
Egg, 1 whole	0.6
Fortified soy drink, 1 cup (250 ml)	1.0
Fortified rice drink, 1 cup (250 ml)	1.0

herbal remedies

VALERIAN

Native to Europe, this plant has a mild sedative effect on the central nervous system. Valerian root (*Valeriana officinalis*) makes getting to sleep easier and it increases the amount of time you spend in deep sleep. Unlike popular prescribed sleeping pills, valerian does not lead to dependence or addiction. And it usually doesn't cause a morning "hangover"—when compared to drugs like Valium® and Xanax®, valerian binds very weakly to brain receptors.[5] Scientists have learned that valerian promotes sleep by increasing the levels of a brain chemical called gamma-aminobutyric acid (GABA).

GABA plays a key role in reducing feelings of stress and anxiety. Scientists can actually measure an increased concentration of GABA in the brains of individuals who have taken valerian. And, it seems, not only is valerian able to increase the amount of GABA the brain secretes, it also helps prevent the levels from falling too quickly. The net result for someone who takes valerian is that GABA levels stay high for a longer period of time.

Much of the research on valerian and sleep dates back to the mid-1980s and early 1990s. At least 10 controlled clinical studies have evaluated valerian's effects in both healthy people and in patients with sleep disorders. In one double blind study (both the researchers and the subjects didn't know who was getting valerian or placebo), 89 percent of those taking 400 milligrams of valerian root reported improved sleep; indeed 44 percent of the study participants taking valerian reported perfect sleep. Two other studies done with healthy people found that valerian was able to significantly reduce the time it takes to fall asleep and improve the quality of sleep. In both studies, participants used 400 to 450 milligrams of valerian daily.

Although the active ingredients in valerian have not yet been confirmed, many experts attribute the herb's effect to certain essential oils found in the root. For this reason, I recommend that you buy a product standardized to contain at least 0.5 percent essential oils or 0.8 percent valerenic acid. Take 400 to 900 milligrams in capsule or tablet form, from 45 minutes to one hour before going to bed. If you wake up feeling groggy, reduce the dose. And don't expect results overnight. One German study found that the herb worked better for people suffering chronic insomnia when used over a period of time.[6] Valerian has a delayed onset of action and it should be taken for two to four weeks to achieve an improvement in sleep.

This herbal remedy may cause stomach upset and headache. Although most studies find no effect of valerian on morning alertness and concentration, occasionally valerian may cause morning drowsiness. Do not take valerian with alcohol or sedative medications. Valerian should not be taken during pregnancy and breastfeeding since there is insufficient reliable information on its use during this time.

other ways to help yourself sleep

Here are some further suggestions for increasing your likelihood of getting a restful night's sleep:

1 Don't forget about exercise. Regular physical activity can bring on a feeling of tiredness later in the day. And research shows exercise also helps you rest better by increasing your blood level of melatonin, which, as I discussed above, plays an important role in regulating sleep-wake cycles. I recommend a minimum of three to four cardiovascular exercise sessions each week. Try brisk walking, jogging, biking, stair climbing, swimming, cross-country skiing, or aerobics classes. If you haven't been exercising at all, see your doctor before you begin. Then start at 20 minutes per session and gradually build up to 30 to 45 minutes each time. Avoid exercising too close to bedtime (in other words, after dinner) since vigorous activity before going to bed may keep you awake a little longer.

2 Get into a nighttime routine that you associate with going to sleep. Reading a book, drinking a cup of chamomile tea, or taking a warm bath can all help slow your mind and body, preparing you for sleep. Avoid watching television or doing office work within one hour before your bedtime. Instead, do something that helps you quiet your mind and relax.

3 If worries and tension related to stress are keeping you awake at night, practice relaxation techniques. Learn about deep breathing or meditation. I have many clients who practice yoga regularly and can't say enough about its relaxing effect. If these techniques don't work for you, consider speaking with a stress management counselor.

4 When you've done everything right and you still can't sleep (or you have no energy) it's time to visit your family doctor. Both poor sleep patterns and ongoing fatigue may be the symptoms of an underlying health problem. A physical exam and blood tests can often help determine the cause.

- Sleep disturbances can cause a loss of restorative sleep, the period during which your body rebuilds its vital forces. Depression, stress, obesity, muscle cramps, restless legs, and sleep-related breathing disorders such as sleep apnea can all interfere with a good night's rest. Referral to a sleep disorder clinic may be appropriate to determine the underlying cause of ongoing sleep disturbances.

THE Bottom LINE...

Leslie's recommendations for coping with insomnia

1 Cut back your caffeine intake to a daily maximum of 450 milligrams. Preferably, however, consume less than 200 milligrams daily.

2 If you do drink alcohol and you don't want to give it up (which I recommend doing if you're experiencing sleep problems), aim for no more than seven drinks per week. To lessen alcohol's impact on your brain, have your drink with a meal or a snack.

3 Try a light carbohydrate-rich snack 30 to 60 minutes before going to bed to increase the level of sleep-promoting serotonin in your brain. Good choices include a banana, a slice of toast, a glass of milk or calcium-fortified soy beverage, or a small bowl of cereal. Avoid heavy meals in the evening.

4 Make sure you get enough B12 in your diet. If you can't get enough B12 through food, or if you don't produce enough stomach acid to absorb it efficiently, take 500 micrograms of vitamin B12 in supplement form daily.

5 For short-term insomnia, consider taking 400 to 900 milligrams of valerian root extract one hour before going to bed. Buy a product standardized to contain at least 0.5 percent essential oils or 0.8 percent valerenic acid. Use valerian to manage acute bouts of insomnia. Long-term (longer than three months) daily use of valerian may cause headaches and sleepiness in some individuals.

6 Don't forget to investigate other possible causes of chronic sleep problems: a lack of exercise, too much stress, or a possible medical problem.

mood swings

"One minute I feel fine; the next minute I am irritable, cranky, irrational, and depressed for no particular reason. I am normally a high-energy type person, but I find that I just can't get myself in gear these days, no matter how well I eat, sleep, or exercise."

3

Most women describe the mood swings of perimenopause as being like those of premenstrual syndrome (PMS). They talk about crying at the drop of a hat, or blowing up at a family member for no good reason. Some women describe day-long bad moods when everyone and everything annoys them. If you've ever suffered through these kinds of feelings during the premenstrual period, then you know they're not fun. And they can be disruptive to both your personal life and work life.

Not all women experience mood swings during the transition years, however. Studies show that if a woman has had a hysterectomy she's more likely to become depressed.[1] And it's my clinical observation that women who tend to be irritable and cranky during the premenstrual period experience the same mood swings at perimenopause. Those mood changes may be minor for some women and major for others.

Mood swings are partly due to a loss of estrogen. Although we don't yet fully understand what happens in the body during a woman's menstrual cycle, we do know that natural chemicals in the brain, called neurotransmitters, respond to hormonal fluctuations that occur during the cycle. Neurotransmitters are responsible for the transfer of messages from one nerve cell to another. These chemicals are released at the end of a nerve cell when a nerve impulse arrives there. Once they are released, neurotransmitters move to the next nerve cell and alter the membrane of that second cell so as to

either inhibit or excite it. The neurotransmitters that excite nerve fibers make us more alert, while the ones that inhibit nerve fibers calm us down.

The hormonal ups and downs of perimenopause may also make us more sensitive than usual to our feelings. And certainly for some women the approach of menopause itself can be upsetting. If you're unhappy or dissatisfied with your life, the signal that one life phase is ending and a new one is beginning can be quite distressing. Sometimes a feeling of unfulfillment, whether it's a result of boredom at work or of an unhappy marriage, can create anxiety about the post-menopausal years—we fear that if we're not happy now, menopause will make matters worse. Other women fear they are leaving behind their youthful, productive years.

Regardless of what is responsible for your mood swings, there are things you can do to calm them down. Especially if they're interfering with your enjoyment of life, it's important to take action. If my suggestions don't help and your mood changes continue to disrupt your life, consult your family doctor.

dietary approaches

For centuries, people have used food to alter their mood. What our ancestors didn't realize was that by eating certain foods they were actually influencing their brain chemistry. Modern science, however, now recognizes that the foods we eat can affect our mood by modifying the brain's production and release of neurotransmitters. Our brain and nervous system rely on thirty to forty neurotransmitters to do their work; researchers believe that five or six of these can be affected by food. Nutrients like carbohydrates, proteins, and vitamins are able to cross the "blood-brain barrier"—a physiological mechanism that limits the types of substances that can enter the brain—and be converted into neurotransmitters.

Studies have shown that specific neurotransmitters affect our mood in predictable ways. It's not known for sure, though, whether eating meals designed to increase the level of certain neurotransmitters is an effective way to recreate the moods inspired by that neurotransmitter. Keep in mind that everyone is different and we may not all respond in the same way. What is true, however, is that any drastic change in your normal eating patterns (crash dieting, binging on sweets, or skipping meals) can alter neurotransmitter levels and your mood. So the first step to smoothing out your mood

is to eat at regular intervals throughout the day—don't wait more than four to five hours between meals, and if you do have to go longer than that without eating, grab a between-meal snack. No more meal skipping! The second step? Eliminate caffeine and alcohol, two beverages known to increase anxiety, irritability, and feelings of depression. Your next step? Read on!

CARBOHYDRATE-RICH FOODS

Without a doubt, carbohydrates have been one of the most widely studied nutrients with respect to their effect on mood. High-carbohydrate meals have been associated with a calming, relaxing effect and even drowsiness. A high-carbohydrate meal like pasta increases the brain levels of an amino acid called tryptophan. The brain then uses tryptophan to make the neurotransmitter serotonin. Many studies have linked high serotonin levels with happier moods and low levels with mild depression and irritability. Most of the research in this area has been done with women who have PMS. One study found that meals high in carbohydrate improved mood in young women within 30 minutes of consumption. Another study found that when women with PMS took a high-carbohydrate drink their mood improved within 90 minutes.[2]

If you're feeling depressed or irritable, try a high-carbohydrate meal that contains very little protein. Since protein foods are made up of many different amino acids, the more protein you eat, whether it's chicken, meat, or fish, the more amino acids will enter your bloodstream. And that means there will be many other amino acids available to compete with tryptophan for entry into the brain. Remember that you want tryptophan levels to rise in your brain so that you can produce more serotonin, which can make you feel calm and relaxed. Try pasta with tomato sauce, a toasted whole grain bagel with jam, or a bowl of cereal with low-fat milk.

If your mood needs a boost during the day, reach for a high-carbohydrate beverage. In fact, the next time you feel the need, drop by a pharmacy and pick up a liquid dietary supplement called PMS Escape. This powdered drink mix, which comes in several flavors, is made from a blend of carbohydrates, vitamins, and minerals. It's thought to act by boosting serotonin levels in the brain. The product was developed by Judith Wurtman, Ph.D, a research scientist at the Massachusetts Institute of Technology (MIT) and a pioneer researcher of the carbohydrate-serotonin connection.

If you can't find PMS Escape, you can buy a carbohydrate replacement drink from your local health food store or sports equipment store. These drinks are used by athletes to help rebuild muscle carbohydrate stores after a hard workout. They're sold as powder mixes or ready-to-drink and come in a variety of flavors.

RESEARCH FILE

Attention chocoholics!

Ever wondered why chocolate lifts your spirits? Well, it seems there just might be a scientific explanation. Researchers attribute chocolate's mood enhancing ability to a number of its ingredients.

- The sugar in chocolate triggers the release of serotonin in the brain, producing a calm, relaxed feeling. Interestingly though, one recent study looked at chocolate addicts and found that after eating chocolate, mood did not improve. In fact, these women felt guilty after eating chocolate. The researchers summarized: "Although chocolate is a food which provides pleasure, for those who consider themselves chocolate addicts, any pleasure experienced is short lived and accompanied by feelings of guilt."
- The caffeine in chocolate stimulates the central nervous system to give you a quick lift. Since milk chocolate contains very little caffeine, dark chocolate is more likely to give you a hit.
- Chocolate contains fatlike compounds that have been shown to target receptors in the brain and produce heightened sensitivity and euphoria.[3]

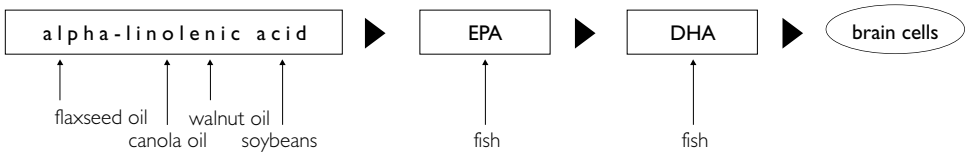
Other experts argue that our love of chocolate is purely sensory, and that it's our desire for chocolate's wonderful smell, flavor, and rich texture that keeps us coming back for more (sounds about right to me). Indeed, at this time, most of the evidence linking chocolate with mood improvement is anecdotal. Still, it's nice to be able to justify that (occasional) chocolate bar!

OMEGA-3 FATS

It seems that the type of fat you eat can affect your mood. Scientists have learned that levels of omega-3 fats are lower in people who are depressed.[4] These special polyunsat-

urated oils are important components of nerve and brain cell membranes and help cells communicate messages effectively. Omega-3 fats may also be crucial for the formation of brain hormones that help stabilize mood.

The best sources of omega-3 oils are cold-water fish. Salmon, mackerel, herring, sardines, and albacore tuna are good choices. They all contain two special omega-3 fats with long, barely pronounceable names: docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). It's a lack of DHA that seems to be an important factor in depression. If you don't care to eat fish, there are other ways to get more DHA into your cell membranes. You body uses foods rich in a fat called alpha-linolenic acid to make some DHA. Flaxseed oil, canola oil, walnut oil, soybeans, and green leafy vegetables all contain alpha-linolenic acid, an essential fatty acid that must be supplied in the diet. If you don't get enough of this fatty acid, your body can't make DHA. With today's emphasis on low-fat and fat-free products, many experts fear we're not getting enough alpha-linolenic acid.



You'll see later on that the omega-3 family of fats does more than just prevent depression. Studies show that these fats appear to play important roles in fighting heart disease and breast cancer. But more on that later. In the meantime, concentrate on getting more omega-3 fats into your diet. Try to eat fish at least three times per week. Omega-3 eggs are another way to get more alpha-linolenic acid into your diet. The chickens that lay these eggs eat a diet high in flaxseed. One egg provides about 25 to 33 percent of the recommended daily intake of omega-3 fatty acids. Use flaxseed oil in salad dressings and canola oil in baking and cooking. In fact, try to get the majority of your added fats and oils from omega-3 sources. If you're allowing yourself four teaspoons (20 milliliters) of added fat a day, make sure that two or three of these (10 to 15 milliliters) come from omega-3 sources.

RESEARCH FILE

Fish oils and depression

Many studies have suggested that a lack of omega-3 fats in a person's diet is an important factor in depression. Scientists have found that the omega-3 content of red blood cell membranes is lower in people who are depressed. Does that mean that if you eat more omega-3 fats, like fish oil, your depression will lift? Well, Boston researchers from Harvard University and the Brigham and Women's Hospital have tried to answer that question. They studied 30 individuals with manic depression (also known as bipolar disorder) who were taking medication. The four-month study found that compared to placebo pills, people taking a daily dose of omega-3s from fish oil capsules had significantly longer remission periods from their depression. In fact, those who took the fish oil were three times more likely to maintain stable moods.[5]

While this research is interesting, it doesn't mean you should rush out to buy fish oil capsules if you're feeling a little down. Keep in mind that this was a study involving people with serious depression, serious enough to put them on medication. And some fish oil supplements can be dangerous if taken in large doses for a long period of time. They contain a fair amount of vitamins A and D, which can be toxic in large doses. Your best bet is to follow my recommendations for getting enough omega-3 fat into your daily diet. And if you don't like eating fish and want to add a supplement, speak to your nutritionist or physician first.

Using flax oil

If you've never used flaxseed oil before you might like a few pointers. You'll find this healthy oil in the refrigerated foods section of your health food store or supermarket. Make sure you buy a brand bottled in opaque plastic or dark glass. And when you take the flaxseed oil home, put it right back in your fridge—omega-3 fats are sensitive to light and heat and turn rancid quickly if not stored properly. Because of its sensitivity to heat, flaxseed oil should never be used in recipes that call for heating. Instead, use this oil in salad dressings, dips, and other unheated dishes. If you want to add it to a cooked dish like soup, do so just before serving. Check out www.omeganutrition.com for recipes using flaxseed oil.

vitamins and minerals

VITAMIN B6

Even marginal deficiencies of the B vitamins have been associated with irritability, depression, and mood changes. For instance, one study found that vitamin B6-deficient mothers were less responsive to their newborns and were more likely to have older siblings care for them than mothers who consumed adequate amounts of B6. If you have ever suffered from PMS, chances are that you have already heard about vitamin B6. This B vitamin has been the focus of study in more than 900 women suffering from PMS (nine clinical studies have been published at the time of this writing). A recent review of this research found that doses of vitamin B6 of up to 100 milligrams daily bring about significant improvement in premenstrual symptoms.[6] Based on the evidence available, and the relationship I've observed between the mood swings of PMS and perimenopause, a daily supplement of vitamin B6 seems likely to improve your mood and smooth out the emotional roller coaster rides experienced by women suffering from perimenopausal depression or mood swings.

How does this vitamin affect your mood? Well, we find ourselves returning to that soothing brain chemical, serotonin. It turns out that the body uses vitamin B6 to form an important enzyme needed to convert the amino acid tryptophan into serotonin in the brain.

Healthy women need 1.6 milligrams of vitamin B6 each day. The best sources of B6 are high-protein foods like meat, fish, and poultry. Other good sources include whole grains, bananas, and potatoes.

NUTRITION TIP

Boosting your B6

If your diet lacks protein foods and whole grains, chances are you're running low on vitamin B6. Here are a few foods that will pack more B6 into your diet.

VITAMIN B6 CONTENT OF COMMON FOODS (MILLIGRAMS)

Meat

Beef, flank, cooked, 3 oz. (90 g)	0.3
Pork center loin, cooked, 3 oz. (90 g)	0.3

Continued on next page

Chicken breast, cooked, 4.5 oz. (140 g)	0.3
Chicken leg, cooked, 6 oz. (180 g)	0.2

Fish

Salmon, sockeye, cooked, 3 oz. (90 g)	0.2
Tuna, canned and drained, 3 oz. (90 g)	0.4

Cereals

100% bran cereal, 1/2 cup (125 ml)	0.5
Cereal, whole grain flakes, 2/3 cup (160 ml)	0.5

Fruits and Vegetables

Avocado, Florida, 1/2 medium	0.4
Avocado, California, 1/2 medium	0.2
Banana, 1 medium	0.7
Potato, baked, 1 medium w/skin	0.7

What about a vitamin B6 supplement?

If you're feeling blue and you'd like to try a supplement, reach for 50 to 100 milligrams of vitamin B6 once a day. This is the amount that's been used in the research studies done to date. However, you need to know that taking only one B vitamin in high doses can upset your body's balance, because all the B vitamins work together (there are eight different B vitamins). For this reason I recommend using a B-complex supplement that contains all of the Bs—I suggest a supplement that contains 50 to 100 milligrams of B6. If you do decide to take vitamin B6 alone, don't take more than 100 milligrams per day. Too much vitamin B6 taken over a period of time can cause irreversible nerve damage.

herbal remedies

DEPRESSION AND ST. JOHN'S WORT

St. John's Wort (*Hypericum perforatum*) is a yellow-flowered plant that has been heralded for centuries for its ability to balance emotions. In its modern, standardized

form, it has been widely used for years in Europe to treat both mild depression and Seasonal Affective Disorder (SAD), a mood disorder related to the absence of light during the winter. In 1997, British researchers analyzed 26 controlled studies involving 1,700 patients. The report concluded that the herb was as *effective as certain antidepressant drugs* in treating mild to moderate depression. There's no question in my mind that the evidence for this herb's effectiveness is strong and convincing.

Scientists are still trying to determine exactly how this herbal remedy works. Many experts believe that St. John's Wort acts to keep brain serotonin levels high for longer periods of time than usual, just like the popular antidepressant drugs Paxil®, Zoloft®, and Prozac®.

The power of St. John's Wort lies in two active ingredients, called hypericin and hyperforin. Researchers today attribute much of the herb's effectiveness to hyperforin. A large German study has found that people who take a St. John's Wort extract containing a higher amount of hyperforin report better improvement in symptoms than when they take an extract containing a lesser amount. In fact, 70 percent of study participants reported their depression was much or very much improved after using the high-hyperforin-content St. John's Wort. High hyperforin content in a St. John's Wort extract has also been shown to cause greater brain wave activity, providing more evidence that it's hyperforin, not hypericin, that influences serotonin levels.[7]

Maybe you're wondering what all this science talk has to do with you. Well, the research results should guide you when it comes to buying a St. John's Wort supplement at your local health food store. As I've said before, I always try to recommend herbal extracts that have been backed by scientific study. In the case of St. John's Wort, you want to look for a product standardized to contain 0.3 percent hypericin, and at least 3 percent hyperforin.

To receive full benefits from St. John's Wort, you need to take 300 milligrams of standardized extract three times daily. The herb has a strong record of safety. However, in a few cases it has been reported to cause sensitivity to sunlight in very light-skinned individuals. It should not be used during pregnancy and breastfeeding. St. John's Wort has the potential to interact with a number of medications. Do not take the herb if you are taking indinavir, cyclosporine, theophylline, warfarin, oral contraceptives, or digoxin. I don't advise that you start taking St. John's Wort if you're currently on antidepressant therapy. Under your physician's guidance, it is possible to taper off your use

of Paxil®, Prozac®, or Zoloft® and gradually increase the herb dose while decreasing the drug dose. If you're taking any other antidepressant drug, do not take it concurrently with St. John's Wort. You must wait a week or two after stopping the medication before taking the herb. Always consult your physician first before stopping use of any medication.

ANXIETY AND KAVA KAVA

Perhaps it's not mild depression that's plaguing you. Perhaps rather than feeling blue, you're experiencing increased nervousness, restlessness, and the feeling that something is wrong. Increased anxiety is a mood change often reported by perimenopausal women. Anxiety is described by psychologists as a feeling of apprehension, uncertainty, and fear. It's also associated with physical changes—increased heart rate, sweating, and even tremors. Anxiety can sometimes cause insomnia, or make existing sleep problems worse.

That being said, enter the latest herbal remedy to hit the market: kava kava (*Piper methysticum*). This herbal elixir is extracted from the roots of the South Pacific kava shrub. The use of kava kava predates written history in this area. Europeans first documented the kava drinking ceremonies of Polynesian peoples in the 18th century. Kava drinkers experienced greater tranquility and sociability, and an overall calming, relaxing effect. If the drink was strong enough the user went to sleep. Kava does not, however, produce a hangover. Today, kava extract is used in low doses to soothe the nerves without interfering with alertness, and in higher doses it's an effective sleeping aid.

Experts believe that kava's active ingredients, called kavalactones, exert their effect by acting on the limbic system of the brain, the center of our emotions. Research has found kava to have therapeutic value in treating anxiety. One double blind study using a standardized kava extract confirmed the herb's effectiveness by measuring its anti-anxiety effect with the Hamilton Anxiety Scale, a standard test used by psychiatrists to measure anxiety levels. Another study found that menopausal women with anxiety disorders obtained significant relief from kava after just one week; relief levels reached their plateau after one month. Women in the study did not experience the negative side effects caused by traditional drugs like Valium®.[8]

According to the research the most effective kava extracts are standardized to contain 30 percent kavalactones. The dosages of kava extracts used in the studies deliver

anywhere from 60 to 120 milligrams of kavalactones daily. For most products, this translates into one to three tablets or capsules daily. Start with one standardized tablet. If you find this doesn't help your symptoms, increase the dose, up to a maximum of three tablets or capsules daily.

Until recently, kava was considered a safe herb, but there is a growing number of reports from Europe that describe liver damage in those taking kava. In fact, kava has been banned in Switzerland, Germany and Canada as a result of this concern. If you decide to use kava, *inform your physician first.* Users to date also have experienced such side effects as mild stomach upset, headaches, or dizziness. The German Commission E advises consumers not to take kava for longer than three months without medical advice.

THE bottom LINE...

Leslie's recommendations for preventing mood swings

1. Eat three meals each day plus one or two snacks. My general rule is to go no longer than four to five hours without eating during the day. If there's a longer gap than this between your meals, plan for a between-meal snack.
2. Eat between 5 and 12 servings of grain foods and 5 to 10 fruit and vegetable servings each day to ensure you get enough carbohydrate in your diet.
3. Eliminate caffeine-containing beverages and foods. Caffeine increases anxiety and irritability in some individuals.
4. Get more omega-3 fats into your diet. Eat fish three times each week. Make sure at least one-half of your added fats and oils are rich in the omega-3 fat called alpha-linolenic acid, or ALA (i.e., at least two out of four teaspoons).
5. Eliminate alcoholic beverages, which can worsen feelings of depression.
6. Make sure you're getting enough vitamin B6 in your diet, since this nutrient is needed to convert the amino acid tryptophan to serotonin.
7. If you suffer from mild depression and you're already eating well and taking a multivitamin and mineral pill, try a daily 50- or 100-milligram B6 supplement. If you're not taking a multivitamin and mineral supplement, take a B complex supplement every day (check the ingredients to make sure it gives you 50 to 100 milligrams of B6).

8 If you've tried B6 and it didn't help your depression, take a standardized extract of St. John's Wort. Take 300 milligrams three times daily. Make sure to buy a product that is standardized to contain 0.3 percent hypericin and 3 percent hyperforin.

9 If you're experiencing anxiety or panic attacks, don't take kava without consulting your physician first.

10 If your mood swings do not improve with dietary changes or the recommended supplements, consult your doctor. Serious emotional problems may require medication. If perimenopausal mood changes take over your life, a psychologist can also be helpful in helping you discover the underlying causes of your stress and teaching you new techniques for coping with it.

forgetfulness and fuzzy thinking

"I have always thought my mind was pretty sharp. For the last year or so, my brain has become like peach fuzz. I have difficulty remembering the names of people I worked with less than a year ago; I constantly misplace things; I go into a room and can't remember why I was going there. It's very frustrating."

4

Can't remember where you left your wallet? Or perhaps your next door neighbor's name has recently eluded you at the most embarrassing possible moment? We've all had memory lapses at one time or another. But there is also a definite link between brain power and hormonal fluctuations. If you have children, think back to the last time you were pregnant. If you're like many of my friends, you probably felt that your brain had turned to mush. Well, going through perimenopause can affect your ability to think and concentrate in the same way. Fortunately, this mid-life brain drain is temporary. You won't continue to forget simple things (like your phone number) forever.

Sometimes other things besides perimenopausal hormonal fluctations may contribute to forgetfulness. For starters, we have to face the fact that there's an aging process at work. The older we get, the more short-term memory we lose. That goes for both women and men. Finnish researchers studied 70 women between the ages of 47 and 65, and found that the results of most tests of mental performance were correlated with age. Older women were slower, and made more mistakes than younger women. When these women were given estrogen replacement therapy for three months (short-term use), their cognitive abilities did not improve.[1] It seems that a little memory loss is a natural part of aging.

Menopausal symptoms can cause memory problems, too. Certainly insomnia and fatigue can reduce your ability to think clearly. And sometimes the stress of experiencing physical changes or emotional turmoil related to menopause can affect your mental performance.

When it comes to hormonal changes, scientists have collected a fair amount of evidence that shows that estrogen affects aspects of brain chemistry and structure that are important for memory, and that the loss of estrogen associated with menopause may be largely responsible for the decline in memory that some women experience in their later years. Scientists have theorized that estrogen is needed for the transfer of nerve messages to specific regions in the brain.

Does all this mean that estrogen replacement therapy might help preserve memory and prevent senility? Some controlled studies demonstrate that estrogen use in menopausal women enhances short- and long-term memory and increases the capacity to learn new material. An overview of ten observational studies of post-menopausal estrogen use published in the *Journal of the American Medical Association* (these were not placebo-controlled trials) suggests that women on estrogen therapy have a 29 percent lower risk of developing dementia than those who don't use supplemental estrogen. Studies have also found estrogen use to be associated with a lower risk of Alzheimer's disease. Since June 1997, four controlled trials have investigated the effect of estrogen in women with Alzheimer's disease. Although the results look promising, many of these studies were either small, of short duration, or poorly controlled.[2]

At this stage in the game, it's too soon to say that estrogen therapy prevents a decline in mental prowess, or prevents dementia. Until well-controlled, larger, longer studies give us clearer answers, there are a few things you can do right now to sharpen your thinking and slow down the aging of your brain.

dietary approaches

EAT BREAKFAST EVERY DAY

Parents tell their children to eat breakfast time and time again. Well, what's good for kids is good for you, too. Many studies of both children and adults have shown that compared to breakfast eaters, individuals who skip the morning meal do not score as well on tests of mental performance that same morning. Breakfast skipping appears to

affect recall and memory tasks more than any other cognitive function.[3] One reason we don't perform well without breakfast is that after a night of sleeping we wake up in a fasting state. That means our blood glucose (blood sugar) levels are low—and blood glucose supplies energy to the brain. Breakfast foods supply carbohydrates that are converted to glucose in the bloodstream, and supply the energy needed for peak mental performance.

Breakfast also supplies key nutrients, including important B vitamins, iron, and calcium. Research has shown that when we skip breakfast, we usually don't manage to catch up later in the day on our intake of the nutrients we missed.

So what's the best breakfast? I recommend having some carbohydrate to elevate blood glucose and a little protein to help sustain energy levels longer. Eating protein has this effect partly because it takes longer to digest. As a result, the carbohydrate you eat with protein is converted to glucose more slowly. In a sense, by eating a little protein with the carbohydrate, you are giving yourself "time release" energy, rather than sharply elevating your blood glucose all at once. Following are a few breakfast ideas that meet my criteria—and also help you meet your daily calcium and vitamin C requirements:

- Whole grain cereal with low-fat milk or calcium-fortified soy beverage. Top with fruit or have a small glass of citrus juice. To increase your fiber intake, choose a breakfast cereal that contains at least 4 grams of fiber per serving. The nutrition information panel will give you the cereal's fiber content.
- Whole grain toast with a poached or hard-boiled egg and a fruit salad.
- Homemade breakfast smoothie made with a calcium-fortified soy beverage, orange juice, and a banana. Add soy protein isolate powder or egg whites for a protein boost.
- In a hurry? If you usually eat breakfast running out the door, grab a piece of fruit, a cereal bar, and a low-fat yogurt for protein (and calcium). You might not be able to eat the yogurt in the car or on the bus, but you can certainly eat it when you get to work.

HIGH PROTEIN AT MIDDAY

Many of my clients complain that they feel sleepy or lethargic after lunch. If you want to be sharp and feel more energetic, try eating protein, vegetables, and fruit. Here's why.

The body breaks down protein-rich foods like meat, poultry, and fish into smaller units called amino acids. Amino acids are the body's building blocks for making muscle, hormones, enzymes, and brain chemicals called neurotransmitters. If you've read Chapter 3, on mood swings, then you already know all about neurotransmitters. If not, check the chapter out. A high-protein meal causes a rise in blood levels of a specific amino acid called tyrosine. Once in the brain, tyrosine is converted to the neurotransmitters called dopamine and norepinephrine. These neurotransmitters have been found to improve alertness, sharpen thinking, and enhance energy levels.

What does a high-protein lunch look like? Here are a few examples of what might fit the bill:

- Large green salad with 3 to 4 ounces (90 to 120 grams) of salmon or grilled chicken, glass of milk or soy beverage, piece of fruit.
- Stir-fried chicken or tofu with plenty of vegetables, a piece of fruit, water.
- Omelet served with a green salad or steamed vegetables, fruit salad, water.

I'll often grill an extra piece of fish or chicken at dinner and bring it to work with me for lunch the next day. I'll also steam extra vegetables at dinner and enjoy them the next day cold, or I'll serve the protein on a bed of greens. Keep in mind, though, that a high-protein lunch doesn't give you enough energy to carry you through the rest of the day. You will need a snack to boost your blood sugar levels about three to four hours after lunch. Even when you eat a starchy lunch, your blood sugar levels normally decline three to four hours later. To prevent that mid-afternoon drop in blood glucose and mental performance, fuel your brain with a snack combining carbohydrate and protein: fruit and yogurt, or whole grain crackers and low-fat cheese.

GET MORE OMEGA-3 FATS

As you might have read in Chapter 3, the type of fat we eat is very important for the healthy functioning of our brain. A large proportion of the communicating membranes of the brain is made up of two omega-3 fats, docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Your brain cells must constantly refresh themselves with a new supply of omega-3 fats. When we eat oily fish like salmon, trout, and sardines, we get a good supply of EPA and DHA. But a small amount of DHA can also be made inside the body from another omega-3 fat called alpha-linolenic acid (ALA). ALA is plentiful in flaxseed oil, canola oil, and walnut oil. It's called an essential fatty acid

because it's essential to our health *and* our bodies cannot make it—it must be supplied by our diet.

While most Americans likely eat too much fat, experts are concerned that we may not be getting enough omega-3 fats for optimal brain health. To get more of them into your diet, aim to consume the following:

- Three to six ounces (90 to 180 grams) of fish high in omega-3 oils at least three times a week.
- Use vegetable oils rich in omega-3 fats. Try to get at least 2 to 3 teaspoons per day of canola, flaxseed, or walnut oil. Corn, sunflower, safflower, and olive oils contain almost no omega-3 fats.

vitamins and minerals

CHOLINE

Although not an official vitamin, choline is a member of the B vitamin family. It's found in egg yolks, organ meats, and legumes. It's one of the building blocks used to manufacture a memory neurotransmitter called acetylcholine. Levels of acetylcholine increase in proportion to the amount of choline in the diet. Choline supplements have been shown to enhance memory and reaction time in animals, particularly aging animals. Researchers currently believe that choline supplements will improve the brain's ability to do its tasks only in people who are actually deficient in the nutrient. Stress and aging can deplete choline levels.

While we don't yet know if supplemental choline will improve memory in people who have normal choline levels, it's still important to get enough of this nutrient in your diet. In fact, in 1998 the Food and Nutrition Board of the National Academy of Sciences, a body consisting of U.S. and Canadian experts, released for the very first time a recommended daily intake for choline. There is evidence that choline may be needed in the diet because the amount synthesized by our body may be insufficient to meet our needs. Healthy women need 425 milligrams of choline each day. The best food sources are egg yolks, liver and other organ meats, brewer's yeast, wheat germ, soybeans, peanuts, and green peas.

If you don't regularly eat egg yolks, organ meats, or legumes, you can get choline from lecithin supplements. The maximum safe dosage is 3,500 milligrams (3.5 grams)

of choline per day. Be warned that taking large amounts of choline can cause low blood pressure and a fishy body odor in some people (pass the soybeans, please!).

IRON

You're probably familiar with iron's role in preventing anemia. When your diet lacks iron, your red blood cells become less efficient at transporting oxygen to your cells for energy. Eventually your body iron stores run low, and you end up feeling tired and lethargic. At this point a blood test will diagnose iron deficiency anemia. But you might not have realized that iron is also used to make certain brain neurotransmitters, in particular the neurotransmitters that regulate the ability to pay attention. It's important to keep in mind that long before red blood cells are depleted of iron and anemia is diagnosed by a standard blood test, a developing iron deficiency can affect your mental performance. And because of the neurotransmitter link, a deficiency of iron can also directly affect your mood, attention span, and learning ability.

NUTRITION TIP

Pumping iron

To help you stay alert, energetic, and focussed, make a point of adding a few of the following foods to your daily diet—they all top the list when it comes to iron content.

IRON CONTENT OF IRON-RICH FOODS (MILLIGRAMS)

3 oz. (90 g) lean beef	3
1 cup (250 ml) beans in tomato sauce	5
1/2 cup (125 ml) kidney beans	2.5
1/2 cup (125 ml) prune juice	5
1 cup (250 ml) cooked spinach	4
6 dried apricots	2.8
1/2 cup (125 ml) Cream of Wheat	8
1 tbsp. (15 ml) blackstrap molasses	3.2
1 tbsp. (15 ml) wheat germ	2.5

If you are still menstruating, you need 18 milligrams of iron each day. After menopause, your need decreases to 8 milligrams per day. To help you get more iron into your diet, use my chart, above. Iron in food is classified either as "heme" or "non-heme" iron. Heme iron is very well absorbed by the body—it's the form of iron found in red meat, poultry, and fish. Foods containing significant amounts of non-heme iron include whole grain breads and cereals, fortified breakfast cereals, beans, vegetables, and fruit. This form of iron accounts for 85 percent of our dietary intake of the mineral, but it is less well absorbed. In fact, you'd have to eat four cups of raw spinach to get as much useable iron as you receive from a 3-ounce (90 g) serving of lean beef.

Maximizing iron absorption

Fortunately, you can take action to enhance your body's ability to absorb non-heme iron. Practice these tips to get the most from your foods: add some vitamin C with foods rich in non-heme iron (top your whole-grain cereal with strawberries or have it with a glass of citrus juice); include a source of heme iron with foods containing non-heme iron (a little meat or chicken tossed into your rice stir-fry will do it); pull out your cast-iron cookware; don't drink coffee or tea with an iron-rich meal as the beverages' tannins will prevent iron absorption.

What about a multivitamin supplement?

You're at risk for iron deficiency if any of the following applies to you: you're still menstruating; you engage in heavy endurance exercise; you don't eat animal foods and are unsure about vegetarian iron sources; you're adhering to a low-calorie diet.

Look for a "high potency" multivitamin or a "woman's" formula supplement; they should contain between 15 and 18 milligrams of iron. Iron-only supplements should be taken under supervision and only if you have an iron deficiency diagnosed by your physician.

BORON

Scientific evidence suggests that this trace mineral plays an important role in brain function. Studies have shown that boron deficiency results in poor performance in tasks

involving neuromuscular speed and dexterity, attention, and short-term memory. Study participants with low boron intakes suffered from significantly poorer performances in tests of hand-eye coordination, attention, perception, and memory as opposed to their counterparts with high dietary boron levels. The individuals with lower boron also had significantly less brain electrical activity.

Because boron has not yet been recognized as an essential nutrient for humans, no recommended daily intake has been established. A daily intake of between 1.5 and 3 milligrams is probably more than adequate to meet daily requirements, but we don't really know for sure if this amount is optimal for brain function. The main food sources for boron are fruits and vegetables, but actual content depends on the food's soil. If you want to take a supplement, 3 to 9 milligrams per day is a very safe amount.

herbal remedies

GINKGO

Also known as maidenhair, ginkgo (*Ginkgo biloba*) is one of the most popular herbs to hit the North American market in recent years. Ginkgo is touted to improve memory and slow the progression of Alzheimer's disease. It turns out that the claims are very likely true. Ginkgo is one of the most heavily researched herbs in the world. The study that made ginkgo famous was a 52-week trial, in which 309 patients with mild to moderate dementia as a result of Alzheimer's disease or stroke participated. Patients were given either 40 milligrams of a special standardized ginkgo extract (called EGb 761) at breakfast, lunch, and dinner, or a placebo pill. After one year the placebo group showed a decline in cognitive function, whereas the group that had received ginkgo did not show an overall decline. When the researchers looked at the Alzheimer's patients only, they found modest, but significant, improvements in memory and other brain functions. A few recent studies suggest that ginkgo can even enhance short-term memory in healthy middle-aged adults!

Ginkgo extracts are made from the fan shaped, bilobed leaves of the ginkgo tree, a tree that lives as long as a thousand years. Ginkgo may act in one of two ways to enhance memory. A number of studies suggest that ginkgo increases circulation and oxygen delivery to the brain. The herb's active ingredients also make blood cells called platelets less sticky. As a result, circulation becomes more efficient.[4] (Ginkgo also

enhances blood flow to the extremities and studies have found the herb to improve sex drive—Chapter 5 has more on this!)

What's more, ginkgo has a strong antioxidant effect in the brain, the eye, and the cardiovascular system, meaning that it protects these tissues from free radical damage. Free radical damage to brain cells is widely accepted as a contributing factor in Alzheimer's disease. Free radicals are unstable oxygen molecules that seek electrons from other molecules and in the process cause cellular damage. Free radicals can damage brain cells, the genetic material of cells, protein molecules in the eye, and cell membranes. Any compound that is able to neutralize these harmful free radicals is called an antioxidant. (For more on free radicals and antioxidants, see page 145 in Chapter 9.) Antioxidant compounds, be they vitamin C in oranges, lycopene in tomatoes, or active compounds in ginkgo biloba, essentially "mop up" free radicals and as a result protect our cells from damage. Scientists aren't sure if ginkgo's positive effect on brain function is largely due to its antioxidant ability to prevent damage to brain cells, or its power to increase blood flow to the brain.

Although no studies have been done in perimenopausal or post-menopausal women, I do recommend ginkgo to my clients to help reduce the effects of aging on brain cells. Researchers have identified the active compounds that appear responsible for ginkgo's beneficial effects. They are called terpene lactones and ginkgo flavone glycosides. Guidelines for buying a top quality ginkgo supplement are as follows:

- Choose a product that is standardized to contain 24 percent ginkgo flavone glycosides and 6 percent terpene lactones.
- The EGb 761 extract used in the scientific research is sold as Ginkoba® in Canada and the United States.

The research indicates that the effective daily dose is between 120 and 240 milligrams, taken in two to three doses over the day. Start with the lower 120-milligram dose by taking a 40-milligram tablet with three meals. Ginkgo has a slight blood thinning effect and should be used with caution if you take a prescription blood thinner such as Coumadin. On rare occasions ginkgo may cause gastrointestinal upset, headache, or an allergic skin reaction in susceptible individuals. In that case, lower your dosage, and if symptoms persist, discontinue use. You may then want to consult with your physician or other qualified health care practitioner to determine if any other herbal remedies may be of use to you. The herb's safety has not been established during pregnancy and breastfeeding.

THE bottom LINE...

Leslie's recommendations for improving memory

1 Eat breakfast every day to provide your brain cells with their preferred fuel source—carbohydrate. To sustain your blood glucose levels, make sure your breakfast includes both carbohydrate and protein.

2 To stay alert and focussed in the afternoon, try a high-protein lunch. A meal consisting of chicken or fish and plenty of vegetables provides your brain with more tyrosine, an amino acid used to produce brain chemicals that increase alertness.

3 Make sure the fats and oils you add to your diet come mainly from the omega-3 family. These special fats are used by the body to manufacture a large part of the communicating membranes of the brain. Eat fish at least three times per week. Use flaxseed oil, canola oil, and walnut oil more often. Eat more soyfoods, omega-3 eggs, and green leafy vegetables.

4 To help your brain manufacture more of the memory neurotransmitter acetylcholine, increase your intake of foods rich in choline, a fatlike member of the B vitamin family. Good sources are eggs, legumes, and organ meats. If these foods aren't on your A-list, consider taking a choline or lecithin supplement.

5 Reach for iron-rich foods every day. Remember, your body uses iron to make brain chemicals that regulate your ability to pay attention. If you're at risk for iron deficiency, be sure to take a multivitamin and mineral supplement that includes between 15 and 18 milligrams of the mineral.

6 Be sure to eat 5 to 10 servings of fruits and vegetables each day to help you get more boron for brain function. While there is no official recommended intake for this trace mineral, it's extremely safe to use a supplement; try adding 3 to 9 milligrams to your daily diet.

7 Even though it might not improve a healthy woman's short-term memory, a standardized extract of ginkgo biloba probably will protect your brain cells from the ravages of aging. Look for an extract that contains 24 percent ginkgo flavone glycosides. Take one 40-milligram tablet with breakfast, lunch, and dinner.

sexual changes

"I can't say that my interest in sex changed when going through menopause. I can say, though, that my dryness made it uncomfortable to the point of not enjoying it."

5

For women who are accustomed to enjoying regular sexual activity, experiencing sexual symptoms due to menopause can be one of the most disconcerting aspects of this life cycle transition. Current estimates indicate that somewhere between 20 and 45 percent of peri- and post-menopausal women report vaginal dryness—they take longer to become lubricated during sexual arousal and intercourse may become uncomfortable. During the perimenopausal years, vaginal dryness is often a transient condition that improves as estrogen levels increase again.

Vaginal dryness is caused by a decline in estrogen levels. As estrogen levels fall, the walls of the vagina become smaller, thinner, and less elastic. Secretion of the fluids that naturally protect the vagina from infection and lubricate it for sexual intercourse also decreases. Lack of lubrication, in turn, can make intercourse painful and cause bleeding and soreness. Regular sexual intercourse can actually help prevent these problems by stretching the vagina and increasing its blood supply and lubrication.

Popular beliefs hold that with menopause comes a loss of interest in sex. While researchers have not found a link between estrogen levels and libido, many women do complain that their sex drive lessens around the time of menopause. Sometimes decreased sexual desire is the result of menopausal symptoms that interfere with sexual intercourse. Libido, or sex drive, is really a function of your brain. Certainly vaginal dryness, hot flashes, night sweats, and insomnia can contribute to a temporary lack of interest in sex.

Androgen (male) hormones, such as testosterone, may also be a factor. These hormones activate specific receptors in the brain to turn on sexual desire. Women who have had hysterectomies report being less interested in sex more often than women who experience natural menopause. Studies in women who have experienced premature menopause have led researchers to theorize that a lack of testosterone due to decreased production in the ovaries may cause some menopausal libido problems. In fact, a number of studies have found that adding testosterone to estrogen replacement therapy improves sexual motivation and desire.[1] While estrogen therapy alone is effective at relieving vaginal dryness, it is less effective at enhancing sexual desire and arousal. Other medical doctors attribute a decline in progesterone production to be largely responsible for decreased libido experienced around menopause. While little research has been done in this area, the use of progesterone creams and oils is becoming more popular (see the discussion on page 57).

So what does all this mean? Well, you certainly don't have to give up sex just because you've entered your "change of life." A healthy sexual relationship with someone you care for deeply is very important for emotional well-being. If you are experiencing serious libido problems, talk to your doctor about the possibility of hormonal therapy. If you're troubled by vaginal dryness there are several things you can do on your own to minimize and possibly alleviate this condition.

dietary approaches

SOY FOODS AND ISOFLAVONES

If you read Chapter 1, on hot flashes, then you're already an expert on soy foods. Studies show that soy's natural plant estrogens, called isoflavones, can improve vaginal dryness as well as reduce hot flashes. Finnish and Israeli researchers have looked at the effect a phytoestrogen-rich diet has on hot flashes and vaginal dryness. In a study involving 145 women with menopausal symptoms, participants were randomly assigned to eat either a diet that contained 25 percent of its calories from phytoestrogen-rich foods (including tofu, soy beverages, miso, and flaxseed) or their regular diet. After 12 weeks, blood levels of phytoestrogens had increased significantly in women eating the diet rich in soy foods, but remained unchanged in the women eating their regular diet. Reductions in hot flashes and vaginal dryness scores were more significant in the women assigned the

phytoestrogen-rich diet. Other studies have also shown that post-menopausal women report improved vaginal lubrication when regularly eating soy foods.[2]

How can soy reverse vaginal dryness? The natural isoflavone compounds in soybeans are able to bind to estrogen receptors in the vagina and exert a weak estrogenlike effect. Acting like estrogen, although much less potent, soy's isoflavones can increase the thickness and elasticity of the vaginal walls, as well as increase vaginal secretions.

Going nuts with soy

You may already have noticed that soy "nuts" (roasted soybeans) provide you with one of the easiest ways to get your phytoestrogens. With soy nuts, you certainly get the most isoflavones for the smallest amount of food. And if you're worried about extra fat and calories, rest assured, there's no need to fret. Soy nuts have less than half the fat found in actual nuts. One ounce (1/4 cup or 50 milliliters) of plain roasted soy nuts delivers 136 calories, 6 grams of fat (only 1 gram is saturated), 10 grams of soy protein, and 5 grams of fiber. Compare that to the same amount of peanuts, which packs 170 calories, 14 grams of fat, 7 grams of protein, and 3 grams of fiber. On all nutrition scores, soy nuts come out the winner.

- Snack on soy nuts right from the bag.
- Sprinkle them over your green salads.
- Sprinkle them over a bowl of frozen yogurt.
- Stir soy nuts into stir-fried dishes along with vegetables and tofu, chicken, or lean meat.
- Add them to a bowl of your favorite hot breakfast cereal.
- Create a homemade snack mix with soy nuts, shredded wheat squares, raisins, dried cranberries, and low-fat granola.

How much soy do you need?

In Chapter 1, on hot flashes, I recommended an intake of 50 to 90 milligrams of isoflavones each day. Many experts believe that this is the amount of phytoestrogens needed to achieve the desired effects.

In Chapter 1 you'll find 10 suggestions for adding isoflavones to your diet, 10 ways to increase your soy intake, and a dictionary of soy foods that demystifies what soy products are and how to use them (see pages 6–12). In Appendix 3, you'll also find

some tasty recipes that will help you experiment with soy in the kitchen. To ensure a daily dose of at least 50 milligrams of isoflavones, I recommend you also try one of the following strategies:

- Every morning, enjoy a breakfast smoothie made with a soy beverage, fruit, and soy protein isolate powder (see page 11 for a list of high-quality brands).
- Add 2 tablespoons (30 milliliters) of soy protein isolate powder to your morning orange juice (not nearly as tasty, although I have a few clients who do this religiously).
- Munch on 1/4 cup (50 milliliters) of roasted soy "nuts" as a regular midday snack. You'll find these nuts at health food stores and supermarkets. They come in plain or flavored varieties. They're quite tasty and don't worry, they contain less fat than actual nuts. Just stick to a small serving!

Do isoflavone pills work?

Unfortunately, I'm afraid not. At this time, there is no research to show that they're effective in reducing vaginal dryness. It seems there's something special about getting your isoflavones along with the protein and other natural components of soy foods. You'd better pull out that blender!

WATER AND FLUIDS

I can't emphasize enough the importance of drinking enough fluids. Keeping your whole body adequately hydrated at all times is a critical component of a healthy lifestyle. We all know the effects of dehydration—dry skin, chapped lips, and lower energy levels. Well, a lack of fluids can affect your vagina in the same way. Dehydration decreases natural body secretions and can exacerbate vaginal dryness caused by an estrogen deficiency. You must drink enough water every day! There's no magic behind that "eight glasses of water per day" recommendation. To maintain fluid balance, women need to drink at least 9 cups of noncaffeinated, nonalcoholic beverages a day. If you exercise, if you work in an air-conditioned building, or if you spend time outside in hot, humid weather, then you need *more* than 9 glasses. Water, vegetable juice, unsweetened fruit juice, milk, herbal tea, soup, and high water content fruits and vegetables all contribute to your daily fluid intake—but to be sure you're getting enough, always drink at least eight glasses of water daily. Avoid caffeine and alcohol, which can cause your body to lose water.

herbal remedies

ASIAN (PANAX) GINSENG

If you've ever been to a health food store in search of an energy boost, chances are you've come across ginseng. Among the five top-selling herbal remedies in North America, *Panax ginseng* (Asian, Korean, and Chinese) is best known for its ability to help the body deal with stress. Probably because it helps them deal better with stress, users report that they experience more consistent energy levels. Now it also appears that the health benefits of ginseng may include improving vaginal dryness associated with menopause. One study reported in the *British Journal of Medicine* found that *Panax* ginseng had a protective effect on vaginal tissue in post-menopausal women. Women who took the herb for six weeks noticed an improvement in vaginal dryness.[3] Ginseng does not have an estrogenic effect. Rather, it encourages the pituitary gland to increase the body's production of hormones that affect vaginal tissue.

Ginseng's benefits can be attributed to active compounds called ginsenosides. Two in particular, Rg1 and Rb1, have received the most attention from researchers and most studies have focused on ginseng extracts standardized to contain 4 to 7 percent ginsenosides. When buying ginseng, look for a statement of standardization, or better yet, choose a product stating "G115" on the label, such as Ginsana®. This designation indicates that the product contains a special extract of ginsenosides that has been used in research. The usual dosage of a standardized extract is 100 or 200 milligrams once daily. Take ginseng in cycles—two to three weeks on, one week off. Some experts believe that over time, your body can get used to the effects of ginseng, and its effectiveness is then reduced. Taking it in cycles helps prevent this problem. According to the German Commission E, ginseng is safe to use for up to three months at a time in the cyclical way described.

Ginseng is relatively safe at the 100 or 200 milligram dosage. In some people, it may cause mild stomach upset, irritability, and insomnia. To avoid overstimulation, start with 100 milligrams a day. If you experience overstimulation at this dose, avoid using caffeine while you're on ginseng. Ginseng should not be used during pregnancy or breastfeeding, and it's not suitable for individuals with uncontrolled high blood pressure. There have also been a few reports of ginseng causing spotting in post-menopausal women. If you experience this side effect, stop taking the herb. If spotting continues, consult your physician.

SIBERIAN GINSENG

Siberian ginseng (*Eleutherococcus senticosus*) has much milder effects than *Panax*, or Asian, ginseng, and few reported side effects. Pregnant and nursing women can safely take Siberian ginseng and it's much less likely to cause overstimulation in sensitive individuals. But keep in mind that in the research we have to date, the type of ginseng shown to improve vaginal cell maturation is *Panax* ginseng, not Siberian.

To ensure that you are buying a high-quality extract, choose one standardized to contain eleutherosides B and E. The usual dosage is 300 to 400 milligrams once daily for six to eight weeks, followed by a one- to two-week break. It is safe to use Siberian ginseng for up to three months, and also safe to take repeated courses of the herb.

RESEARCH FILE

Ginkgo for better sex?

What will those scientists decide to study next? After a patient taking ginkgo biloba for memory problems reported improved erections, California researchers decided to investigate whether there was any substance to the patient's story. Each day, they gave from 60 to 120 milligrams of standardized ginkgo extract to a group of 63 men and women who complained of sexual dysfunction as a result of using antidepressant medication. And guess what? Ginkgo was found to be 84 percent effective in treating sexual dysfunction. Women were more responsive than men, with a success rate of 91 percent versus the men's rate of 76 percent.[4] It appears that ginkgo's ability to increase blood and oxygen delivery to the tissues may not only help your brain function better, but might also improve your sex life as well!

DONG QUAI

Dong quai (*Angelica sinensis*) is often recommended by herbalists as an all-purpose herb for gynecological complaints, including menopausal symptoms. However, if you're taking this herb to treat hot flashes or vaginal dryness, you might want to give it a second thought. When researchers from the Kaiser Permanente Medical Center in Oakland, California, assessed the herb's effects in 71 post-menopausal women over 24 weeks, they found no difference between the groups taking dong quai or placebo with respect to vaginal wall thickness, rate of vaginal cell maturation, or hot flashes. The researchers concluded that when used alone, dong quai does not have an estrogenlike

effect on vaginal tissues and is no more helpful than placebo in relieving menopausal symptoms.[5]

The results of this study are a little surprising, given dong quai's long tradition of use in Asia. However, practitioners of Traditional Chinese Medicine (TCM) usually prescribe dong quai in combination with other herbs. While the herb might not reduce certain menopausal symptoms all by itself, it might work as part of a combination of herbs. If you're interested in learning more about dong quai, I recommend you consult a practitioner well trained in the use of traditional Chinese herbs.

other ways to prevent vaginal dryness

In addition to the dietary and herbal suggestions I've provided, here are some other ways to combat vaginal dryness:

1. Use a vaginal lubricant. Many women find that vaginal lubricants (gels and liquids) replenish moisture to the vaginal lining and eliminate general itchiness and discomfort during sexual intercourse. If you decide to try an external lubricant, be sure to buy a water-based product such as Replens®, Vagisil®, Gyne-Moistrin™, or KY Long Lasting Vaginal Moisturizer®. Water-based lubricants are less likely to cause bacterial growth or infection than oil-based products.

   Depending on the severity of vaginal dryness, these products may be used anywhere from daily to once every three days.
2. Try vitamin E suppositories. These suppositories can be made by a compounding pharmacist (to find such a pharmacist in your community, contact the Board of Pharmacy in your state). Each suppository will contain 120 international units (IU) of vitamin E. After insertion into the vagina, the suppository softens and dissolves in the cavity. Some vitamin E will be absorbed into the body through the vaginal lining, but most of the oil-based vitamin will act to lubricate the vagina. Vitamin E suppositories can be used once daily or as needed.

NATURAL PROGESTERONE REPLACEMENT?

Natural progesterone creams contain progesterone synthesized in the laboratory from active compounds, called diosgenins, found in wild yams and is identical in structure to that made by your body. Proponents of natural progesterone state that it is safer than the progestins prescribed in hormone replacement therapy.

Little has been done to assess the effectiveness of this type of product, but some of my clients have reported improvement of hot flashes and vaginal dryness with their use.

Some things to keep in mind: natural progesterone creams are available by prescription and should only be used under medical supervision; proper manufacturing is important, so only buy creams from a knowledgeable pharmacist who has experience compounding them; apply cream to areas of thin skin—palms, face, neck, upper chest, inner arms, and thighs—and remember to change the application site regularly; use 1/8 to 1/2 of a teaspoon of cream per application as directed; check with your doctor, pharmacist, or naturopathic physician for detailed dosage information pertaining to your individual situation.

THE bottom LINE...

Leslie's recommendations for minimizing vaginal dryness

1. Start adding soy foods to your daily diet. Once you find a few of these foods that you like, aim to consume at least 50 milligrams of isoflavones from a combination of these foods each day.
2. If soy foods aren't for you, try a protein powder made from isolated soy protein, preferably made from Supro® soy protein isolate. Add soy protein powder to a breakfast milkshake or glass of juice.
3. Be sure to consume enough fluids. Aim to drink at least 9 glasses of water each day. Avoid beverages and medications that cause your body to lose water. Dehydration can make vaginal dryness worse.
4. Consider trying a daily dose of 100 to 200 milligrams of *Panax* ginseng to help restore vaginal epithelial tissue. Buy a standardized extract containing 4 to 7 percent ginsenosides or look for the G115 statement on the label. Remember to take ginseng in cyclical fashion, two to three weeks on, one week off.
5. Vitamin E suppositories and other vaginal lubricants are also helpful in providing moisture.

menstrual cycle changes

"My periods became a real worry. I'd never had such heavy flow before. On a few occasions, I felt so drained I could barely make it through the day. Thankfully, this didn't go on too long."

6

More than 75 percent of women will experience some change to their monthly cycle during their mid to late 40s or early 50s and this is often the first sign that menopause is approaching. A number of years before her last period, a woman may notice that her cycle becomes less frequent or that periods arrive closer together. And often her period shortens in duration as estrogen production fluctuates. While an erratic menstrual cycle can be annoying, what's more distressing is the heavy bleeding that can occur during the perimenopausal years.

Heavy bleeding in perimenopausal women is usually the result of an imbalance of estrogen and progesterone. When ovulation does not occur and your ovaries don't release an egg, progesterone is not produced. Since progesterone normally counters the effects of estrogen, this means that in its absence, estrogen is allowed to continue to build up the uterine lining throughout the month beyond normal limits. The lining becomes very thick and therefore laden with more capillaries than usual, and releases a great deal of blood when it is finally shed at your next period (a naturally orchestrated, sharp decline in both estrogen and progesterone each month catalyzes menstrual bleeding). As your estrogen levels decline with approaching menopause, heavy bleeding will become less of an issue.

While heavy bleeding is a common symptom during the years leading up to menopause, it can still be scary. In some cases, heavy bleeding can also be a sign of something else going on in the uterus—polyps, a fibroid, or, less commonly, cancer. Always alert your gynecologist if your periods last more than seven days, if you bleed between your periods, or if your menstrual flow becomes much heavier than usual.

Heavy menstrual bleeding may cause you to experience chills, dizziness, fatigue, and anemia caused by blood loss. To minimize these side effects, make sure you pay attention to your diet.

dietary approaches

GET ENOUGH IRON

Now, more than ever, it's important to eat a diet rich in iron. Iron is used by red blood cells to form hemoglobin, the molecule that transports oxygen from your lungs to all your cells. If your diet is deficient in iron, or if your body loses iron faster than your diet can replace it, red blood cell levels drop and less oxygen is delivered to your tissues. Symptoms of iron deficiency include weakness, lethargy, and fatigue on exertion. Iron deficiency is a progressive condition, which means that even if your iron stores aren't low enough to warrant a formal diagnosis of anemia, you can still be deficient and feel symptoms.

While you're still menstruating, you need 18 milligrams of iron each day. In Chapter 4 I mentioned iron's role in your ability to think and pay attention, and discussed ways to increase your intake. You may remember that iron in food comes in two forms—heme iron and non-heme iron. Heme iron is the form most efficiently absorbed and is found in red meat, chicken, eggs, and fish. Non-heme iron comes from plant foods like whole grains, legumes (lentils, chickpeas, kidney beans), fruit, and vegetables. The body has a harder time absorbing non-heme iron from foods. Eating foods rich in vitamin C along with food sources of non-heme iron will allow your body to absorb much more of the non-heme iron. If you include a little heme iron (for example, meat) with your meal, you'll also increase the absorption of non-heme iron. As you can see by the numbers on page 46, the best iron sources are lean beef, tofu, legumes, enriched breakfast cereals, whole grain breads, raisins, dried apricots, prune juice, spinach, and peas.

What about iron supplements?

To ensure you get 18 milligrams of iron each day, a multivitamin and mineral supplement is a wise idea. Most formulas provide 10 milligrams, but you can find multivitamins that provide up to 18. If you're experiencing persistent heavy bleeding, however, the recommended daily intake of 18 milligrams might not be enough to meet your needs. Sometimes 100 milligrams of supplemental iron daily is needed to rebuild your iron stores. Because iron is toxic in large doses, you should take iron pills only if your doctor has determined that you have low enough iron levels to warrant this level of supplementation. If you are advised to use an iron supplement, take it on an empty stomach to enhance absorption. Many people find that taking their iron supplement just before going to bed reduces stomach upset. Iron can be constipating, so I recommend that you boost your fiber and your water intake when using an iron supplement.

NUTRITION TIP

Boosting your fiber intake

Here are 10 strategies for boosting your fiber intake that are easy to implement, and increase your intake of tasty and healthy foods to boot.

1. Strive to consume five or more servings of fruits and vegetables each day.
2. Eat the skin of the fruits and vegetables you consume whenever possible.
3. Eat at least five servings of whole grain foods each day.
4. Buy higher-fiber breakfast cereals. Aim for at least 4 grams of fiber per serving. (Check the nutrition information panel to find out how much fiber the cereal contains.)
5. If you're looking for a real fiber boost at breakfast, choose a 100 percent bran cereal that packs in 10 grams of fiber per half-cup (125 milliliter) serving.
6. Top your breakfast cereal with dried apricots, berries, or raisins.
7. Add two tablespoons (25 milliliters) of natural wheat bran or oat bran to hot cereals, yogurt, casseroles, and soup.
8. Eat legumes more often—add white kidney beans to pasta sauce, black beans to tacos, chickpeas to salads, lentils to soup.
9. Add a handful of nuts, seeds, and raisins to salads.
10. Reach for high-fiber snacks like popcorn, dried apricots, or dried or fresh dates.

herbal remedies

CHASTEBERRY (*Vitex agnus-castus*)

Extracts of the berries of the Mediterranean chaste tree (*Vitex agnus-castus*) plant have been used in Europe for over 40 years for female menstrual cycle disorders and menopausal complaints. The herb was first mentioned as a medicinal plant some 2,000 years ago when a Greek physician noted the ability of a drink made from the plants' seeds to reduce sexual desire. The herb was also reported to help medieval monks keep their vows of chastity. Accordingly, its Latin name, *agnus castus*, means chaste lamb. Today, the herb is most often used in women with PMS, but chaste berry may also help women manage heavy or frequently occurring periods.

Chaste tree berry contains about 0.5 percent volatile oils along with two compounds called agnuside and aucubin. Studies have shown that an extract of chaste tree berries is able to lower blood levels of a hormone called prolactin. Scientists aren't certain how chaste tree berries do this, but they may directly curb prolactin production and slow down its daily secretion. In any case, chaste tree's ability to lower prolactin levels is an important effect because high prolactin levels lead to decreased progesterone. And remember that without progesterone opposing its action, estrogen is allowed to continue to build up your uterine lining unimpeded throughout the month, resulting in heavy bleeding during your period.

If you are experiencing heavy bleeding or erratic periods and want to try chaste tree berries, buy a product that's standardized to contain 0.5 percent agnuside and 0.6 percent aucubin. The recommended dosage is one 175- to 225-milligram tablet once a day. If you prefer to use a tincture, take 3 to 5 milliliters (1/2 to 1 teaspoon) once a day. There are a few herbal supplements for menopause that combine chaste tree berries with other herbs like black cohosh and dong quai. You can certainly try these, but if you don't find them effective it may be because they offer too little of each ingredient.

Chaste tree berry is not fast acting; it takes some time for it to produce results. You should plan on using it for at least four to six months. Chaste tree berry should not be combined with hormone replacement therapy and should be discontinued if you become pregnant. Side effects are rare. A few cases of gastrointestinal upset and mild skin rash have been reported. Also, be sure to let your doctor know that you are taking

chaste tree berry if you're on any medication that interacts with dopamine receptors in the brain. Two common drugs that do this are the antidepressants Wellbutrin® and Effexor®, but there are other drugs that influence dopamine levels as well—ask your doctor or pharmacist. If you are taking chaste tree at the same time as these drugs, your doctor will want to monitor you closely to make sure that the herb doesn't make your medication less effective.

THE bottom LINE...

Leslie's recommendations for managing heavy menstrual flow

1 If you experience heavy flow during your periods, increase your intake of iron-rich foods. Every day, choose at least two iron-rich foods.

2 Make sure that your multivitamin and mineral supplement contains 15 to 18 milligrams of iron. A multivitamin containing this amount of iron will likely be sold as a "woman's" supplement. At menopause, when you are no longer menstruating, switch to a regular formula that contains no more than 8 milligrams of iron.

3 If heavy flow has plagued you for some time and your energy levels are down, ask your family doctor to measure your iron level.

If iron deficiency anemia is diagnosed by your blood test, take 100 milligrams of iron one to three times a day two hours after meals. After six to eight weeks your doctor will retest your blood to determine your iron levels. Once iron supplements are discontinued, return to your multivitamin and mineral supplement. Since iron supplements can cause stomach upset and constipation, they are often better tolerated when taken later in the day (afternoon and evening). Iron-only supplements should be taken *only* if your doctor has diagnosed anemia.

Aim to consume between 25 and 35 grams of fiber per day to help prevent the constipation associated with iron supplements.

4 Consider taking a standardized extract of chaste tree berries to alleviate erratic periods or heavy menstrual flow. Take a 175- to 225-milligram dose once a day. Keep in mind that this herb does not work overnight. You should take it for at

least four to six months before making a decision as to whether it helps or not. Since heavy bleeding is a perimenopausal symptom that does eventually go away, chaste tree berry may not be a practical option for you— by the time it has an effect, your heavy bleeding may be over and done with. Do not take this herb if you're on hormone replacement therapy.