

**H**ot weather linked to increased blood pressure, we hear from Pietro Amedeo Modesti, MD, PhD. *Recent study:* When researchers reviewed the records of 6,400 people, in those age 66 or older who were being treated for high blood pressure, nighttime systolic blood pressure (top number) averaged five points higher when the temperature ranged from 77.9° F to 90.5° F than when it was 30.7° F to 43.2° F. *If you have hypertension and are 66 or older:* Ask your doctor to review your blood pressure treatment during the summer.

Pietro Amedeo Modesti, MD, PhD, associate professor of internal medicine, University of Florence, Italy.

**O**steoarthritis eased by topical remedies, we hear from Jörg Melzer, MD. *New finding:* In a study of 204 people with osteoarthritis of the hands, those who rubbed *arnica* gel (an herbal remedy) over their affected joints three times a day for 21 days had similar improvements in pain, grip strength and hand-function measures as those who used 5% *ibuprofen* gel. Unlike oral *ibuprofen* and other nonsteroidal anti-inflammatory drugs, topical *arnica* and *ibuprofen* gel generally do not cause stomach upset. *Theory:* Both therapies have anti-inflammatory effects. *If you have osteoarthritis of the hands:* Ask your doctor if *arnica* gel or *ibuprofen* gel is appropriate for you.

Jörg Melzer, MD, researcher, Institute of Complementary Medicine, University of Zurich, Switzerland.

**F**ibromyalgia relieved by water exercise, we hear from Narcís Gusi, PhD. *New finding:* In an eight-month study of 33 women with fibromyalgia (characterized by painful muscles, ligaments and tendons), those who participated in a supervised exercise program in a heated swimming pool for 60 minutes three times weekly had fewer symptoms than nonexercisers. *Theory:* Warm water induces relaxation, which helps fight pain. Ask your doctor if water workouts are an option for you.

Narcís Gusi, PhD, professor, University of Extremadura, Cáceres, Spain.

## New Ways to Protect Against Melanoma

The new "sunscreen pill" and other breakthroughs.



**W**e all know that spending too much time in the sun increases

the risk for melanoma, the most serious form of skin cancer. But sun exposure is not the only cause.

**What you may not know:** Genetic factors may play a significant role in the development of melanoma. Melanoma can develop on parts of the body that get little or no sun (for example, on the palms of your hands or soles of your feet...between the fingers, toes and buttocks...and on the genitals). Melanoma also can develop under a fingernail or toenail...in the eye...and, in rare cases, in the nose and mouth.

People with a family (or personal) history of melanoma or pancreatic cancer must be especially vigilant about checking their skin for changes even if they spend little time in the sun. (Pancreatic cancer has been linked to melanoma via a mutation in a particular gene.)

Even though we cannot change our genes, we can control our sun exposure and be vigilant about skin exams. *My advice...*

### UV DANGERS

Ultraviolet (UV) radiation, produced by the sun and tanning beds and lamps, is a carcinogen

(cancer-causing agent) that increases risk for all types of skin cancer. Specifically, sunshine contains UVB radiation, which causes tanning and sunburn, and UVA radiation, which damages deeper skin layers. Tanning beds produce primarily UVA radiation and should be avoided.

**Important:** UVA skin damage can occur even if your skin does not appear red.

### What is MELANOMA?

**E**ach year, about 62,500 Americans develop melanoma, the deadliest form of skin cancer. It occurs when the pigmented cells that give color to your skin (melanocytes) multiply uncontrollably as a result of DNA damage (due to genetic predisposition and/or exposure to radiation from the sun or tanning beds).

### BETTER SUNSCREENS

The most effective sunscreens are "broad-spectrum"—they protect the skin against both UVA and UVB radiation. Within the next few years, virtually all sunscreens will be broad-spectrum. Until then, you must read the label.

*Avobenzon* (Parsol 1789) or *oxybenzone*, both of which absorb UV radiation, are commonly found in high-quality broad-spectrum sunscreens.

*Titanium dioxide* and *zinc oxide* are broad-spectrum sunscreen ingredients that prevent all of the sun's rays from reaching the skin

**Bottom Line/Health** interviewed Albert M. Lefkowitz, MD, an associate clinical professor of dermatology at Mount Sinai School of Medicine and codirector of the Mount Sinai Dermatological Cosmetic Surgery Program, both in New York City. He is a member of the Medical Advisory Council of the Skin Cancer Foundation (SCF), [www.skincancer.org](http://www.skincancer.org), and recently presented "New Strategies for Melanoma Prevention" at an international gathering of the SCF.







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The information in *Bottom Line/Health* is not intended as a substitute for personal medical advice. Before making any decision regarding your health, please consult a physician or another health-care practitioner.

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by reflecting the rays back. Products that contain at least 5% of titanium dioxide or zinc oxide are recommended for people who burn easily or work outdoors, those with a history of skin cancer or those who take certain medications that increase sun sensitivity, such as certain antihistamines, diuretics and tetracycline and sulfa antibiotics.

**What you may not know:** The FDA has proposed a new one- to four-star rating system to alert consumers to a sunscreen's protective effect. The FDA is finalizing this rule and plans to implement it within the next few years.

*Other advice...*

■ **Don't spend more for ultra-high SPF sunscreens.** I recommend using a sunscreen with a sun protection factor (SPF) of 30. *Exception:* A sunscreen with an SPF higher than 30 should be used by people with extremely sun-sensitive skin, a history of skin cancer and/or a photosensitivity disease, such as lupus.

■ **Apply a sufficient amount of sunscreen.** Most people apply only a thin layer. It takes about one ounce of sunscreen—approximately two tablespoons—to protect the average-sized person's face and all exposed areas of the body (including the hands and feet).

**Also important:** Apply sunscreen at least every two hours and re-apply immediately after getting out of the water and drying off. Also, apply it 30 to 60 minutes before going outside to allow the active ingredients to penetrate into deeper layers of skin.

■ **Protect your scalp and eyes.** Wear a hat with at least a three-inch brim and UV-blocking sunglasses.

#### TEA EXTRACTS

Many skin-care products, including some sunscreens, now contain tea extracts. Reliable studies have shown that both green and black tea (applied topically) reduce inflammation caused by sun expo-

sure. Tea contains antioxidants that reduce free radicals, harmful molecules released in the skin during excessive sun exposure. Controlling free radicals protects skin DNA and can help reduce the risk for skin cancer.

#### A SUNSCREEN YOU SWALLOW

The dietary supplement Heliocare (available online or by special order at your pharmacy) contains an extract of *Polypodium leucotomos*, a tropical plant, which improves the skin's resistance to UV radiation. Studies published in the *Journal of the American Academy of Dermatology* found that the extract significantly reduced sunburn as well as cell damage—both can increase cancer risk.

**How to use:** Take one 240-mg capsule in the morning on a day when you're planning to spend time in the sun. Take a second capsule at noon if you will be exposed to intense sunlight (such as that in a tropical climate). The extract has no known side effects.

**Caution:** Heliocare should be used in conjunction with—not as a substitute for—sunscreen.

#### IMPROVED EXAMS

A monthly self-exam of the skin is one of the best ways to identify signs of melanoma *anywhere* on the body. Most skin cancers, including melanoma, can be cured when they are confined to the outermost layer of skin.

Use a mirror to look at hard-to-see areas—and don't forget to part the hair and examine the scalp. If necessary, ask another person, such as your hair stylist or barber, to examine your scalp. A thorough self-exam also should include the back of the neck and behind the ears—like the scalp, these areas sometimes are missed, allowing a melanoma lesion to reach an advanced stage before being detected.

Everyone should see a dermatologist for a full-body exam each year—especially people who burn easily or have a personal or family



history of skin cancer.

**What you may not know:** A relatively new technology known as *epiluminescence microscopy* (ELM) allows a doctor to detect cancers or precancerous changes that would get missed during a routine skin examination. With digital ELM, the doctor uses a handheld device to examine and photograph large areas of the skin. The images are magnified and stored electronically.

The equipment is expensive, so only certain dermatologists in private practice—for example, those who specialize in the treatment of melanoma—use ELM. However, many large hospitals and academic medical centers now utilize the technology.

#### NEW RULE FOR DETECTION

Melanoma deaths could be curbed by 60% if everyone performed monthly self-exams. Patients have traditionally been advised to see a doctor if a mole or other growth can be described by the “A, B, C, D” guidelines—that is, it is **Asymmetric**, in which the two halves are different...has an irregular **Border**...has variations in **Color**...and/or has a **Diameter** greater than the size of a pencil eraser.

**What you may not know:** “E” for **Evolving** has been added to the guidelines. If a mole or other growth *changes* in appearance, sensation (itching and tenderness) or size, see a dermatologist. Lesions that change, particularly over a period of a few months, are far more likely to be melanoma than areas that stay the same over a period of years.

**Warning:** It's unusual for patients to develop new moles after age 40. To be safe, if you develop a new mole after age 40, see a doctor right away, particularly if you have melanoma risk factors—a personal or family history of melanoma, a large number of moles (more than 20) or fair skin that burns easily. ■

Sally M. Pacholok, RN  
Jeffrey J. Stuart, DO

## The Epidemic of Vitamin B-12 Deficiency

Are you needlessly suffering memory loss, depression or other serious ailments?

**M**illions of Americans suffer tingling, numbness or pain in their hands or feet...dizziness...balance problems...depression...and/or memory loss because they are deficient in vitamin B-12, a nutrient that most of us—including many doctors—rarely think about. Low levels of vitamin B-12 can even raise the risk for heart disease and osteoporosis, according to research.

**Good news:** You can avoid the potentially serious complications of vitamin B-12 deficiency with simple, inexpensive treatment—if the problem is identified soon enough. Permanent damage can occur if the deficiency is not treated within a year of the development of symptoms.

*What you need to know...*

#### A KEY TO PROPER NERVE FUNCTION

Vitamin B-12 is needed to maintain the layers of tissue, called the myelin sheath, that insulate each nerve cell. We need only a very tiny amount of the vitamin each day—2.4 micrograms (mcg).

The vitamin is abundant in meats (such as red meat, poultry and liver), shellfish, eggs and dairy products. Because vitamin B-12 is readily stored by the body (mainly in the liver), doctors have long assumed that deficiency is rare.

But a complex process must occur before vitamin B-12 can do its job. The vitamin must be split from the proteins to which it is at-



tached, carried into the small intestine and transported throughout the body with the help of other proteins.

If there is a problem—for example, a person takes a drug that interferes with vitamin B-12 absorption—a potentially dangerous deficiency can result. Among adults over age 65, up to 25% have been found in studies to have a clear B-12 deficiency (blood levels of less than 225).

#### THE TOLL OF B-12 DEFICIENCY

Many so-called symptoms of aging—both physical and mental—actually could be the result of B-12 deficiency. When a lack of this vitamin impairs the nervous system, a variety of problems can result, including weakness, dizziness and tremor—all of which can be mistaken for signs of neurological disorders, such as Parkinson's disease, multiple sclerosis, vertigo or neuropathy (nerve damage that causes pain or numbness).

A B-12 deficiency also can affect how you think, feel and act, resulting in irritability, apathy, confusion, forgetfulness—even serious depression, dementia, paranoia and/or hallucinations. Vitamin B-12 deficiency can lead to symp-

*Bottom Line/Health* interviewed Sally M. Pacholok, RN, and Jeffrey J. Stuart, DO, coauthors of *Could It Be B-12?* (Quill Driver). She has studied vitamin B-12 deficiency for 20 years and is an emergency room nurse in Mount Clemens, Michigan. Dr. Stuart is a board-certified emergency medicine physician in Rochester, Michigan.

