POSTMASTER: PUBLICATION...PLEASE RUSH

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Bottom Line health

WELLNESS STRATEGIES FROM THE WORLD'S LEADING MEDICAL EXPERTS

LATE-BREAKING NEWS

Improve asthma symptoms by reducing salt intake. *New finding:* A review of 26 published studies found that lowering salt intake to 1,500 mg of sodium per day reduces asthma severity and improves breathing in two to five weeks. *Theory:* High-sodium foods may play a role in bronchial inflammation, which can worsen asthma. *If you have asthma:* Limit sodium intake to 1,500 mg daily and eat a diet rich in fresh foods.

T. D. Mickleborough, PhD, associate professor, department of kinesiology, Indiana University, Bloomington.

Prolonged sitting increases risk for blood clots. *Background:* Deep vein thrombosis (DVT), in which a blood clot forms in the leg, has been linked to long airplane flights. *New finding:* Prolonged sitting, regardless of where it occurs, seems to increase risk for blood clots by reducing blood flow to the legs. In a study of 73 healthy adults, blood clots were no more likely to develop when the study participants sat in a chamber simulating an airplane cabin's reduced air pressure and oxygen levels for eight hours than when they sat for the same period at ground level. *When sitting for prolonged periods:* Get up at least once every hour and walk around, or flex and extend your ankles and knees while seated.

William D. Toff, MD, senior lecturer in cardiology, University of Leicester, England.

Improved stroke detection. *New study:* Researchers studied 356 people who received magnetic resonance imaging (MRI) or computed tomography (CT) scans after suffering stroke-like symptoms, such as slurred speech or weakness on one side of the body. *Conclusion:* Doctors accurately diagnosed strokes 83% of the time when patients received MRI scans, compared with 26% of the time when CT scans were given. *Reason:* MRI scans detect changes within minutes after the onset of a stroke...a CT scan may not be accurate until hours later.

Julio A. Chalela, MD, medical director, Neuroscience Intensive Care Unit, Medical University of South Carolina, Charleston.

The Amazing Healing Power of Coffee

Joe Vinson, PhD
University of Scranton

Fight heart disease, diabetes, memory loss and more... *with coffee*

When most people think of a healthful diet, fresh fruits and vegetables typically top the list.

Surprising: An eight-ounce cup of caffeinated or decaffeinated coffee contains *more* disease-fighting antioxidants than a typical serving of fresh blueberries or oranges.

Although coffee does not contain some of the other nutrients found in healthful foods, it is the main source of antioxidants in the American diet (followed by tea and chocolate, respectively). Of course, the stimulating effects of coffee's caffeine are not always desirable—some people experience nervousness, insomnia or even spikes in blood pressure.

But most people who drink moderate amounts of coffee (typically defined as one to three cups daily) seem to have a lower risk for a number of chronic conditions, including heart disease, diabetes and age-related cognitive declines.

WHAT'S IN A CUP?

The amount of caffeine that is found in coffee varies, depending on how the coffee is prepared.

Examples: One ounce of espresso contains about 50 mg...an eight-ounce cup of instant coffee has 95 mg...and eight ounces of plain, brewed coffee has 150 mg.

A serving of espresso, instant or brewed coffee each contains roughly the same amount of antioxidants. In fact, coffee contains hundreds of antioxidants, particularly *polyphenols*—plant compounds that can inhibit cell damage or inflammation, two of the main causes of many chronic diseases. The addition of milk and/or sugar does not appear to affect the antioxidant levels.

Important: Most of the research linking coffee to reduced disease rates is based on epidemiological studies, in which scientists have analyzed the past dietary habits of large groups of people.

This type of research helps to

Bottom Line/Health interviewed Joe Vinson, PhD, a professor of chemistry at the University of Scranton in Pennsylvania. A specialist in food-based chemical compounds, he was the lead author of an article on antioxidants published in October 2006 in *Journal of Agriculture and Food Chemistry.*

Bottom Line health

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PURPOSE: To help busy people achieve and maintain optimum health. To provide up-to-date advice on nutrition, fitness and illness prevention and cure. To present the latest findings from the world's leading medical experts. To serve as a guide through the increasingly complex and often hostile health-care system …and to guard against mistreatment by doctors, hospitals or insurers.

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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rash-like reddening of the face, neck and chest, which lasts about 10 minutes. Flushing is caused by niacin's ability to trigger *vasodilation* (widening of blood vessels).

To lessen this side effect, choose a form of niacin known as *inositol hexanicotinate*. It helps prevent the flush without reducing niacin's effectiveness.

Caution: Niacin should be avoided by people with a history of liver disease or stomach ulcers and used with caution by patients with diabetes and/or gallbladder disease. In addition, high-dose niacin (2,000 mg or more) may interact with certain medications, including alpha-blockers, such as *doxazosin* (Cardura), and the diabetes drug *metformin* (Glucophage).

OTHER NONDRUG THERAPIES

A diet that keeps sugar and processed food to an absolute minimum and emphasizes fruits and vegetables…whole grains…beans…fish…lean meats…and nuts and seeds can help lower LDL cholesterol and raise HDL levels. So can regular exercise, such as brisk walking, and losing excess weight.

Other nondrug approaches can lower total and LDL cholesterol and boost HDL. *Combine the following nondrug therapies with niacin for maximum effectiveness…*

Red yeast rice. This Chinese medicine—a yeast that is grown on white rice, then fermented—contains *monacolins*, substances that act as naturally occurring statins. Research in China shows that red yeast rice can lower total cholesterol by 11% to 30%. *Typical use:* Take 1,200 to 2,400 mg a day of red yeast rice, in two to four doses, with meals.

Not recommended: Policosanol—a supplement derived from cane sugar that also contains natural statins—has been widely promoted as effective for lowering cholesterol. However, several recent studies show that policosanol has *no* significant effect on cholesterol.

Fish oil and flaxseed. Fish oil and flaxseed supply omega-3 fatty acids, which lower total cholesterol and LDL levels and raise HDL levels. *Typical dose:* For fish oil, take supplements containing a total of 3 g daily of *eicosapentaenoic acid* (EPA) and *docosahexaenoic acid* (DHA). If you take a blood-thinning drug, such as aspirin or *warfarin* (Coumadin), check with your doctor before taking this dose of fish oil. Or use one to three teaspoons of ground flaxseed a day, sprinkled on food or mixed with water or juice. Flaxseed also can help relieve constipation and ease arthritis pain.

Soy. Many studies show that soy can help lower total and LDL cholesterol. *Typical use:* Try to get 20 g of soy protein a day—the equivalent of eight ounces of tofu…or one cup of edamame (soy) beans. *Important:* Soy ice cream and other processed soy foods don't deliver enough soy to help reduce cholesterol.

Caution: If you have been diagnosed with a hormone-dependent cancer, such as some breast malignancies, or are at risk for such a condition, check with your doctor before adding soy to your diet.

Plant sterols. These natural substances, which block the absorption of cholesterol in the intestines, are found in fruits, vegetables, beans, grains and other plants. Regular intake can reduce total cholesterol by 10% and LDL by 14%. Products with plant sterols (or a similar form, plant stanols) include spreads, salad dressings, snack bars and dietary supplements. *Typical use:* Aim for 1 g to 2 g daily of plant sterols.

Walnuts. A recent study published in the medical journal *Angiology* showed that people who ate a handful of walnuts daily for eight weeks had a 9% increase in HDL. Walnuts contain polyphenol antioxidants, which also inhibit oxidation of LDL cholesterol. *Recommended intake:* One ounce of raw walnuts three times daily.

HEARD BY THE EDITORS

Melatonin curbs blood pressure, we hear from Ehud Grossman, MD. *New finding:* For four weeks, 19 adults with nocturnal hypertension (diagnosed with a 24-hour monitor), took 2 mg of the sleep hormone melatonin two hours before bedtime as well as blood pressure medication. Nineteen others took blood pressure medication alone. *Result:* Blood pressure was significantly reduced in the melatonin users. The other group reported no change. *Theory:* Melatonin suppresses the sympathetic nervous system, which controls blood pressure. *If you have nocturnal hypertension:* Ask your doctor about trying melatonin.

Ehud Grossman, MD, head of internal medicine and hypertension unit, Chaim Sheba Medical Center, Tel-Hashomer, Israel.

Whole grains may prevent gum disease, we hear from Anwar T. Merchant, SCD, MPH. *New finding:* In a study of 34,160 men, those who reported eating about three servings daily of whole-grain foods were 23% less likely to develop gum disease over a 14-year period than men who ate less than one daily serving. *Theory:* Whole grains help control blood sugar, limiting formation of compounds that trigger inflammation that can lead to gum disease. *Self-defense:* Aim to eat three to four servings daily of whole-grain foods. One serving equals three-quarters cup of whole-grain cereal or one slice of whole-wheat bread.

Anwar T. Merchant, SCD, MPH, assistant professor of epidemiology, McMaster University, Ontario, Canada.

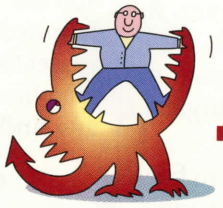
Medication relieves numb hands and feet, we hear from Stephan Rosenkranz, MD. In a new study, 40 adults (mostly women) with Raynaud's disease (blood vessel constriction that causes numb hands and feet) took 10 mg of *vardenafil* (Levitra), an erectile dysfunction drug, twice daily for two weeks. In 70% of participants, symptoms improved. *Theory:* The drug relaxes blood vessels, allowing for better blood flow. *If you have Raynaud's:* Ask your doctor about trying vardenafil.

Stephan Rosenkranz, MD, associate professor of medicine, department of cardiology, University of Cologne, Germany.

Edward K. Chapnick, MD, ***Maimonides Medical Center***

Protect Yourself From Killer Bacteria

Proven ways to avoid a life-threatening infection in the hospital.



Imagine entering a hospital for heart surgery, a joint replacement or some other procedure. The treatment is successful, but you contract an infection during your hospital stay.

Each year, this happens to 2 million Americans. The infection is usually minor—a simple rash and fever that can be cured with antibiotics. But about 10% of hospital-acquired infections are serious. Some bacteria are resistant to most—if not all—antibiotics, and harmful organisms can quickly invade the bloodstream and damage skin, organs, muscles and/or bones. More than 90,000 Americans die of these hospital-acquired infections annually.

While most hospitals have stepped up their efforts to prevent infections, only recently have many patients become aware that they must be more assertive in protecting themselves.

HOW TO AVOID BACTERIA

Bacteria can live for hours—sometimes even days—on almost any surface and then transfer easily to skin. From there, bacteria can enter the body through breaks in the skin or via touching the eyes, nose or mouth. Hand-washing is the most effective way to help prevent the spread of bacteria and other infection-causing organisms. (For more on hand-washing, see page 6.)

Other ways to protect yourself—or a loved one…

■ **Ask doctors and nurses to disinfect medical devices.** To prevent the spread of bacteria or other germs, stethoscopes, blood pressure cuffs and other such medical devices should be cleaned with a disinfectant alcohol wipe before they touch your skin.

■ **Avoid touching surfaces touched by other people.** Some people do their best to avoid touching tabletops, chairs, elevator doors or any other surface. If this is impractical, use alcohol-based disinfectant gels and/or wipes. To prevent a possible infection, avoid rubbing bare skin from any part of your body against these surfaces. In a recent study, about three-quarters of hospital rooms tested were contaminated with bacteria.

■ **Be aware that visitors can carry germs into your hospital room.** Ask visitors not to sit on your bed—they can transfer bacteria from their clothes to the sheets …or use the bathroom in your room—they can transfer germs to bathroom surfaces. Even doctors' neckties can carry bacteria or other germs, research shows.

Hospital patients typically are at greater risk of contracting an infectious disease due to their weakened immunity, but it's also wise for

Bottom Line/Health interviewed Edward K. Chapnick, MD, director of the division of infectious diseases at Maimonides Medical Center in Brooklyn, New York, and associate professor of medicine at Mount Sinai School of Medicine in New York City. He has published more than 30 medical journal articles on infectious diseases.

hospital visitors to follow hygienic practices to avoid getting sick.

PREP YOURSELF

Patients themselves often carry bacteria, such as *Staphylococcus aureus* (staph), on their bodies and/or clothes when they check into the hospital. These germs don't always cause symptoms—up to 30% of healthy adults carry staph on their skin. However, if your skin is colonized with bacteria when you go for surgery, it can enter your body at the surgical site. *To protect yourself…*

■ **Wash your body.** Three to five days before surgery, start showering or bathing daily using a special 4% chlorhexidine soap. Chlorhexidine is a powerful antiseptic agent that will help remove bacteria from the skin's surface. Chlorhexidine soap (such as Hibiclens or Betasept) is available over the counter at most drugstores. If it is not in stock, ask the pharmacist to order it.

Caution: Because this soap can irritate the skin or cause an allergic reaction in some people, do not use the soap for more than five days…avoid the use of other skin products during that time…and be sure that your doctor gives his/her consent to use the soap.

■ **Don't shave.** No matter how careful you are, shaving causes microscopic nicks in your skin. Any break in the skin can potentially create an entry point for bacteria. For 72 hours before surgery, do not shave the surgical site, even if the site is on your legs, underarms or face. If your surgery typically requires shaving, ask your doctor if clippers can be used instead of a razor by hospital personnel before your surgery.

■ **Ask for a staph test.** A week to 10 days before surgery, ask your surgeon to test you for *methicillin-resistant Staphylococcus aureus* (MRSA) by taking a nasal swab. If this test shows that you are a carrier of the bacterium, specific infection-control procedures will be used in the hospital. A topical antibiotic also may be prescribed.

Helpful: Almost everyone will be given an oral antibiotic within 60 minutes of receiving surgery to help prevent an infection. However, it's common for busy hospital staff to forget this routine medication. Be sure to remind your doctor.

If you're scheduled for surgery: Call your state's health department and ask if hospitals in the state are required to report infection rates. If so, get the latest report for the hospital where you'll be treated. Discuss any findings with your doctor.

CATHETERS AND IVs

Having a catheter or intravenous (IV) line increases your risk for infection because bacteria from your own body or a health-care worker's hands can enter at the insertion site. Catheters are tubes that are used to drain liquids, such as urine, from the body. IV lines deliver fluids, such as medication and nutrients, directly into a vein. You may not have a choice whether or not a catheter or IV is inserted, but always ask…

■ **Why is the catheter and/or IV there?** Often, a catheter or IV is used when a patient enters the emergency room, but is then forgotten for a time after it is no longer needed. If you don't know why you have a catheter or IV, ask.

■ **How many days will I need the catheter and/or IV?** The answer largely depends on your condition, but it's important to let your doctor know that you want a catheter and/or IV removed as soon as possible. With urinary catheters, the risk for an infection increases by at least 5% each day it remains in place. That means that it should come out as soon as medically possible.

Helpful: Every day, ask your nurse or doctor whether the catheter can come out…don't wait for medical staff to think of removing it.

With peripheral IVs (the kind that are inserted into a vein in your hand or arm), the risk for infection is relatively low until the third or fourth day. If an IV has been in place for four days, ask when you are scheduled to have it replaced with a new one. (Central venous lines, which are inserted in large veins of the neck or chest, don't have the same risk and can stay in place almost indefinitely.)

More from Dr. Chapnick…

Hand-Washing Secrets

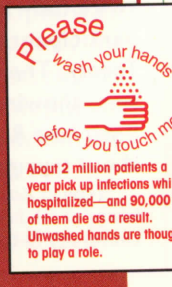
If you are hospitalized, everyone who enters your room should wash his/her hands. This includes family members, doctors, nurses and other hospital staff. If you feel embarrassed to remind your doctor or anyone else, raise the issue as a question: "Did you remember to wash your h ands?"

Be sure that people who wash with soap and water dry their hands with a clean paper towel and not a cloth towel from the bathroom in your hospital room. The paper towel also should be used to turn off the faucet.

In most hospitals, alcohol-based hand-cleaning gel dispensers are mounted on the wall in or near each patient's room—these are for everyone to use, not just staff. These gels (which should contain at least 62% alcohol) are superior to hand-washing at killing germs. Alcohol dries out the skin less than soap and water does, so it is best for frequent cleanings. If hands are visibly soiled, soap and water must be used.

Important: Latex gloves are meant to protect the person wearing them, not the patient. If hands aren't washed before putting on gloves, bacteria will live on the gloves. If a hospital staff member enters your room already wearing gloves, ask him to remove the gloves, clean his hands and put on a fresh pair.

If you are planning to be hospitalized, go to **www.bottomlinesecrets.com/bonus** for a free reproducible poster that reminds health-care workers to wash their hands before they touch you.



BETTER WAYS

Better vitamin D source. Boston researchers recently measured the vitamin D content in local seafood. *Result:* Farm-raised salmon contained about 25% of the vitamin D content found in wild-caught salmon. In earlier research, however, farmed salmon contained, on average, higher levels of beneficial omega-3 fatty acids than wild salmon. *Bottom line:* If you're trying to maximize your vitamin D intake, look to wild salmon over farm-raised salmon.

Michael F. Holick, MD, PhD, professor of medicine, physiology and biophysics, Boston University School of Medicine.

Better kidney stone treatment. Researchers recently reviewed nine studies involving 693 adults treated for kidney stone disease. *Result:* Patients given calcium channel blockers, such as *nifedipine* (Procardia), used to treat heart disease...or alpha-blockers, such as *tamsulosin* (Flomax), typically prescribed for enlarged prostate, had a 65% greater chance of passing their kidney stones than those not given these drugs. *Theory:* These medications relax the ureters (muscular tubes that push the urine from the kidneys to the bladder), easing stone passage. *If you have kidney stones:* Ask your doctor about trying one of these drugs.

Brent K. Hollenbeck, MD, assistant professor of urology, department of urology, University of Michigan, Ann Arbor.

Better apple juice. *New finding:* Researchers measured levels of *polyphenols*—antioxidants thought to protect against cancer and heart disease—in pasteurized apple juice that was either clear or cloudy. *Result:* Cloudy apple juice, which contains more pulp, had up to four times more polyphenols than the clear variety. *Theory:* The manufacturing process used to make clear apple juice reduces polyphenol levels. *Important:* Choose pasteurized apple juice to ensure that the product does not contain bacteria.

Jan Oszmianski, PhD, professor and head, department of fruit, vegetable and cereal technology, Wroclaw Environmental and Life Science University, Poland.

Kate Lorig, RN, DrPH
Stanford University School of Medicine

The Arthritis Fix Few People Use

"Self-management" strategies can keep you active and pain-free.

All too often, people with arthritis give up activities that they enjoy because of their pain and stiffness. That is unfortunate—and usually unnecessary.

WHAT YOU CAN DO

Most doctors remind arthritis sufferers that exercise is necessary to reduce the discomfort associated with the condition. Still, many people with arthritis "overprotect" their affected joints—a truly dangerous approach because their joints don't get the circulation and nutrients they need, and their muscles atrophy. Without strong muscles to stabilize the body and act as shock absorbers, the joints are more vulnerable to damage.

Helpful: Start with whatever amount of physical activity, such as walking or bicycling, you can do *now*—even if that means one minute every hour or five minutes twice a day. Perform the activity four or five times weekly, increasing your time by about 10% every couple of weeks. If at any point you feel worse after exercising than you did before, cut back and wait a week before increasing your time again.

Maintaining a healthy weight also is crucial to managing arthritis pain. If you are overweight, losing just five to 15 pounds can significantly reduce knee osteoarthritis pain as well as improve overall flexibility and mobility.

Helpful: If you need to lose weight, try the "200-a-day" plan. By eliminating just 200 calories daily through diet and/or exercise, the average person will lose about 20 pounds in a year. To reduce your daily intake by 200 calories, skip one slice of bread and take a 20-minute walk, for example...or eat two fewer cookies.

THE TOOL THAT TOO FEW PEOPLE USE

There is another approach that many arthritis sufferers overlook. At the Patient Education Research Center at Stanford University School of Medicine, we've helped thousands of arthritis sufferers achieve greater mobility and less physical discomfort with a six-week "self-management" program that teaches problem-solving strategies that can be used in a variety of situations. In addition to self-management techniques, the program includes exercise and diet strategies as well as the use of arthritis medications.*

Several randomized trials have shown that people who follow our program for at least four months experience less pain and disability, have fewer visits to doctors and enjoy greater quality of life than arthritis patients who have not participated in the program.

What's the secret? People who become good arthritis "self-

*Exercise guides and DVDs, as well as self-help information, are available from the Arthritis Foundation (800-568-4045 or *www.arthritis.org*).

Bottom Line/Health interviewed Kate Lorig, RN, DrPH, director of the Patient Education Research Center at Stanford University School of Medicine and coauthor of *The Arthritis Helpbook* (Da Capo) and *Living a Healthy Life with Chronic Conditions* (Bull).

JAMISON STARBUCK, ND

Natural Cures for Heartburn and Ulcers

"Doctor, I have heartburn, but I don't want to take a prescription drug. What can I do?" Many people have asked me for such advice—especially since the media have publicized risks associated with popular heartburn and ulcer medications called proton pump inhibitors (PPIs). These drugs, including *omeprazole* (Prilosec), *lansoprazole* (Prevacid) and *esomeprazole* (Nexium), offer short-term relief by reducing stomach acid, but they do not cure the underlying problem. Even worse, long-term use (more than a year) of PPIs increases risks for hip fracture (because of decreased mineral absorption)...and the bacterial intestinal infection *Clostridium difficile* (because stomach acid is needed to fight bacteria). For my patients, I use a different approach that focuses on improving digestion and healing the lining of the stomach and the esophagus. *My advice...*

If you suffer from heartburn and/or have an ulcer, avoid any foods that may irritate your condition, such as fried foods, citrus, tomato-based foods and spicy meals. Don't overeat. Large meals increase the demand for stomach acid. Chew thoroughly and eat nothing within two hours of going to bed. Avoid smoking and pain relievers, such as aspirin or *ibuprofen* (Advil), that can cause gastrointestinal irritation.

Herbal tea also can be surprisingly effective for heartburn and ulcers. Chamomile and licorice root are two herbs with a long medicinal history for treating the digestive tract lining.* Drink three cups of either tea daily, on an empty stomach. Use two teaspoons of dried plant or one teabag per eight ounces of water.

For heartburn (without ulcer), I suggest that you add stomach acid—which is necessary for good digestion—rather than reduce it with an acid blocker. At the end of your meal, sip on a four-ounce glass of water to which you have added one teaspoon of either apple cider vinegar or fresh lemon juice. *Caution:* Do not drink vinegar or lemon water if you have an ulcer or gastritis (inflammation of the lining of the stomach). Discontinue this practice if it causes pain or worsens symptoms.

If you have an ulcer (with or without heartburn), I recommend adding other botanical medicines. The antiseptic herbs echinacea, cranesbill root and Oregon grape root (50 mg each) help reduce bacteria associated with ulcers. The herbs cabbage leaf, marshmallow root and slippery elm bark (200 mg each) help restore the gut's protective lining. Take these herbs three times daily on an empty stomach until the ulcer symptoms have eased, usually for two to eight weeks.

If you take a PPI but want to stop using it, gradually wean yourself off the drug while you add this protocol. Consult your doctor about your plan and schedule a follow-up visit in a month. You can review your condition and discuss what I hope will be good news about your progress.

*If you have high blood pressure, avoid licorice tea.

Jamison Starbuck, ND, is a naturopathic physician in family practice and a lecturer at the University of Montana, both in Missoula. She is past president of the American Association of Naturopathic Physicians and a contributing editor to *The Alternative Advisor: The Complete Guide to Natural Therapies and Alternative Treatments* (Time Life). Please send comments and suggestions for future columns to Dr. Starbuck in care of *Bottom Line/Health*, Box 10702, Stamford, CT 06904-0702...or via E-mail at **Starbuck@BottomLineHealth.com**.

managers" learn how to work around the physical limitations that prevent them from activities they enjoy. Whether you want to walk the beach, climb the stairs to your friend's front door or visit your sister in Chicago, following a self-management program will help you. *Here's how...*

■ **Set a *specific* goal.** Is there something specific you would like to do, but are avoiding because of your arthritis? *Example: I would love to go to the movies, but I worry about sitting for two hours.*

■ **Pinpoint the obstacles.** What, precisely, is the problem with prolonged sitting? Do you get stiff? Do your knees hurt?

■ **Brainstorm possible solutions.** Would it help to sit in an aisle seat, so you can stretch your legs during the movie? Could doing warm-up exercises beforehand and/or bending and stretching your knees during the movie make a difference? How about changing the angle of your knees by sitting on your coat...or timing your medication so its effect peaks during the movie? Would you do better at a matinee or early-evening show, when the theater is less crowded?

■ **Devise a short-term action plan.** Find something specific that you can do now to move closer to your goal. *Example: I will practice sitting for 30 minutes, four times this week, at different times of the day to see when I'm most comfortable.*

Write down your action plan and post it on your bathroom mirror or any other place where you'll see it often. Keep a notebook to record setbacks and successes. Review your progress and update your action plan weekly. If you're able to sit comfortably for 30 minutes in the afternoon, see if you can extend that time by doing knee exercises before or during sitting.

■ **Test different approaches.** In many cases, a combination of solutions will be most effective. While simply choosing a matinee, for example, may not be enough to get you comfortably through

a two-hour movie, you may find that you are able to enjoy the cinema if you attend an early-afternoon show, take your medication an hour beforehand, use a warm pack on your knees and sit in an aisle seat so you can periodically stroll to the back of the theater.

OTHER WAYS TO BEAT ARTHRITIS

Arthritis pain and stiffness often interfere not only with the things you would *like* to do, but also the things you *have* to do. With a little ingenuity, however, you can reduce your discomfort. *Example:* Bulky handles (about an inch in diameter) are much easier to grasp than narrow handles when using tableware, pens, pencils, kitchen utensils and tools. Less tension is required to maintain your grasp on a bulky handle, so it's easier to hold if your hands are weak or your fingers won't close all the way.

Helpful: To modify your existing utensil handles, wrap them with foam pipe-insulation tubing (available at most hardware stores). Tubing with a three-eighths inch to three-quarter inch diameter opening usually provides a good fit. It's inexpensive and can be cut to size with a knife or scissors.

Other approaches...

☐ To save your hands from painful wringing of a dishcloth, use a sponge instead—the water can be easily squeezed out by putting the sponge in the sink and pressing on it with your palm.

☐ To avoid the sometimes painful movements needed to towel dry, put on a terry-cloth robe after showering to absorb much of the water.

☐ Put small laundry items (socks, underwear) in mesh bags (available at home-goods stores) for easier retrieval from the washer.

☐ To avoid morning stiffness, keep joints warm at night with a lightweight electric blanket. Or sleep inside a sleeping bag—it will turn with you, preventing cold air pockets, and keep you warmer than a blanket.

☐ Use a large spatula to tuck in sheets when making the bed.

Samuel Meyers, MD
Mount Sinai School of Medicine

The Perfect Colonoscopy

Follow these steps for an easier prep and better test.

When it comes to medical procedures, colonoscopy is one of the most universally dreaded. But it doesn't have to be that way.

Colonoscopy, the "gold standard" for examining the interior of the colon and rectum, is recommended for most adults once every decade after age 50. Some people, such as those with a family history of colon cancer, may be tested earlier and/or more often. Other tests, such as checking the stool for blood, and sigmoidoscopy, which examines only a portion of the colon, are not nearly as accurate as colonoscopy.

Before a colonoscopy can be performed, the patient's colon must be emptied, usually through the use of bowel-cleansing products 12 to 24 hours before the procedure.

During colonoscopy, the patient is sedated and lies on his/her side. The doctor introduces a flexible, lighted scope (approximately one-third inch in diameter and 79 inches long) through the patient's anus and threads it through the colon. A tiny camera attached to the end of the scope helps the doctor identify polyps (precancerous growths) that can be removed before they develop into colon cancer.

To get the most accurate results with the least amount of discomfort...

Choose a qualified physician. Many colonoscopies are performed by general practitioners who have no formal training in the procedure. That increases the risk for complications, such as bleeding and perforation of the colon. When choosing a physician, look for a board-certified gastroenterologist. To receive board certification, the doctor must complete an approved training program and pass the board examination. Gastroenterologists who belong to the American Society for Gastrointestinal Endoscopy (ASGE) are well-trained in performing colonoscopies and are recognized by their peers as qualified.*

Meet with the doctor ahead of time. It's not always customary to do so, but if you're nervous about your colonoscopy, make an extra appointment a week or two before the procedure. If you are concerned about pain during colonoscopy, for example, your doctor can give you details about the sedatives (or a general anesthetic, if necessary or preferred) that will be used to minimize discomfort.

Ask about potential complications. Colon perforation (in which the lining of the colon is perforated by the scope) can lead to such complications as peritonitis (bacterial infection in the abdominal cavity) and even death. The average perforation rate is one in 1,000 cases.

Another risk: General anesthesia

*To find a gastroenterologist who also belongs to ASGE, go to *www.askasge.org*, the group's Web site.

Bottom Line/Health interviewed Samuel Meyers, MD, a clinical professor of medicine/gastroenterology at Mount Sinai School of Medicine in New York City and co-author of the medical textbook *Bockus Gastroenterology* (W.B. Saunders). He has performed more than 5,000 colonoscopies during his career.

CHARLES B. INLANDER

Are You Saving Enough for Your Health Care?

Far too many people assume that health-care costs will no longer be a concern once they reach age 65 and become eligible for Medicare. That's a mistake.

According to the nonprofit Employee Benefit Research Institute, a 65-year-old couple who retire this year and live into their mid 80s will need $154,000 to $299,000 (in today's dollars) to cover out-of-pocket medical costs for insurance premiums (including Medicare), insurance-related copayments and deductibles, and prescription drugs. That doesn't include the cost of over-the-counter medications, long-term care (if you opt for it) and most dental expenses.

But the situation is not necessarily as grim as it sounds. Whether you are planning for retirement—or are already there—you can significantly lower your out-of-pocket health-care costs. *Here's how...*

Look for the best price. Even some people who would never make a purchase at the grocery store without comparing prices believe that health-care costs are final. That's not the case. Drug prices, even for generic drugs, vary widely among local pharmacies, chain drugstores, large retailers and mail-order companies. Before you fill a prescription, check at least three stores in your area (including pharmacies in the same chain, where prices often vary). Mail-order drug programs, such as those offered by AARP or drugstore chains, are often cheaper than local stores. If you use the same drug continuously, ask your doctor to write a 90-day (rather than a 30-day) prescription—this can save you up to 20% (via mail order or at a drugstore).

When you purchase Medicare supplemental insurance, make sure that you look at the same policy from at least five different companies. The federal government controls what the various policies cover, but not the prices. You can get a list of approved insurers from your state's insurance department (usually listed in the phone book). You'll find that the cost of the same policy may vary by as much as 40% among companies. Do the same when looking at Medicare prescription drug plans. Each state has at least three dozen plans available in all price ranges. Buy what you need and can afford. Also, don't use a specialist, such as a cardiologist, for a general problem like a sinus infection. Use a family physician or internist. His/her rates will be lower, and he will have more experience treating general health problems. Your out-of-pocket expenses also will be lower.

Start building a health reserve. If you are younger than age 65 and planning for retirement, put aside some money each month for postretirement out-of-pocket health costs. If you have just received a tax refund, put all or part of it into an account earmarked for postretirement health expenses.

Plan ahead. If you have more than $150,000 in stocks, bonds and similar investments, consider buying long-term-care insurance, which covers such things as nursing-home care. The younger you are when you purchase such coverage, the less expensive it is. Even for a 65-year-old, the cost is about 40% less than it is if you wait until age 70. Again, shop around for the policy that provides the best coverage for the money.

Charles B. Inlander

Charles B. Inlander is a Fogelsville, Pennsylvania–based consumer advocate and health-care consultant. He was the founding president of the nonprofit People's Medical Society, a consumer advocacy organization credited with key improvements in the quality of US health care in the 1980s and 1990s, and is the author of 20 books, including *Take This Book to the Hospital with You: A Consumer Guide to Surviving Your Hospital Stay* (St. Martin's). Please send comments and suggestions for future columns to Mr. Inlander in care of *Bottom Line/Health*, Box 10702, Stamford, CT 06904-0702...or via E-mail at **Inlander@BottomLineHealth.com**.

can cause breathing problems in some people, so be sure that a trained practitioner will administer the drug and be present throughout the procedure if you are receiving an anesthetic.

To further reduce your risk for complications, give your doctor a list of any medication allergies you have as well as any over-the-counter or prescription drugs or supplements you take.

Follow prep instructions. This is perhaps the most important step to ensuring a successful colonoscopy. If you don't empty your colon properly, pools of fecal matter will block areas of the colon from the doctor's view.

There are many different prep methods, including lavage solutions (which involve drinking a gallon of a special liquid that promotes frequent bowel movements)...osmotic laxatives (such as magnesium citrate)...stimulant laxatives (such as senna)...or a combination of these. Phosphorus-based laxatives, such as OsmoPrep (32 tablets taken the night before and morning of the colonoscopy) or Phospho-Soda (a 1.5-ounce liquid that is mixed with a clear drink, such as ginger ale, and drunk the night before the procedure), are often prescribed. However, phosphorus-based laxatives may not be recommended if you have certain conditions, such as heart and/or kidney disease.

I prescribe magnesium citrate, which comes in a 10-ounce bottle. One bottle is drunk the night before the colonoscopy, and a second bottle is consumed the morning of the procedure.

To prevent the possibility of vomiting during the procedure, don't drink any liquids within two hours of receiving a colonoscopy, regardless of the type of bowel-cleansing product used.

Recent finding: A study published in the *American Journal of Gastroenterology* found that people who walked for five-minute intervals between drinking glasses of bowel-cleansing solution had a cleaner

colon than patients who rested. Why walking helps is unclear, but it may be because exercise stimulates intestinal motion.

Ask how many colonoscopies the doctor performs in a day. A typical colonoscopy takes 30 to 60 minutes to complete. During part of that time, the doctor is threading the scope to the end of the patient's colon.

It is important that the doctor take at least six minutes to withdraw the scope, according to a recent study in *The New England Journal of Medicine*. If the withdrawal is performed more quickly, there is a greater chance of missing small polyps hiding behind folds of intestine.

To gauge how long your doctor personally spends on each colonoscopy, ask how many procedures he performs in a day. If he's doing eight or more within a four-hour period, he's not spending enough time on each patient.

I use a pediatric scope on every patient because it is more flexible and easier to maneuver than an adult scope. If you know that your colon is more twisted than normal (as determined by a prior colonoscopy), consider asking your physician to use a pediatric scope.

Make sure polyps will be removed. Before scheduling a colonoscopy with a particular doctor, confirm that he will remove polyps during the procedure should any be found. Otherwise, the colonoscopy will have to be repeated.

Avoid virtual colonoscopy. It requires the same prep as standard colonoscopy. During virtual colonoscopy, air is pumped into the colon via the rectum, and the patient's colon is viewed with a computed tomography (CT) or magnetic resonance imaging (MRI) scan. Virtual colonoscopy may be only 50% to 60% accurate, depending on the polyp size and the equipment used. Also, if polyps are found, your doctor still will need to do a standard colonoscopy to remove them.

Matthew L. Flaherty, MD
University of Cincinnati Medical Center

Dangers of Blood-Thinning Drugs

New research shows that potentially fatal bleeding is occurring at an increasing rate.

Medications known as anticoagulants reduce the risk of developing life-threatening blood clots that can lead to heart attack, stroke, deep vein thrombosis (a blood clot in the leg) and pulmonary embolism (a blood clot in the lung). Even though these drugs are highly effective at preventing clots, they can cause excessive bleeding.

New finding: A 2007 study in the medical journal *Neurology* suggests that the incidence of bleeding in the brain—intracerebral hemorrhage (ICH)—associated with anticoagulant use increased fivefold between the late 1980s and late 1990s, a rise that corresponds to the increasing use of the popular anticoagulant *warfarin* (Coumadin). In patients age 80 and older, brain hemorrhages associated with anticoagulants in the same period increased by a factor of *greater than 10*. Warfarin use in the US rose after the drug was shown to help prevent ischemic strokes (caused by blood clots) in patients with atrial fibrillation (abnormal heart rhythm).

The risks associated with anticoagulant use are often outweighed by the potential benefits of preventing clots. However, patients need to be aware of necessary tests and other strategies to ensure that the drugs are being used safely.

HOW ANTICOAGULANTS WORK

About 4 million Americans take prescription anticoagulants. These drugs are commonly known as blood thinners, but they don't actually thin the blood. Anticoagulants inhibit the ability of substances in the blood to form clots and can prevent some clots from getting bigger. They are part of a broader category of drugs called antithrombotic agents. *Antithrombotics include....*

- **Antiplatelet drugs** inhibit the ability of cell-like structures in blood (platelets) to form clots. Drugs in this class include aspirin, *clopidogrel* (Plavix), *ticlopidine* (Ticlid) and a combination of aspirin plus *dipyridamole* (Aggrenox).

Aspirin and other antiplatelet drugs are usually recommended for the prevention of heart attack and ischemic stroke. Patients with certain medical conditions, including heart-rhythm disturbances, such as atrial fibrillation, may require a different anticlotting agent, such as warfarin.

- **Clotting factor inhibitors,** such as warfarin, work in the liver to inhibit the production of proteins that cause clotting. These drugs typically are prescribed for patients with deep vein thrombosis, pulmonary embolism, atrial fibrillation or mechanical heart valves.

- **Heparin** is mainly used in hospitalized patients with a high risk of developing clots. Heparin is given either intravenously—to

Bottom Line/Health interviewed Matthew L. Flaherty, MD, a neurologist at the University of Cincinnati Medical Center and assistant professor of neurology at the University of Cincinnati College of Medicine. He was the lead author of "The Increasing Incidence of Anticoagulant-Associated Intracerebral Hemorrhage," published in *Neurology* (January 9, 2007).

prevent or treat clots—or by injection.

WARNING SIGNS

Antithrombotics can cause unwanted bleeding. Even though aspirin, clopidogrel and other antiplatelet drugs are unlikely to cause excessive bleeding, there's still a risk for bleeding from the gastrointestinal tract or into the brain. The risk for bleeding is higher with anticoagulants, such as warfarin.

Red flag: Unexplained bruising is a sign of bleeding under the skin—and could be due to an incorrect dose of antithrombotic medication. However, many elderly patients with fragile skin will experience bruising even if the dose is correct.

Other warning signs: Bleeding gums when flossing/brushing the teeth...small cuts that continue to bleed...excessive fatigue due to blood loss/anemia...or dark urine or black stools, both of which can be signs of internal bleeding.

New guidelines: For years, doctors prescribed warfarin to patients who might have achieved adequate clotting control (with less risk for side effects) by taking aspirin or other antiplatelet drugs. It's now believed that warfarin should be reserved for patients such as those with atrial fibrillation or a recent heart attack complicated by ischemic stroke.

Warfarin also may be the first choice for patients with a high risk for pulmonary embolism or deep vein thrombosis. For these conditions, the higher risk for bleeding and other side effects, including nausea and loss of appetite, is offset by the potential benefits.

REDUCING YOUR RISK

When an antithrombotic is prescribed, doctors are supposed to discuss with you the risks associated with the drug and explain the precautions that should be taken. Unfortunately, this conversation often does not take place.

To reduce your risk...

■ **Know your INR.** The *International Normalized Ratio* (INR) measures how quickly blood clots. Based on a blood test (typically called a prothrombin time test), the INR is used to determine the correct dose of warfarin, which differs widely from patient to patient. The INR for most patients should be two to three. A lower number means that the dose is inadequate for clot control. A higher number indicates a higher risk for bleeding.

Important: After starting warfarin, patients are usually advised to have the prothrombin time test several times a week. Once they've achieved good blood-clotting control, the test should be given at least monthly—or more often in patients who are starting (or stopping) medications that can affect blood clotting, such as aspirin and certain antibiotics.

■ **Use NSAIDs cautiously.** Patients taking warfarin can experience unwanted bleeding when they combine it with aspirin, *ibuprofen* (Advil) or other nonsteroidal anti-inflammatory drugs (NSAIDs). Patients on warfarin who need these drugs—for arthritis, for example—should take them only under a doctor's supervision.

Helpful: *Acetaminophen* (Tylenol), which is not an NSAID, is less likely than other over-the-counter painkillers to increase bleeding in patients taking warfarin and may offer some pain relief for arthritis. *Caution:* Do not exceed the maximum 24-hour dose of acetaminophen (4,000 mg)—liver damage may result.

■ **Don't double up.** Patients who miss a dose of warfarin or an antiplatelet drug should wait until their next scheduled dose before taking it again. Doubling the amount to make up for a missed dose increases bleeding risk.

■ **Maintain a stable diet.** Foods that are high in vitamin K—green, leafy vegetables, such as spinach, and cruciferous vegetables, such as broccoli—affect the ability of blood to clot. Patients taking anticoagulants who suddenly start eating more (or less) of these foods can experience changes in the way the drugs work.

Little-known sources of vitamin K: Olive and canola oils, cranberries and black licorice.

It's not necessary to avoid vitamin K–rich foods. However, patients shouldn't make major dietary changes, such as becoming a vegetarian, without checking with their doctors—and getting a blood test to determine whether the drug dose needs to be adjusted.

■ **Avoid herbs/supplements.** Many herbs, including alfalfa and American ginseng, and herbal teas, such as ginger, can increase bleeding when combined with anticoagulants.

Important: Patients who were

using these products when starting anticoagulant therapy shouldn't stop abruptly without checking with their doctors.

■ **Drink alcoholic beverages in moderation.** Alcohol can increase bleeding risk in the stomach and/or brain—and the risk is even higher in patients taking anticoagulants. One drink a day for women and up to two drinks a day for men is unlikely to cause problems. Larger amounts of alcohol should be avoided.

■ **Control hypertension with diet, medication and exercise.** Hypertension increases the risk for many health problems, including hemorrhagic stroke (bleeding in or around the brain)—and people who take an anticoagulant are already at greater risk for this condition.

■ **Avoid contact sports.** Injuries can cause internal bleeding that's difficult to control in patients taking anticoagulants. Contact sports, such as hockey or football, are too risky for these patients.

Minor cuts or scrapes—from shaving, working in the yard, etc.—usually aren't a problem unless there's a significant increase in the amount of time it takes to form clots and stop bleeding when you're cut. This could mean that the anticoagulant dose needs to be adjusted.

Keep your doctors informed about medication changes. Many drugs, including some antibiotics, laxatives and antacids, can interact with warfarin. Tell the doctor managing your warfarin therapy about any drugs that have been prescribed by your other physicians.

coming soon in Bottom Line/Health

- **SKIN CANCER:** Latest research on this deadly malignancy.
- **CHOLESTEROL TESTS:** Are you getting the ones you need?
- **CHRONIC PAIN:** New ways to get relief.
- **AROMATHERAPY:** Improve your circulation, digestion and more.

David L. Cochran, DDS, PhD
University of Texas Health Science Center

DENTAL IMPLANTS Are They for You?

New technology has made them a better alternative to dentures and bridgework.

For years, dental bridges and dentures were the only options for people who had lost teeth as a result of gum disease or an injury.

Now: Recent technological advances have made the dental implant—an artificial tooth root that is surgically implanted into the jawbone and covered with a natural-looking, artificial tooth—better and more popular than ever.

Over the past several years, the number of Americans receiving dental implants has increased by about 20% each year, with an estimated 1 million implants now being placed annually. In 95% to 97% of cases, the artificial tooth stays in the jaw without pain or infection.

Unlike bridges, which rely on neighboring teeth for support, dental implants leave more of your own teeth unaffected and reduce the risk for gum disease because they make it easier to remove plaque. For denture wearers, dental implants offer a more secure and comfortable fit.

For people missing one or two teeth, individual implants can be anchored into the jawbone and the artificial tooth or teeth attached.

For people missing many or all of their teeth, two or more implants can be placed into the upper and lower jawbones, and dentures can be clipped or screwed onto them. Dentures that clip on are removable—just like regular dentures—but more stable and comfortable because they are secured by the implants.

What are DENTAL IMPLANTS?

Dental implants consist of three parts—a metal screw (the implant, also known as a post or cylinder) that is surgically anchored into the jawbone and acts as an artificial tooth root...a titanium extension (abutment) that fits on the implant...and an artificial tooth (also known as a crown or restoration) that attaches to the abutment. Crowns are made of ceramic (porcelain) to approximate the color and texture of your natural teeth.

A FOUR-STEP PROCESS

To get an implant...

STEP 1: Schedule an evaluation. You'll need X-rays and possibly a computed tomography (CT) scan so the periodontist (a dentist who specializes in gum disease) or oral surgeon can calculate the depth of bone, note the location of nerves and vital structures (such as the sinuses) and plan the placement of the implant.*

STEP 2: Place the implant. An implant is placed slightly less than

*The American Academy of Periodontology (312-787-5518, *www.perio.org*) and the American Association of Oral and Maxillofacial Surgeons (800-822-6637, *www.aaoms.org*) can help identify implant specialists in most parts of the country.

Bottom Line/Health interviewed David L. Cochran, DDS, PhD, professor and chair of the department of periodontics at the University of Texas Health Science Center at San Antonio Dental School. He is a board-certified periodontist and vice president of the American Academy of Periodontology. Dr. Cochran has published more than 140 scientific journal articles on dental health.

KNOW-IT-ALL

■ **EAT RIGHT, SPEND LESS.** *New finding:* Americans who eat six to 10 daily servings of fruits and vegetables spend about $2,000 less on health-care expenses annually than those who eat less of these foods...and if everyone ate six to 10 servings daily, cases of heart disease could drop by about 30%. ■ **LET'S PLAY! SAY SURGEONS.** In a simulated surgery skills course, surgeons who played video games more than three hours a week made 37% fewer errors than surgeons who never played. ■ **SALIVA TESTS.** The proteins, antibodies and other substances in saliva can be used to diagnose disease—and are easier to collect than blood. "Oral fluid" tests, still in development, could make diagnostic exams less painful—and less expensive. ■ **STRESS DERAILS MEMORY** in highly accomplished people. They have large stores of working memory, which is used up by stress. People with less working memory are less affected by stress because they develop other skills to compensate. ■ **WANT TO LIVE LONGER?** Win a Nobel prize. Winners between 1901 and 1950 lived an average of 77.2 years—1.4 years longer than scientists who were only nominated. Research is under way to determine how the status from winning the prize extends lifespan. ■ **SURPRISING "CURE" FOR SMOKERS.** Scientists have identified a small brain area, the *insula*, that is closely linked to cigarette addiction. Smokers with insula damage, due to stroke or other causes, immediately lose the urge to smoke. The finding could lead to better stop-smoking strategies. ■ **THE ROMANCE GENE.** Differences in sexual desire and performance may be determined by normal genetic variations rather than by learned behavior or emotional problems. Researchers report that some variations in the D4 receptor gene depress sexual desire and function, while other variations have the opposite effect.

■ *Journal of the American Dietetic Association* ■ *Journal of the American Medical Association* ■ *Medical News Today* ■ University of Chicago ■ University of Warwick ■ American Association for the Advancement of Science ■ Hebrew University of Jerusalem.

one-half inch, on average, into the jawbone. This is delicate surgery that requires cutting and peeling back the gums, drilling into the jaw, placing the device at the correct angle and depth, and sewing the gums closed around the implant.

A local anesthetic is often sufficient for pain control, and placing a single screw can take as little as 30 minutes. The entire procedure for one implant usually takes one to three hours. Most people can return to work or their regular activities the same day.

There will be gum soreness the first day, and you should not chew hard food on the side of your mouth with the new implant for a few weeks. Pain usually can be managed with *ibuprofen* (Advil) or another over-the-counter pain reliever. Stitches are usually removed in seven to 10 days. For multiple implants, general anesthesia or conscious sedation, which typically involves the use of the opiate *midazolom* (Versed), may be preferred.

STEP 3: Attach the abutment. After the bone heals around the implant (about six to 12 weeks), the dental surgeon will open the gums again and put the abutment onto the implant. This is minor surgery that can be completed in just a few minutes under local anesthesia.

STEP 4: Attach the crown. A general dentist or specialist in prosthetic dentistry (a prosthodontist) attaches the crown with an adhesive or screws it onto the implant.** A week to two weeks before this step, the dental professional makes impressions of the implant and abutment and sends them to a dental lab, which makes the crown. He/she also uses a shade guide to select a color that matches your adjacent teeth.

TOTAL COST

The typical total cost of a dental implant is $3,000 to $4,000. That's $1,500 to $2,500, on average, for implanting a single screw and another $1,500 to create and place the crown. Check with your insurer to see whether it covers dental implants and/or crowns. Some insurance policies have a maximum payout of $1,000 per year for dental care.

To maximize your coverage: Start the procedure late in the year and finish it the following year, if possible.

GETTING THE BEST RESULTS

To increase your chances of receiving a successful dental implant...

If you smoke, stop. Smokers heal more slowly, have an increased risk for infection and are more likely to have an implant come loose.

Control blood sugar. People with diabetes who maintain good blood sugar control typically do well with implants. Uncontrolled diabetes may disqualify you for surgery because the implant site may not heal properly. For the same reason, people who have had radiation treatments of the jaw may not be able to have the surgery.

Discuss your medical history. Make sure that your dentist knows about all the medications, supplements and herbs you take, as well as any chronic or acute health conditions you have.

Floss. Your replacement teeth are not vulnerable to tooth decay (cavities), but you still need to brush and floss them to keep gum-damaging plaque from accumulating around the implant. You'll also need to visit the dentist two to four times per year for routine cleanings and exams.

Even if you and the dental specialists do everything right, there is a 3% to 5% chance that your implant will fail for reasons that no one understands. *Example:* The jawbone may not heal around the implant... or the screw may come loose. If an implant fails, you can have it removed, let your gums heal and try again when your dentist thinks it is prudent.

**To find a qualified prosthodontist in your area, consult the American College of Prosthodontists (*www.prosthodontics.org*).

Larkin Barnett, *Florida Atlantic University*

Exercises That Help With Everything You Do

Functional training is a form of exercise that strengthens the muscles that we use in everyday activities, such as standing, walking, sitting, doing chores and carrying packages.

How it works: Functional training helps integrate the limbs and the trunk muscles for fluid, powerful movements...puts your body into proper alignment...improves posture and balance...and promotes deep breathing for relaxation.

A functional fitness routine can be incorporated into cardiovascular and strength-training workouts. The exercises described below are designed for people of all fitness levels and should be performed daily...

SIT UP AND TAKE NOTICE

Benefits: Corrects trunk alignment, including weak abdominal muscles that don't provide sufficient support for the lower back...and enhances stamina and endurance.

Good for: Carrying objects... walking and running...and relieving muscle tension caused by working at a desk or a computer.

What to do: While sitting in a straight-backed chair, scrunch your shoulders up toward your ears, then relax them. Inhale slowly while you raise your shoulders, then exhale slowly as you lower them. Do this three to five times, feeling tension drain out of your shoulders and neck.

Next, sit tall, perched on your sit-bones (you can find these by rocking side-to-side) and concentrate on stacking your hips, ribs, chest and head on top of each other like building blocks. Exhale powerfully while pulling your abdominal muscles inward toward your spine. Then pull your shoulders back gently. Take several deep breaths.

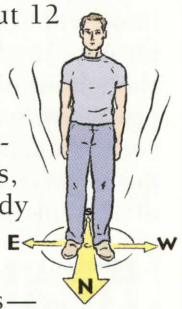
Finally, sit up tall, while picturing the tops of your ears stretching upward. This elongates the spine and improves respiratory function. Tighten your abdominals inward and upward toward your spine while exhaling forcefully three to five times.

THE COMPASS

Benefits: Strengthens your postural muscles (to improve coordination and balance)...and reduces fatigue and stress on the legs, hips and back.

Good for: Relieving muscle soreness from extended standing as well as improving performance in all sports and physical activities.

What to do: With your feet flat on the ground about 12 inches apart, pretend you're standing in the middle of a large compass. With exaggerated movements, shift your entire body toward each of the four main points on the compass—north (forward), south (backward), east (to the right) and west (to the left)—pausing momentarily at each point. Do this three to five times. Contract your abdominal muscles and notice how your control improves.



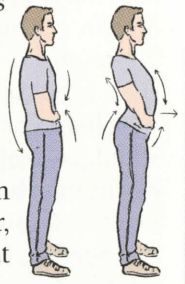
Gradually make your movements smaller and smaller. Do this for 30 seconds. End by standing still and feeling your body weight evenly distributed.

THE PELVIS AS A FISH BOWL

Benefits: Centers the hips and places the pelvis in neutral alignment, reducing stress on the legs, back and neck.

Good for: Lifting...getting in and out of bed...and swinging a golf club or tennis racket.

What to do: Standing with your feet about 12 inches apart, contract your stomach muscles and draw them inward and up toward your spine. Picture your hips as a fish bowl filled with water, with the bowl's rim at your waistline.



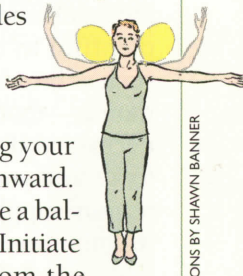
Now tip your hips forward slightly and visualize water spilling out of the front of the fish bowl. Next, tip your hips backward slightly and visualize water sloshing out of the back of the bowl. Finally, balance the fish bowl so that the rim is perfectly level. This is your pelvis's "neutral" position. Throughout the day, assume this position as you stand up, walk and sit.

SHOULDER BLADE, ARM, FINGERTIP

Benefits: Teaches you to initiate arm movements from your trunk muscles (including your shoulder girdle muscles) for more power and control.

Good for: Relieving muscle tension caused by driving a car or speaking on the telephone...and playing golf and racket sports.

What to do: While standing, lift your arms to your sides at shoulder level. Then lift your arms higher, in the shape of a "U," while sliding your shoulder blades downward. Imagine that you have a balloon next to each ear. Initiate these movements from the shoulder blades. Lower your arms, then repeat three to five times.



ILLUSTRATIONS BY SHAWN BANNER

Bottom Line/Health interviewed Larkin Barnett, an adjunct professor of exercise science at Florida Atlantic University in Boca Raton, and the author of *Functional Fitness: The Ultimate Fitness Program for Life on the Run* (Florida Academic).

"The physician should not treat the disease, but the patient who is suffering from it."
—Maimonides, 12th-century scholar, philosopher and physician

READERS WANT TO KNOW

■ My daughter wants me to try acupuncture for my back pain. Are the needles painful?

Usually not. The goal of acupuncture, which is a key component of Traditional Chinese Medicine, is to treat illness by correcting imbalances in the flow of energy. To do this, the acupuncturist inserts needles in acupuncture points along meridians, or energy pathways, in the body. Acupuncture needles, which are disposable and made of stainless steel, are about the width of a human hair. Most practitioners use sterile plastic tubes to guide the needles into the acupuncture point, making insertion relatively painless. And even if you feel the insertion, you usually don't feel the needles once they're in. The number of needles used during a treatment depends on the condition and the patient's overall health. Acupuncture is typically performed with the patient lying flat on his/her back or stomach. Treatment lasts 20 to 40 minutes. To find a licensed acupuncturist in your area, contact the National Certification Commission for Acupuncture and Oriental Medicine (904-598-1005, *www.nccaom.org*).

Joan-Ellen Macredis, ND, LAc, licensed acupuncturist in private practice, Stamford, Connecticut.

■ I've heard that magnesium improves a person's absorption of calcium. Is this true?

Yes. Magnesium helps transport calcium into and out of bones. In most instances, magnesium is so plentiful in one's diet—in foods, such as brown rice, spinach and almonds—that supplements are not necessary. If your diet lacks these foods and you want to take a magnesium supplement, the amount of magnesium you take should be half that of the calcium. For example, if you are taking 1,500 mg of calcium daily, the magnesium dose should be 750 mg. Your body cannot absorb more than 500 mg of supplemental calcium at one time, so it's best to take calcium supplements in divided doses. Make sure that you get enough vitamin D, which is even more essential for calcium absorption than magnesium is. The current recommended daily intake for vitamin D is 200 international units (IU) for adults age 50 or younger...400 IU for those ages 51 to 70...and 600 IU for those age 71 or older. *Caution:* Vitamin D and calcium supplements can affect the potency of high blood pressure medications known as calcium channel blockers, such as *nifedipine* (Adalat) and *amlodipine* (Norvasc). If you use these medications, check with your physician before taking the supplements described above.

Leon Root, MD, attending orthopedic surgeon, Hospital for Special Surgery, New York City.

■ My husband's penis becomes slightly curved when he has an erection. What causes this?

It could be Peyronie's disease, a disorder of the penis characterized by abnormal thickening of the lining of the erection chamber. The thickened area (plaque) feels like a hard lump within the penis. The causes are not completely understood, although injury to the penis is one possibility. Symptoms include erectile dysfunction...pain, especially during an erection...and curvature of the penis during erection. Peyronie's disease may occur at any age, but is more common in older men and diabetics. Initial treatment, if needed, typically includes vitamin E, taken orally, or drugs, such as the calcium channel blocker *verapamil* (Isoptin), that are injected into the plaque. If the problem persists for more than six months, surgery is an option. Your husband should consult a urologist for a proper diagnosis and treatment.

Irwin Goldstein, MD, director, sexual medicine, Alvarado Hospital, San Diego.

■ Will the jewelry I wear interfere with my pacemaker?

Possibly. Jewelry, name tags, eyeglasses and other products, including clothing, are increasingly using rare-earth magnets, strong magnets made from neodymium-iron-boron (NdFeB). *New finding:* When researchers held NdFeB magnets up to 1.18 inches away from 70 patients with pacemakers or implantable cardioverter defibrillators (ICDs), the magnets interfered with the devices' functioning. *Theory:* Magnetic fields can affect pacemakers and ICDs, especially those that use magnetic switches to control some functions. *If you have a pacemaker or ICD:* Keep magnets (especially those that contain NdFeB) away from the device. If you are uncertain whether a product that comes in close contact with your chest contains a magnet, consult your doctor and/or the manufacturer.

Thomas Wolber, MD, cardiologist and cardiac electrophysiologist, University Hospital of Zurich, Switzerland.

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