

# MAYO CLINIC HEALTH LETTER

Reliable Information for a Healthier Life

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## Skin cancer

### Sun protection is key

Sitting in the sunshine can produce a warm feeling that's hard to beat. What's more, the vitamin D your body gains through sunlight is essential to health.

But as with most things in life, too much sun isn't healthy. Your skin is designed to protect your body from harm, including the damage caused by the sun's ultraviolet (UV) radiation. But when exposed to this radiation for too long or at too great an intensity, skin damage occurs. Over time, changes in skin cells may result in skin cancer.

### Three main types

Skin cancer develops primarily on areas of sun-exposed skin, including the scalp, face, lips, ears, neck, chest, legs, arms and hands. But it can also form on areas that rarely see the light of day. The three major types of skin cancer:

■ *Basal cell carcinoma* — This is by far the most common type of skin can-

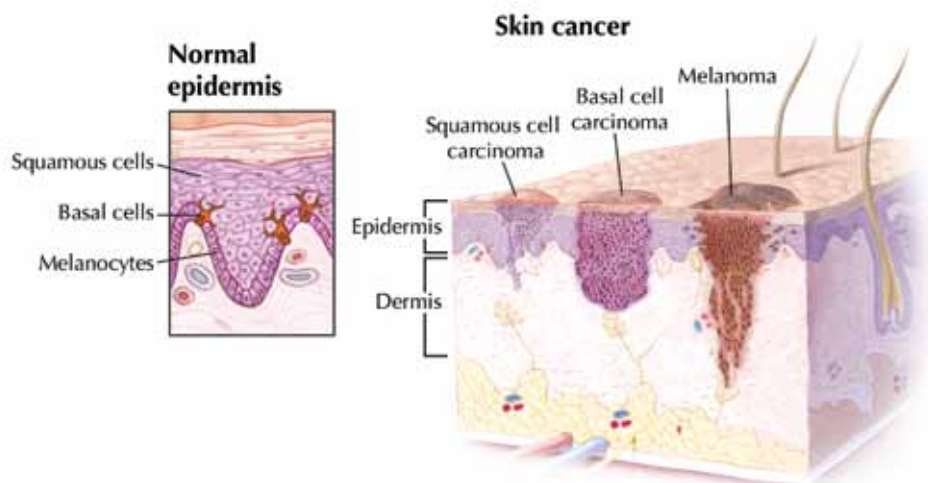
cer. It may appear as a pearly or waxy bump, or as a flat, flesh-colored or brown scar-like lesion. It affects mainly sun-exposed areas, rarely spreads and is considered highly treatable.

■ *Squamous cell carcinoma* — This common type of skin cancer may appear as a firm, red nodule or as a flat lesion with a scaly, crusted surface. It primarily affects sun-exposed areas and has a high cure rate. However, a small percentage of these can be very aggressive.

■ *Melanoma* — While not as common as the other two skin cancers, it's the most deadly. Melanoma develops in the cells (melanocytes) that produce melanin — the pigment that gives your skin its color. It's often associated with abnormal or changing moles or other dark lesions. Melanoma affects sun-exposed skin, but also can occur on skin that hasn't been exposed to the sun.

### Skyrocketing rates

Skin cancer is the by far the most common cancer. Melanoma alone will account for an estimated 76,000 new cases in the U.S. in 2014. New non-



melanoma cancers — which are more difficult to estimate because they're often not reported to cancer registries — may number in the millions.

Melanoma rates in particular have dramatically increased over the last 30 years. From 2006 to 2010 alone, rates among Caucasians increased by 2.7 percent a year. It's estimated that about 1 in 50 people will develop melanoma at some point in life.

### Be realistic about your risk

It's true that certain skin types are more prone to skin cancer. But even if

### Use this ABCDE guide to determine if a mole or spot may be melanoma.



**Asymmetry** — One half is unlike the other half.



**Border** — Irregular or poorly defined border.



**Color** — Variation in color from one area to next, including shades of brown, black and sometimes white, red or blue.

**Diameter** — Larger than the diameter of a pencil eraser (about 6 millimeters).

**Evolution** — Any change in size, shape, color, elevation or symptoms, such as bleeding, itching or tenderness.

you have darker skin or don't tend to burn, UV rays can still cause harm. In addition, skin cancer also isn't always tied to UV exposure.

Here are common risk factors:

■ **Excessive sun exposure** — Anyone who spends considerable time in the sun may develop skin cancer, especially if your skin isn't protected. Tanning, including exposure to tanning lamps and beds, also increases risk.

■ **Fair skin** — Having less pigment in your skin provides less protection from damaging UV radiation. If you have blond or red hair and light-colored eyes, and you freckle or sunburn easily, you're much more likely to develop skin cancer.

■ **A history of sunburns** — Having had one or more blistering sunburns as a child or teenager increases your risk of skin cancer as an adult. Sunburns in adulthood also are a risk factor.

■ **Sunny or high-altitude climates** — People who live in sunny, warm climates are exposed to more sunlight than are people who live in colder climates. Living at higher elevations, where the sunlight is strongest, also exposes you to more radiation.

■ **Moles** — People who have many moles or abnormal moles are at increased risk of skin cancer, especially if this trait runs in your family.

■ **Family history of skin cancer** — If one of your parents or a sibling has had skin cancer, you may be at an increased risk of skin cancer.

■ **Personal history of skin cancer** — If you've developed skin cancer once, you're at risk of developing it again.

■ **Weakened immune system** — People with weakened immune systems have a greater risk of developing skin cancer. This includes people living with HIV/AIDS and those taking immunosuppressants after organ transplant.

### What to watch for

If any of the above risk factors apply to you, you may want to perform a regular skin self-exam. Check for any new moles or discolored patches on your

skin, as well as for existing moles that may have changed size, shape or color.

Check yourself from head to toe, using a hand-held mirror and wall mirror to check places you can't easily see. Pay close attention to areas that are frequently exposed to the sun, including your neck, ears and scalp. Also examine areas that aren't usually exposed to the sun, such as between your toes and around your genital area. In general, if any changes to your skin worry you, report them to your doctor.

### Treatment options

Treatments options for skin cancer depend on the type, location and extent of the cancer. Small cancers limited to the skin surface may be removed and not require further treatment.

If additional treatment is needed, a number of treatments may be used,

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including the application of liquid nitrogen to freeze the cancer (cryosurgery), use of an electric needle to burn the cancer (electrosurgery), laser treatment, photodynamic therapy, drugs to stimulate the immune system to destroy cancer cells (immunotherapy), surgical removal and specialized surgical techniques to avoid removing healthy skin. Radiation therapy may be an option if the cancer can't be completely removed during surgery. In situations where the cancer may have spread to other areas, chemotherapy may be warranted.

### Skin protection tips

The most important step you can take to reduce your risk of skin cancer is to protect your skin from harmful UV radiation. Here are a few tips:

- *Avoid midday sun* — For many people in North America, the sun's rays are the strongest between about 10 a.m. and 4 p.m. Schedule outdoor activities for other times of day, even in winter or when the sky is cloudy.
- *Wear sunscreen year-round* — Sunscreens don't filter out all the harmful UV radiation. But they play a major role in an overall sun protection program. Use a broad-spectrum sunscreen with a sun protection factor (SPF) of at least 15. Apply sunscreen generously,

and reapply every two hours, or more often if you're swimming or sweating. Use a generous amount of sunscreen — about the amount to fill a shot glass — on all exposed skin, including your lips, the tips of your ears, and the backs of your hands and neck.

- *Wear protective clothing* — Sunscreens don't provide complete protection from UV rays. So cover your skin with dark, tightly woven clothing that covers your arms and legs, and wear a broad-brimmed hat. Some companies also sell photoprotective clothing. Don't forget sunglasses. Look for those that block both UVA and UVB rays.
- *Avoid tanning beds* — Lights used in tanning beds emit UV rays and can increase your risk of skin cancer.
- *Be aware of sun-sensitizing medications* — Some common prescription and nonprescription drugs can make your skin more sensitive to sunlight. Ask your doctor or pharmacist about the side effects of any drugs you take. If they do increase sensitivity to sunlight, take extra care to protect your skin.
- *Check your skin regularly* — Examine your skin often for new skin growths or changes in existing moles, freckles, bumps and birthmarks. You might also consider an annual skin check with a doctor if you're at higher risk. □

## Risk is more than skin deep

People who have had skin cancer are at increased risk of other types of cancers. That's especially true for people who had skin cancer at a young age.

A recent study found that people diagnosed with nonmelanoma skin cancer have a 36 percent higher risk of developing another cancer than do people with no history of nonmelanoma skin cancer. While the risk of developing melanoma in particular was quite high for this group, the risk of developing most other primary cancers — including cancer of the salivary glands, bone and upper gastrointestinal tract — also were increased. Of these nonmelanoma cancers, squamous cell carcinoma carries a higher risk of subsequent cancers and the risk of more common cancers.

With melanoma, elevated risks have been found for cancers of the bone, colon or rectum, breast, kidney, and prostate, to name a few.

If you've ever been diagnosed with skin cancer, make cancer screening a priority. In addition to the regular skin checks recommended by your doctor, be sure to ask about a comprehensive cancer screening schedule.

## Health tips

### Boosting bone health

Whether you have the bone-thinning disease osteoporosis or are looking to prevent it, maximize your bone health by:

- *Consuming calcium* — The recommended daily calcium intake for women 51 and older and men 71 and older is 1,200 milligrams (mg). For men 51 to 70, the recommendation is 1,000 mg. Although getting calcium from food is best, a calcium supplement can help close the gap if you're falling short of your recommended daily calcium intake.
- *Getting adequate vitamin D* — Your body needs vitamin D to absorb calcium. The recommended daily vitamin allowance for an adult under age 71 is 600 international units (IUs). For those 71 and older, the recommendation is 800 IUs daily. Although sunlight contributes to the body's production of vitamin D, supplementation with vitamin D ensures that you're getting enough.
- *Walking and exercising* — Thirty minutes of daily or near-daily exercise that involves supporting the weight of your body — or other weights or resistance — with your skeleton helps maintain bone density. Walking is a great choice, as it is simple, free, achievable, enjoyable and can be done just about anywhere.
- *Quitting smoking and using alcohol in moderation* — Smoking and excessive alcohol consumption both contribute to bone loss.
- *Treating osteoporosis* — Tests to assess bone density can help you and your doctor make decisions about treating bone loss with medications. □

## News and our views

### Mayo Clinic acquires technology to treat tumors

Mayo Clinic recently acquired focused ultrasound technology to treat the pain caused by certain types of cancerous tumors. By using magnetic resonance imaging (MRI) for guidance, the procedure is completely noninvasive, allowing for quick recovery and minimal discomfort and complications.

Magnetic resonance-guided focused ultrasound (MRgFUS) is also known as high-intensity focused ultrasound (HIFU). It works similarly to using a magnifying glass to burn a hole in a leaf. Beams of sunlight are focused onto a single point to burn a hole in the leaf while leaving surrounding areas untouched.

With MRgFUS, multiple intersecting beams of high-energy sound waves (ultrasound) can focus precisely on a target deep within the body. At this focal point, ultrasound energy can be used to destroy abnormal cells, target drug delivery at particular areas, or to affect the targeted cells in a way to make them more sensitive to treatments.

MRgFUS was approved by the Food and Drug Administration in 2004 to treat symptomatic uterine fibroids. More recently, it was approved to treat the pain caused when cancer spreads to the bones (bone metastases).

The use of focused ultrasound technology to treat other primary malignant cancers is still under investigation. Mayo Clinic experts are excited about the promise this new technology shows for both noncancerous and cancerous tumor management. □

### Larger waistline is an important health risk

New research led by Mayo Clinic indicates that the greater your waist circumference the lower your longevity — even if you're at a healthy weight for your height, as measured by the body mass index (BMI).

The research, published in the March issue of *Mayo Clinic Proceedings*, analyzed data from 11 different studies that included health measurements of more than 600,000 people from around the world. Measurements of waist circumference were taken 1 inch above the navel. Study participants were followed for a median of nine years.

A major finding of the study was that men with waist circumferences of 43 inches or greater had a 50 percent higher risk of death over the course of the study than did men with waists of less than 35 inches. This translated to about a three year lower life expectancy after age 40. Similarly, women with a waist circumference of 37 inches or greater had an 80 percent higher risk of death over the course of the study than did women with waists of less than 27 inches. This translated to about a five year lower life expectancy after age 40.

The study found each 2-inch increment in waist circumference was associated with a 7 percent increase in risk of death in men and a 9 percent increase in risk of death in women. This held in people who had a BMI that was normal, overweight or obese.

Even modest or small decreases in waist circumference due to improvements in diet and physical activity can have important impacts in reducing health risks. For example, studies indicate that increased physical activity is associated with significant reductions in waist circumference, even if your total body weight doesn't change much. □

## Devices that track activity

### Info you can run with

Did you get enough physical activity today? How about this week?

Many people overestimate their activity level. In other words, you may not be as active as you think. That's a problem, because exercise and physical activity — and even just avoiding sitting — are among the most powerful ways to preserve health.

Basic pedometers that count your footsteps measure movement in a limited way. A more advanced generation of activity-tracking technology is now available, allowing you to get a much more accurate picture of your daily movement and energy expenditure.

When people discover their actual activity level, they often learn to increase their activity habits within a short period of time. Over the long term, most people either quit using these tools or use them only sporadically. Still, it's suspected — though not proved — that the initial education and guidance from shorter term use may be enough to kick-start healthy habits.

### Many features

Low-cost, easy-to-use pedometers that roughly estimate the number of footsteps you take in a period of time can be reasonably effective activity-tracking devices. However, pedometers often don't accurately count steps. Basic pedometers also don't differentiate between levels of exercise intensity or measure activity that involves slower movement or undetectable steps.

There are well over a dozen brands of newer activity-tracking devices that take advantage of computing and electronics advances. These include accelerometers that detect movement and may have sensors that detect standing or sitting, or elevation gain or loss. Data is crunched by a microchip that can

calculate and quantify movement. The amount you move may be displayed as steps taken, miles covered, calories burned, minutes spent being active or in other ways.

Devices can distinguish between types of movement based on acceleration and force. Although accuracy varies from product to product, most can distinguish between walking, jogging or taking stairs, and in some cases bicycling. The most sophisticated devices can even make distinctions between sedentary activities — such as sitting and typing — and the slow walking speeds of older adults or those with mobility problems.

Various additional measurements may include heart rate, body perspiration, body temperature, and wireless connections to a scale for measuring weight or other external devices. Other features may include a vibration to get you up and moving if you've been sitting too long, music players, and GPS tracking, to name a few.

Most devices have some way to display information on the device itself, which may be attached to the wrist or the waist area. Often, the display indicates your progress toward meeting daily activity goals. Devices typically have wireless download capability to smartphones, tablets or computers. Once downloaded, you typically find an array of colorful graphs and charts and perhaps motivational games, challenges or even comparisons to other people who use the same device.

### What's best for you?

If you find the choices in activity trackers to be intimidating, keep in mind that your best results are likely to be achieved by a device that you're willing to wear and that easily:

- Helps you understand your activity level and how that compares to the amount of activity you're likely to need to reap significant benefits. Depending on your goals, this may be 150 minutes a week of moderately intense exercise such as brisk walking, 10,000 steps a day or at least 10 minutes of movement every hour.

- Guides and motivates you to insert more movement into your day, so you know mentally and physically what you need to do each day to reach your activity goals.

Additional features on activity trackers may be interesting or helpful, but they're not necessarily better than a product with fewer features that achieves the twin goals above.

Additional considerations include:

- *Technology compatibility* — A smartphone, tablet or computer may be needed to operate an activity-tracking device, and some devices only work with one computer operating system. Be sure to get a device that matches the technology you have, or look for a stand-alone device. Make sure you can operate the technology, such as being able to see the screen and properly push buttons on the device.

- *Accuracy* — A basic pedometer can provide a reasonable estimation of the

number of steps you take, although with limitations in terms of accuracy. Most newer activity trackers provide a higher level of accuracy and differentiation in activity level, with devices at the waist being more accurate than those worn on the wrist. At the high end of accuracy are nonexercise activity thermogenesis (NEAT)-certified devices such as Kinetic Activity Monitor (KAM), Lumo Back and Gruve, which were either developed or tested by the NEAT laboratory at Mayo Clinic. NEAT can be described as all calories burned through movement that isn't scheduled exercise. NEAT-certified devices can track slow movement, in addition to tracking high-intensity activity. This may be important if a lot of your daily body movement is slower and subtle.

- *Cost* — A basic pedometer costs about \$10 to \$50. Newer activity trackers such as the Fitbit, Jawbone, Basis or Motaactv and the NEAT-certified trackers sell for about \$60 to \$200. Some products require a subscription fee for continued access to online data. Many retail stores that carry electronics, sporting goods or general merchandise sell activity-tracking devices.

### Future movement

Even if you don't plan to try an activity-tracking device, you may end up using one as part of medical care. For example, the amount you move is one of the best indicators of recovery from a health event such as surgery or a heart attack.

Doctors may have you wear an activity-tracking device to detect low levels of movement, stalled progress or declines in movement. These could be important indicators that some sort of helpful intervention is needed to keep you on track with recovery. □

**Most newer activity trackers, left, provide a higher level of accuracy and differentiation in activity level. Devices worn at the waist are considered more accurate than are those worn on the wrist.**



# Thyroid testing

## Catching a subtle problem

It wasn't anything you would have gone to the doctor for — you've lost a few pounds lately and have felt just a little weaker than normal. But during a regular checkup, you mentioned the symptoms. Based on your description, your doctor ordered a screening test of your thyroid function.

Thyroid problems are fairly common, especially in older adults and particularly in women — and sometimes they can cause symptoms that are subtle and hard to distinguish from other disease symptoms or from simply the way it feels to get older.

A blood test that measures the amount of thyroid-stimulating hormone (TSH) can confirm or rule out a thyroid problem. Still, test results can be tricky to understand for many people, and there's disagreement about whether older adults should be screened for thyroid problems if they don't have any identifiable symptoms.

### A delicate balance

Your thyroid releases hormones — including the all-important hormone thyroxine — into the bloodstream that help control many aspects of body

function, including body temperature, heart rate, muscle strength, cholesterol, memory and even mood.

The release of thyroid hormones occurs when a particular area of the brain (hypothalamus) signals the nearby pituitary gland to make TSH, which signals the thyroid to produce hormones.

The release of TSH by the pituitary gland works like a thermostat in your house. When the level of thyroid hormones in your bloodstream decreases below a certain threshold, production of TSH by the pituitary gland increases, signaling the thyroid gland to increase hormone production. When the level of thyroid hormones in your bloodstream increases above a certain threshold, production of TSH by the pituitary gland is reduced, resulting in a decrease in hormone production by the thyroid gland. Except in rare situations when there's pituitary disease, the TSH test is the most sensitive test for thyroid function.

When you have an underactive thyroid (hypothyroidism), there's too little thyroid hormone in the blood. The pituitary gland increases its output of TSH to stimulate the thyroid to produce more hormones. The reverse occurs with an overactive thyroid (hyperthyroidism), and TSH production is lowered.

Initial testing for thyroid problems involves a blood sample and checking

TSH levels. If TSH levels are higher than normal, it's a sign of underactive thyroid. If TSH levels are lower than normal, it's a sign of overactive thyroid.

This can be confusing because you get results from your thyroid test and learn that it was high, only to find out that you have low production of thyroid hormones due to an underactive thyroid.

If you have an abnormal TSH test, additional testing may be performed to determine the cause.

### Should you be screened?

Thyroid experts at Mayo Clinic generally don't recommend blanket screening. Rather, they recommend "aggressive case finding," which means being highly alert to the possibility of thyroid problems in older adults. If you're generally healthy, feel good, and have the energy and ability to do what you want to do given your age, then a TSH test may not be necessary. In contrast, a TSH test may be worthwhile if you have:

- One or more chronic conditions such as diabetes or high blood pressure
- Developed one or more symptoms of thyroid disease
- Developed limitations in energy levels or physical or mental function

Certain risk factors for thyroid disease such as a family history of thyroid disease or past radiation therapy to the neck area usually warrant testing. □

| Disease                                                                             | TSH levels | Common but variable signs and symptoms                                                                                                                                                                                                                                                                             | Alternate scenario                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Underactive thyroid (hypothyroidism)</b><br><br><b>Slows down body functions</b> | High       | Signs and symptoms can be vague and develop slowly. They can include sluggishness and fatigue, weight gain, dry skin, constipation, constantly cold hands and feet, high cholesterol levels, weakness, muscle aches, joint discomfort, slowed mental function, forgetfulness, and depression.                      | In older adults, symptoms are often even more vague than in younger people. In addition, older adults are more likely to have fewer symptoms, just one symptom or even no noticeable symptoms. Since the symptoms are similar to symptoms of other diseases and conditions — and may be similar to the effects of normal aging — symptoms can be overlooked as part of aging or another condition. |
| <b>Overactive thyroid (hyperthyroidism)</b><br><br><b>Revs up body functions</b>    | Low        | Signs and symptoms may start as jittery nervousness, irritability, rapid heartbeat or palpitations, hand tremors, difficulty sleeping, weight loss, neck swelling, and more-frequent bowel movements. The body can only be revved up for so long before the development of fatigue, tiredness and muscle weakness. |                                                                                                                                                                                                                                                                                                                                                                                                    |

# Hot and cold therapies

## Know which to use for common ailments

You overdid it playing with the grandkids over the weekend. You're paying for it now with a sore lower back. But should you reach for the heating pad or the ice pack?

Heat and cold are commonly used treatments for pain and injuries. But it's not always clear whether heat or cold is the best choice to help ease a particular discomfort.

### Helpful heat

Whether it's heating pads, warm compresses, a paraffin wax treatment system, or warm showers and baths — heat helps with pain. Heat works by increasing the blood flow to the area where you're experiencing pain. This helps relax tight or cramping muscles. Many people find that heat helps with arthritis pain — when not accompanied by inflammation.

To use hot therapy, apply the heat up to 15 minutes at a time, two or three times a day. To protect your skin from burns, avoid going too hot or using heat for too long. In particular, avoid lying on a heating pad — instead, place it over the area you're trying to heat. Make certain you don't fall asleep while using a heating pad. Fortunately, many commercial heating pads will automatically shut off after a safe time has elapsed.

Remember that because hot therapy increases blood flow, it can actually aggravate an acute injury such as a sprain or strain by increasing the swelling. In these cases, use cold therapy instead of hot therapy.

### Ice for inflammation

Cold therapy may take the form of an ice pack, slush bath or even a bag of frozen vegetables. Cold works best to treat the inflammation caused by

more-acute injuries such as sprains, strains and pulled muscles.

If you have an injury that involves inflammation, applying cold will help take the swelling down by constricting the blood vessels. Cold sensations also travel along your large nerve fibers, making them more noticeable than are pain sensations, which travel along your smaller nerve fibers.

Cold therapy is part of the **R.I.C.E** formula which follows for treating any muscle or joint injury:

- **Rest** the injured area.
- **Ice** the affected area as soon as possible after the injury.
- **Compress**, as with a bandage or elastic wrap, also helps with swelling.
- **Elevate** the injured area above heart level whenever possible to prevent or limit swelling.

Apply cold for 15 to 20 minutes, four to eight times a day, for the first 48 hours or until swelling improves. If you use ice, be careful not to use it too long, as this could cause tissue damage.

Try not to apply the ice directly to your skin. Instead, wrap the ice pack in a protective layer, such as a towel or pillowcase.

### Try alternating

There may be times when either therapy may be helpful for you, and you may find that alternating heat and cold has the most effect.

Lower back pain is a situation that may benefit from both heat and cold. Start by applying cold several times a day to relieve inflammation. After two to three days, begin to apply heat to relax your muscles.



## Patches and wraps for portable relief

Newer on the market are specially designed heat patches or wraps that can be worn on the body to reduce pain and stiffness.

These products — which create a chemical reaction to produce heat — are more portable than are traditional methods of hot therapy and are tailored to fit specific areas of the body that are prone to pain, such as the lower back or knee.

Because the products provide a low level of heat, they can be worn for an extended time — often up to 8 hours. However, they may cause skin irritation and they carry an extra expense because they aren't reusable.

Cold wraps also are available, allowing you to take pain relief for muscles and joints on the go. However, these aren't meant for extended use. Often, these products are reusable.

Therapy for headaches is another example. Ice packs have a numbing effect, which may dull the sensation of pain. Heat can relax tense muscles.

To alternate therapies, start by applying a warm pack for a few minutes to the neck and back of the head. Follow up with a cold compress applied on the forehead and temples for 30 seconds. Repeat if needed.

### For further relief

In many cases, hot and cold therapies are effective on their own in relieving discomfort. However, you can safely pair both heat and cold with nonprescription pain relievers — as directed — for greater pain relief, if you find it necessary.

If your discomfort persists for more than a few days, see your doctor for further evaluation. □

# Second opinion

**Q I've heard that some foods that are labeled as "trans fat-free" may actually contain harmful trans fats. Is this true?**

**A** Yes. Under labeling laws, a food can be labeled as "trans fat-free" or "containing no trans fat" if it has less than 0.5 grams of trans fats a serving.

This may seem like a minor issue because the amount of trans fats is so small. But think realistically of how small a true serving sometimes is — do you always stop at a handful of crackers or a single cookie? If, for example, a type of crackers contains 0.4 grams of trans fats in a serving and the package contains 10 servings, you would still be eating 4 grams of total trans fats if you eat the whole package.

Trans fats can increase your risk of cardiovascular disease. They raise your low-density lipoprotein (LDL) cholesterol levels and lower your high-density lipoprotein (HDL) cholesterol levels. For these reasons, dietary experts advise that you consume as few trans fats as possible. The American Heart Association recommends limiting trans fats to less than 1 percent of your total calories. If you consume 2,000 calories a day, that means no more than 20 of those calories should come from trans fats. This translates to less than 2 grams a day — which can easily be found in a small amount of sweets or treats.

Trans fats are created when hydrogen is added to vegetable oils through a process called hydrogenation. These processed oils are used to improve the texture, shelf life and flavor stability of foods. Trans fats are common ingredi-

ents in commercial baked goods, such as crackers, cakes and cookies, and are often used to fry foods. Some vegetable shortenings and stick margarines contain trans fats.

To avoid trans fats, it's best to avoid products that have been through a process of hydrogenation. To find out if a food contains trans fats, look for the term *partially hydrogenated* in the list of ingredients on the product's food label. Partially hydrogenated fat turns the oil into trans fat. When the term *hydrogenated* appears on the label, it means the fat is now saturated. Both trans fats and saturated fats increase the risk of heart disease. □

**Q I had an evaluation for sleep apnea. As part of that, my neck circumference was measured. Why is this important?**

**A** Having a neck circumference that's greater than 16 inches if you're a woman or greater than 17 inches if you're a man is one of numerous risk factors associated with obstructive sleep apnea (OSA). OSA occurs when muscles at the back of your throat relax and temporarily restrict or block airflow as you sleep. This may lead to disrupted sleep and daytime tiredness. Sudden drops in blood oxygen levels that occur during sleep apnea increase blood pressure and put a strain on your cardiovascular system, raising your risk of developing heart problems such as high blood pressure (hypertension) and heart failure.

In most people, a neck size greater than 16 or 17 inches is a sign of excess

fat in the neck area. This may contribute to crowding and narrowing of your breathing tube, making obstruction or blockage of your airway while you sleep all the more likely.

Doctors use neck circumference and other indicators to evaluate your overall risk of OSA. You may be asked questions about how you sleep, whether you snore and how you feel when you're awake. You also may be assessed for other risk factors such as obesity, high blood pressure, whether you smoke or drink alcohol, or have throat anatomy that crowds your breathing tube.

Your doctor may first recommend an overnight study at home that tests to see if there are periods when your oxygen is low. Depending on the results of that test, your doctor may decide it's worthwhile for you to spend a night in a sleep lab to definitively diagnose your OSA, determine its severity and assess treatment options. □

## Have a question or comment?

We appreciate every letter sent to Second Opinion but cannot publish an answer to each question or respond to requests for consultation on individual medical conditions. Editorial comments can be directed to:

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