



AVIATION MEDICAL BULLETIN™

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EXAMINING YOUR ARTERIES

Is there any way to tell how much plaque you have before a heart attack occurs? If you're having angina or have several risk factors for heart disease, your doctor may order a series of tests to determine if you have coronary artery blockages. These may include:

Electrocardiograms. In this test, known as an ECG or EKG, electrodes are attached to your chest to detect any irregular heart rhythm or damage from a heart attack and determine whether your heart is getting enough blood and oxygen.

Imaging techniques. These can determine if you have any artery blockages, and if so, how severe they are. The most common ones are:

Radioisotope scan. A radioactive dye is injected into the bloodstream, and a special machine takes pictures of your heart and arteries as the dye passes through.

Echocardiogram. This test uses sound waves instead of dye or X-rays to trace a picture of your heart: revealing any damage to the muscle or abnormal blood flow.

CT scan. A more advanced form of X-ray, the CT machine takes detailed pictures of your heart from various angles; providing a cross-sectional view.

MRI. Using a magnetic field and radio waves, MRI records energy signals emitted by the atoms that make up the cells of the body. MRI can measure blood flow through arteries: providing information about blockages.

Cardiac catheterization, or angiography. In this procedure -- an invasive test -- a pencil-sized plastic tube is threaded through an artery in your groin. A catheter is then passed through the tube toward the heart and into a coronary artery. Iodine-based dye is then injected, and a special camera takes pictures to show any blockages.

EBCT. This sophisticated test measures calcification of the

arteries, a possible indication of coronary heart disease (CHD).

Once your doctor determines you have plaques, the goal is to stabilize them and prevent a heart attack. But, it's far better to prevent the plaques in the first place. Bringing down your cholesterol is a key strategy for both. For instance, having 60 percent of the surface area of a coronary artery covered in plaque is considered significant atherosclerosis. If your cholesterol is 150 you'll be 80 years old before you get that much plaque. But, if your cholesterol is 300 you'll reach that level before you hit 40.

Of course, cholesterol isn't the only factor that plays a role in the development of heart disease. There are many other factors involved -- inflammation, high blood pressure, even germs -- that can significantly affect your risk.

BASEBALL INJURIES

Baseball is the No. 1 cause of sports-related eye injuries to children. The newsletter Archives of Ophthalmology recommends that children play with baseballs specifically designed for them. They are 15% to 20% softer than major-league baseballs, and they can reduce the potential for all impact injuries.

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FOOD LABELS: CAN YOU TELL FACT FROM FICTION?

Your favorite juice is branded as a "fruit drink." This means that it:

- A. May contain little or no real fruit juice
- B. Was made from a mixed blend of fruit
- C. Contains 100% juice
- D. Is better for you than concentrate

The answer is: A, may contain little or no real fruit juice. If you see the word "drink" on a product, that's a telltale sign that it's not 100% juice, says Dr. Sears. Look carefully at the ingredient list to make sure you're getting pure fruit juice -- unhealthy drinks will contain 10% or less of pure juice. You should also avoid beverages with added sugars such as high-fructose corn syrup. Otherwise, you may be quenching your thirst with just sugar water.

AGGRESSIVE PROSTATE CANCER – ANOTHER REASON TO AVOID SATURATED FATS

Limiting consumption of saturated fats, which are found primarily in animal foods, is important for overall health and cardiovascular disease prevention. A 2017 study suggests that saturated fat may also be associated with more aggressive prostate cancer.

This population study, published in *Prostate Cancer and Prostatic Diseases*, included men, ages 40 to 79, who were newly diagnosed with the disease. After adjusting for total fat, the researchers, found that men with the highest saturated fat intake were 50 percent more likely, overall, to have more advanced disease, compared to those with the lowest intake. No significant effects were seen with other types of fat, including polyunsaturated fats and trans fats.

Saturated fat, as commonly found in animal foods, increases blood cholesterol levels—and elevated cholesterol has previously been linked to more aggressive prostate cancer, though in this study, the use of cholesterol-lowering statins did not significantly lessen the effect of saturated fat on disease aggressiveness.

On the other hand, an earlier study in *The Prostate* found that among men diagnosed with prostate cancer, those on statins were 80 percent less likely to die from the cancer over a 10-year period compared to nonusers.

How can you limit your intake of saturated fat? Choose lean meats, skinless poultry, and nonfat or low-fat dairy products (which also saves calories).

THE FACTS ON FAD DIETS

There is no shortage of diet plans that promise quick weight loss. But, how do you know when a fad diet is potentially dangerous?

Weight loss veterans know that losing weight and keeping it off requires a long-term commitment, yet even savvy dieters can occasionally be tempted by the quick weight loss promised by fad diets. As each new "lose weight fast" gimmick comes along, some people forget about the negatives associated with most fad diets — from a lack of nutritional value to food restrictions that are hard to live with — while others might not know if the weight-loss plan they're considering is a fad or a program that could be helpful over the long haul. Here's how to tell a flash-in-the-pan plan from an effective one.

Beware Magical Claims and Passing Promises

It seems to be human nature to be attracted to fad diets, which promise quick and easy results. Weeding out fad diets takes a bit of effort because there is no standard definition of a fad diet.

Here are some of the red flags that indicate a weight-loss plan is an ineffective fad diet:

- The diet promises that you will lose weight fast or at an unrealistic pace. The claims sound too good to be true. The diet's recommendations are based on a single study – or no research at all.
- The diet's recommendations seem extreme.
- Statements made about the diet are refuted by reputable scientific organizations.
- It refers to foods as "good" or "bad."
- Personal testimonials are used to "sell" the diet.
- The fad diet involves crash dieting, or very intense reductions in eating and drinking.

"Fad diets are the parachute pants of nutrition," explains nutritionist Judy Penta. "Usually these diets are popular only for a short time — a season or at most a few years — then become unpopular or even laughable when the new fad comes along."

Feeding The Popularity of Fad Diets

Why do fad diets become the rage? A number of factors typically fuel their popularity, including:

- **Celebrity endorsements.** Who doesn't want to be as popular and slender as the latest starlet?
- **The promise of quick weight loss.** In this age of instant everything, there's a natural temptation to fall for a weight-loss plan that promises quick weight loss in only weeks rather than months.

- **The “elimination” mentality.** The idea that cutting out certain foods will result in quick weight loss plays into popular beliefs about dieting. “Many of these diets promote elimination of one or multiple food groups for a set number of days or in very specific combinations with some sort of gimmick,” says Penta, adding that many people equate misery and deprivation with dieting and so are more willing to accept this type of weight-loss plan, at least for a brief while.
- **Peer pressure.** If all your friends are following the fad, it’s tempting to join in.

Find Better Alternatives to Fad Diets

If you are concerned that a weight-loss plan could be a fad diet, do some research — look for the science behind the diet’s claims. A better solution is to work with a nutritionist or registered dietitian to create a realistic diet that will be effective for you.

People should follow recommendations made by reputable organizations, such as the Dietary Guidelines for Americans, which are made by the U.S. Department of Agriculture and U.S. Department of Health and Human Services. The reality of weight loss is that, in the long run, a slow and steady approach brings more lasting results than any quick weight-loss fad.

CAN DIABETES BE CURED?

With all the research on diabetes and advances in diabetes treatments, it's tempting to think someone has surely found a diabetes cure by now. But, the reality is that there is no cure for diabetes -- neither type 1 diabetes nor type 2 diabetes. (Although lifestyle changes can achieve remission in type 2 diabetes in some cases.)

However, there are treatments, including simple things you can do daily, that make a big difference.

Is there a natural therapy that can cure diabetes?

No. Natural therapies such as deep abdominal breathing, progressive muscle relaxation, guided imagery, and biofeedback can help relieve stress. And, emotional stress affects your blood sugar levels. So learning to relax is important in managing your diabetes.

Supplements don't cure diabetes, either. Some natural supplements may interact dangerously with your diabetes medication. Others have been shown to help improve your diabetes, but always check with your doctor before taking any supplement.

Be skeptical about claims of a diabetes cure. A genuine cure will have been tested repeatedly in clinical trials with clear success.

What lifestyle changes can help me manage my diabetes?

Even though there's no diabetes cure, diabetes can be treated and controlled, and some people may go into remission. To manage diabetes effectively, you need to do the following:

Manage your blood sugar levels. Know what to do to help keep them as near to normal as possible every day: Check your glucose levels frequently. Take your diabetes medicine regularly. And balance your food intake with medication, exercise, stress management, and good sleep.

Plan what you eat at each meal. Stick to your diabetes eating plan as often as possible.

Bring healthy snacks with you. You'll be less likely to snack on empty calories.

Exercise regularly. Exercise helps you keep you fit, burns calories, and helps normalize your blood glucose levels.

Keep up with your medical appointments. That includes your doctor, diabetes educator, ophthalmologist, dentist, podiatrist, and other health care professionals.

THE REAL COST OF DRUNK AND DRUGGED DRIVING

The costs of driving under the influence don't end with the fatalities, injuries, or disabilities caused by traffic accidents. People who drive after using drugs or alcohol, and even passengers who ride with them, can face jail time, the loss of a driver's license, higher insurance rates, and additional expenses such as attorney fees, court costs, and lost time at work.

Alcohol-related crashes account for nearly one-third of traffic-related deaths in the U.S., and the annual cost is over \$51 billion. So remember, if you catch a buzz, catch a ride.

BALANCING THE SCALE

Stepping on the scale can give you a good reality check when it comes to weight control. Participants in one study who weighed themselves every day after losing weight were more successful at keeping it off. If you see the number on the scale going up, you can use that information to take quick action by eating less or exercising more.

Researchers suggest that people weigh at least once a week, and always under the same conditions – preferably in the morning after you've used the restroom but before getting dressed.

GOOD AND BAD EXERCISES FOR LOW BACK PAIN

Lower Back Pain: How Exercise Helps

You may feel like resting, but moving is good for your back. Exercises for lower back pain can strengthen back, stomach, and leg muscles. They help support your spine, relieving back pain. Always ask your health care professional before doing any exercise for back pain. Depending on the cause and intensity of your pain, some exercises may not be recommended and can be harmful.

Avoid: Toe Touches



Exercise is good for low back pain -- but not all exercises are beneficial. Any mild discomfort felt at the start of these exercises should disappear as muscles become stronger. But if pain is more than mild and lasts more than 15 minutes during exercise, patients should stop exercising and contact a doctor. Some exercises may aggravate pain. Standing toe touches, for example, put greater stress on the disks and ligaments in your spine. They can also overstretch lower back muscles and hamstrings.

Try: Partial Crunches



Some exercises can aggravate back pain and should be avoided when you have acute low back pain. Partial crunches can help strengthen your back and stomach muscles. Lie with knees bent and feet flat on the floor. Cross arms over your chest or put hands behind your neck. Tighten stomach muscles and raise your shoulders off the floor. Breathe out as you raise your shoulders. Don't lead with your elbows or use arms to pull your neck off the floor. Hold for a second, then slowly lower back down. Repeat 8 to 12 times. Proper form prevents excessive stress on your low back. Your feet, tailbone, and lower back should remain in contact with the mat at all times.

Avoid: Sit-ups



Although you might think sit-ups can strengthen your core or abdominal muscles, most people tend to use muscles in the hips when doing sit-ups. Sit-ups may also put a lot of pressure on the discs in your spine.

Try: Hamstring Stretches



Lie on your back and bend one knee. Loop a towel under the ball of your foot. Straighten your knee and slowly pull back on the towel. You should feel a gentle stretch down the back of your leg. Hold for at least 15 to 30 seconds. Do 2 to 4 times for each leg.

Avoid: Leg Lifts



Leg lifts are sometimes suggested as an exercise to "strengthen your core" or abdominal muscles. Exercising to restore strength to your lower back can be very helpful in relieving pain yet lifting both legs together while lying on your back is very demanding on your core. If weak, this exercise can make back pain worse. Instead, try lying on your back with one leg straight and the other leg bent at the knee. Keeping your lower back flat on floor. Slowly lift the straight leg up about 6 inches and hold briefly. Lower leg slowly. Repeat 10 times, then switch legs.

Try: Wall Sits



Stand 10 to 12 inches from the wall, then lean back until your back is flat against the wall. Slowly slide down until your knees are slightly bent, pressing your lower back into the wall. Hold for a count of 10, then carefully slide back up the wall. Repeat 8 to 12 times.

Try: Press-up Back Extensions



Lie on your stomach with your hands under your shoulders. Push with your hands so your shoulders begin to lift off the floor. If it's comfortable for you, put your elbows on the floor directly under your shoulders and hold this position for several seconds.

Try: Bird Dog



Start on your hands and knees, and tighten your stomach muscles. Lift and extend one leg behind you. Keep hips level. Hold for 5 seconds, and then switch to the other leg. Repeat 8 to 12 times for each leg, and try to lengthen the time you hold each lift. Try lifting and extending your opposite arm for each repetition. This exercise is a great way to learn how to stabilize the low back during movement of the arms and legs. While doing this exercise

don't let the lower back muscles sag. Only raise the limbs to heights where the low back position can be maintained.

Try: Knee to Chest



Lie on your back with knees bent and feet flat on the floor. Bring one knee to your chest, keeping the other foot flat on the floor. Keep your lower back pressed to the floor, and hold for 15 to 30 seconds. Then lower your knee and repeat with the other leg. Do this 2 to 4 times for each leg.

Try: Pelvic Tilts



Lie on your back with knees bent, feet flat on floor. Tighten your stomach by contracting it as though you were preparing for a punch. You'll feel your back pressing into the floor, and your hips and pelvis rocking back. Hold for 10 seconds while breathing in and out smoothly. Repeat 8 to 12 times.

Try: Bridging



Lie on your back with knees bent and just your heels on the floor. Push your heels into the floor, squeeze your buttocks, and lift your hips off the floor until shoulders,

hips, and knees are in a straight line. Hold about 6 seconds, and then slowly lower hips to the floor and rest for 10 seconds. Repeat 8 to 12 times. Avoid arching your lower back as your hips move upward. Avoid overarching by tightening your abdominal muscles prior and throughout the lift.

Lifting Weights May Help



Done properly, lifting weights doesn't usually hurt your back. In fact, it may help relieve chronic back pain. But, when you have acute (sudden) back pain, putting extra stress on back muscles and ligaments could raise risk of further injury. Ask your doctor whether you should lift weights, and which exercises to avoid.

Try: Aerobic Exercise



Aerobic exercise strengthens your lungs, heart, and blood vessels and can help you lose weight. Walking, swimming, and biking may all help reduce back pain. Start with short sessions and build up over time. If your back is hurting, try swimming, where the water supports your body. Avoid any strokes that twist your body.

Try: Some Pilates Moves



Pilates combines stretching, strengthening, and core abdominal exercises. Under the instruction of an experienced teacher, it may help some people with back pain. Be sure to tell your teacher about your back pain, because you may need to skip some moves.

THE RIGHT MOVES FOR YARD WORK

To protect your back when raking leaves, keep your feet moving and hold the rake close to your body instead of standing in one place and reaching for the leaves.

When shoveling, avoid lifting and twisting at the same time. Lift by bending your knees and keeping your back straight and upright. Use your legs to turn your body and keep the shovel close to you.

Yard work is good exercise, but like any activity, it's important to warm up your muscles before starting. Also, take plenty of rest breaks to avoid muscle fatigue. You're more prone to injury when your body is tired.

You can burn as many calories with 30 to 40 minutes of raking leaves as you can with a 30-minute walk or a five-mile bike ride.

TV AND YOUR KIDS

Sex and violence are what many parents fear their children will consume too much of on television. But, a new study finds that food is the top product served to kids and teens on screen.

The study finds that food is the number one product advertised to kids, followed by media such as music, video games and movies. The study found that more than a third of commercials targeting children or adolescents are for candy and snacks - often high-fat, sugary foods that are likely to fuel the ongoing childhood obesity epidemic.

Children 8 to 12 years old watch the most food commercials, averaging 21 ads daily, according to the findings. That adds up to 7,600 per year, or nearly 51 hours annually. Teens, 13 to 17 years of age, see 17 food ads daily, or more than 6,000 per year. While youngsters 2 to 7 years of age view 12 food ads per day, or 4,400 yearly.

Half of all the ads shown during children's shows are for food. Of all the ads in the study, 34 percent marketed candy and snacks, 28 percent were for cereal and 10 percent promoted fast foods. By comparison, none of the commercials in the study promoted fruit or vegetables. Only four percent advertised dairy products - a rich source of calcium, which most children fall short in

consuming, according to the U.S. Dietary Guidelines Advisory Committee.

ACRONYMS EVERY PARENT SHOULD KNOW

One thing you can do to keep your kids safe in cyberspace is to learn as much as possible about the acronyms used in chat rooms, e-mails, and text messaging. Some of the most common ones:

PAW.....Parents are watching
 PAL.....Parents are listening
 POS.....Parents over the shoulder
 PIR.....Parents in room
 P911.....Parent alert
 ASL.....Age-sex-location
 MorF.....Male or female
 KFY.....Kiss for you
 WYCM...Will you call me
 LMIRL...Let's meet in real life
 SYT.....See you tonight

Other safety tips: Place the computer in an area where you can easily monitor its use, not in the child's room; learn how to set parental controls and how to check the browser's history files. For more information, visit <http://www.cybertipline.com/>.

MIRACLE FOOD?

If there is a miracle food, soy might just be it. "There isn't a disease soy can't help with in some way," says John Glaspy, MD, of UCLA's Jonsson Cancer Center, where he is head of a study of the effects soy and breast cancer. Here's some of the things that there is evidence that soy does:

- **Fights heart disease.** Soy has been shown to reduce cholesterol levels in many studies.
- **May reduce risk of osteoporosis.** Preliminary studies show soy helped increase or maintain bone density in postmenopausal women.
- **Eases menopausal symptoms.** In Asia, where soy is eaten daily, women experience a lower incidence of hot flashes.
- **May fight breast cancer.** Studies are being conducted to ascertain if soy can make a difference in breast cancer risk.
- **May fight prostate cancer.** A new study at Sloan-Kettering Cancer Center in New York will begin soon.
- **May protect against colon cancer.** In a study of 1,000 Californians, those who ate at least one serving a week of soybeans in some form had half the risk of developing precancerous polyps.
- **May protect against endometrial cancer.** A

Hawaiian study found that women who ate soy regularly had half the incidence of this cancer.

- **May prevent stroke.** Animal studies suggest promising results.

QUITTING SMOKING AND WEIGHT GAIN

Most women believe that if they stop smoking they will gain weight. A new study out of the University of Minnesota indicates that is not true. Fully two-thirds of women who quit didn't gain any weight; the one-third who did only gained a few pounds and lost it quickly.

GARLIC DOESN'T IMPROVE CHOLESTEROL

Don't depend on garlic supplements to lower cholesterol. In two independent and controlled studies, one using Kwai garlic powder and the other using Tegra garlic-oil preparation, there was no evidence that garlic made any difference in total cholesterol, LDL cholesterol or HDL cholesterol.

CHECK TOOTHBRUSH

Take a look at your toothbrush. The Academy of General Dentistry says if its bristles are frayed in all directions after a few weeks use, you're brushing too hard, and hard brushing can wear down tooth enamel.

RUNNING UNDER PRESSURE

Do you put pressure on yourself when you run? Jeff Galloway, Olympic runner and writer, says many runners "place unrealistic time and distance expectations on themselves." "When that happens," he says, "running can become a chore." He offers these two rules for putting your running regimen back into perspective:

1. Don't wear a watch or heart-rate monitor for a few weeks.
2. For the next few weeks, run just 3 days a week and maintain a slower-than-usual pace. It'll make running fun again.

GETTING A BONUS INCREASES YOUR CHANCES OF DYING THAT WEEK

You have a slightly higher chance of dying in the days after you get a paycheck, bonus, or Social Security payment. For example, during the week when the U.S. tax rebate checks arrived, mortality among 25-to-64 year olds increased by 2.5%, and during the week when dividends are paid to Alaskans from the state's Permanent Fund, mortality increases by 13%. Higher levels of activity such as driving and recreation after money rolls in are the likely causes of the effect.

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WHAT'S THE DIFFERENCE?

We are often asked, “If we have Long Term Disability (LTD) coverage for our pilots, why do we/they need Loss of License (LOL) coverage”? The answer lies in an explanation of the difference between LTD and LOL.



Traditional LTD carriers don't recognize what we call the licensing risk. That's the risk of an FAA licensing grounding that can extend well beyond the resolution of the health issue/problem that initially triggers a disability benefit. Further, they generally don't recognize at all, those health related licensing safety issues that cause a pilot's loss of income, but never trigger an LTD benefit. Below is an example:

A pilot has to have a stent. After 45 days, his cardiologist releases him to go back to work. The LTD carrier reasons that his health problem has been solved, and his doctor released him, so they deny or cease further payment of benefits.

Here's the problem: The FAA won't even consider letting him fly until at least six months has elapsed between the event and his request to go back on flight status. And, it's incumbent on the *pilot* to prove to the FAA that he/she is fit to fly after the six month mark. So, he has to know the FAA requirements, have extensive testing, and have his case presented to the FAA Cardiac Review Board for a "Special Issuance". (And, by the way, the board only meets every other month.) So, in the real world of aviation, it can be seven to twelve months before this pilot can fly again even though the LTD carrier stopped benefits after 45 days. A LOL contract would continue to pay him long after the LTD plan stopped.

The bottom line is that traditional disability insurance will not typically consider a pilot disabled once your treating doctor or the insurance company's doctor say "he's good to go." Hence the reason Loss of License Insurance was created and our experience shows it pays nearly 1 in 20 covered pilots every year.

With 65 years experience, Harvey Watt & Co provides the *only* US pilot disability plans for individuals and small groups we know with a FAA Medical Licensing definition of disability for commercial pilots.

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