



# AVIATION MEDICAL™

## BULLETIN

PUBLISHED BY HARVEY WATT & COMPANY BECAUSE HEALTH AND FITNESS MATTER TO AVIATORS

March 2015

### WILL SIT-UPS MAKE MY STOMACH FLATTER?

They won't help much. There is no way to selectively burn belly fat—"spot reducing" is a myth. In any case, the energy burned by sit-ups (actually not that much) and other short exercise comes almost all from stored carbohydrates, not body fat. But sit-ups can strengthen abdominal muscles, which in turn provide better support for the back and can improve posture and prevent slouching—and that may make you look trimmer.

In any case, instead of old-fashioned sit-ups, you're better off doing curl-ups, also called crunches, as follows.

- 1) Lie on the floor with your knees bent, several inches apart, and your feet flat on the floor.
- 2) Contract your abdominal muscles while pressing your lower back into the floor, which will help lift your upper body.
- 3) Come up to no more than a 30° angle, hold for a few seconds, then lower slowly.

*Source: Men's Health*

### HOW MUCH MORE CAFFEINE DOES ESPRESSO HAVE THAN REGULAR COFFEE?

Espresso usually has less caffeine per serving. Because it is so concentrated, espresso has, ounce for ounce, about two to three times as much caffeine as brewed coffee. However, a "shot" of espresso is only one to two ounces, so it typically packs less caffeine than a six-ounce cup of regular coffee.

But "typical" doesn't mean much when it comes to coffee. The variability in caffeine is huge—depending on the type of bean, how the beans are ground, how much is used, the type of machine, the brewing time, and so on. For instance, six ounces of brewed or drip coffee can have anywhere from 80 to 175 milligrams of caffeine.

Espresso is not a type of coffee bean, but rather a brewing process, in which pressurized steam and water are rapidly forced through finely ground coffee. Different kinds of beans can be used for espresso, and this will affect the caffeine content.

### H2O IN YOUR FOOD

Recommendations to drink eight glasses of water a day typically overlook the water content of foods, which can contain almost as high a percentage as plain water (100%):

**90%-99%**—Fat-free milk, cantaloupe, strawberries, watermelon, lettuce, cabbage, celery, spinach, pickles

**80%-89%**—Fruit juice, yogurt, apples, grapes, oranges, carrots, broccoli (cooked), pears, pineapple

**70%-79%**—Bananas, avocados, cottage cheese, ricotta cheese, potatoes (baked), corn (cooked), shrimp

**60%-69%**—Pasta, legumes, salmon, ice cream, chicken

**50%-59%**—Ground beef, hot dogs, feta cheese, tenderloin

*Source: USDA National Nutrient Database*

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## ARE DRIED FRUITS AS NUTRICIOUS AS FRESH, FROZEN OR CANNED?

The short answer is yes, provided you adjust the serving size. That is, when fruit is dried, most of the water is removed in the process, which means the final product has less volume and weight than its fresh, canned or frozen form. Because there is less of the fruit remaining after drying, the serving size will be smaller, and all of the nutrients, and sugars, will be more concentrated. So, when you compare one-quarter cup of dried fruit with a one-cup serving of its fresh, frozen or canned (water-packed) counterpart, the amount of each nutrient is really close.

*Source: American Journal of Clinical Nutrition*

## YOUR TARGET HEART RATE

Your maximum heart rate is about 220 minus your age (155 beats per minute for age 65, for example). When you start an exercise program, such as brisk walking, you should aim for about 50% of that maximum. As you get into shape, gradually increase until you're achieving about 85% of maximum (see chart).

To see how you're doing, as you exercise, periodically:

- Take your pulse on the inside of your wrist, on the thumb side.
- Use the tips of your first two fingers (not your thumb) to press lightly over the blood vessels on your wrist.
- Count your pulse for 10 seconds and multiply by 6 to find your beats per minute.

A few high blood pressure medications lower the maximum heart rate and thus the target zone rate; check with your physician. If you have a heart condition or you're in cardiac rehab, talk to a healthcare professional about what exercises you can engage in, what your target heart rate should be and whether you need to be monitored during physical activity.

Age	Target Zone 50%-85% (beats per minute)	Average Maximum Heart Rate, 100% (beats per minute)
20	100-170	200
30	95-162	190
40	90-153	180
50	85-145	170
60	80-136	160
65	78-132	155
70	75-128	150
80	70-119	140

*Source: The American Heart Association*

## AEROBIC ACTIVITY HELPS BUILD BIGGER BRAINS

Another study has shown that aerobic activity, such as brisk walking, boosts your brain—actually increasing the size of the hippocampus, a key part of the inner brain involved in forming, storing and processing memory. When compared to an earlier study of cognitively healthy older adults, moreover, the findings suggest that aerobic exercise offers greatest benefits to those who need it most: people with mild cognitive impairment (MCI), often a precursor to Alzheimer's disease. People already suffering mild cognitive impairment benefit most.

*Source: Johns Hopkins Health Alerts*

## IT'S NO LONGER A SMALL WORLD

More than 2 billion people around the world are now overweight or obese, according to a new University of Washington. Since 1980, the global proportion of women who are overweight or obese has gone from 30% to 38%; men have gone from 29% to 40%, overtaking women in percentage overweight or obese.

Overall, the greatest increases in overweight and obesity came between 1992 and 2002, primarily in those ages 20 to 40. The study found some evidence that weight gain is slowing, especially in developed countries like the US.

*Source: The Lancet*

## EATING 'MINI-MEALS ALONE GROWING IN POPULARITY

Sitting down to a home-cooked meal with the whole family is increasingly a thing of the past, according to a report from the trend-watching Hartman Group. Instead, half of all eating occasions are snacks or "mini-meals," and nearly half (47%) are eaten alone.

The report cited increased availability of food from outlets ranging from warehouse clubs to convenience stores to home-goods retailers. Increasingly, people are eating "on the go" but actually at home, consuming take-out and prepared foods purchased en route. They see it as a way to catch up on work, reading and television program and to nourish themselves without having to wait for family members who are going in all different directions.

*Source: Nutrition Action Healthletter*

## RETHINKING BMI FOR OLDER ADULTS

The weight-height equation may be different as you age. Here's what really matters instead.

If you're over 65 or approaching that age and still watching your weight, new findings suggest you may be worrying about the wrong thing. It's true that the obesity

epidemic has exacted a serious toll on America’s health. But for older adults, maintaining muscle mass to ward off frailty—a condition called sarcopenia—is more important both to the length and quality of life than counting pounds.

The popular Body Mass Index (BMI—see box), a calculation that combines weight and height, turns out not to be a very good predictor of health for older adults—for whom the “rules” about overweight may simply be different than for younger people.

Unfortunately, too many older people remain preoccupied with the numbers on their bathroom scale. This is a serious mistake. Losing weight is the wrong goal. You should forget about your weight and instead concentrate on shedding fat and gaining muscle.

In fact, because muscle tissue weighs more than body fat, if you succeed in replacing fat with muscle, you won’t lose much if any weight. But you would be much healthier as a consequence because you’ve altered your body composition in a favorable way. You’ve decreased your risk for sarcopenia.

**BMI Surprise:** A new study, casts further doubt on the usefulness of BMI as a measure of health status for older adults. Australian researchers combined 32 prior studies totaling nearly 200,000 people age 65 or older, who were followed for an average of 12 years. They compared mortality risk with BMI to see if being overweight or obese increased participants’ odds of dying during the study periods.

Surprisingly, they found just the opposite. Those at greatest mortality risk were the thinnest seniors, with risk increasing at a BMI of 23 (towards the upper end of what’s defined as a healthy body weight) and below. Risk actually rose with thinner BMIs; those with a BMI of 20.0 to 20.9 were 19% more likely to die than those between 23.0 and 23.9.

Conversely, those at lower mortality risk had BMIs of 24.0 to 30.9—a range including the high end of healthy, all those considered overweight, and the beginning of obesity. The very lowest risk fell between 27.0 and 27.9, the middle of the overweight category.

**Changing Ideal:** Though surprising to most people, this isn’t the first time science has challenged the assumption that older people should follow the same BMI guidelines as younger adults. In 1985, Reubin Andres, MD, long-time clinical director of the National Institute on Aging, used data from life-insurance companies to compare

longevity and BMI. His findings showed that the “ideal” BMI—that associated with the lowest risk of chronic disease or mortality—increased with age:

Age Range	Ideal BMI	
	Male	Female
20-29	21.4	19.5
30-39	21.6	23.4
40-49	22.9	23.2
50-59	25.8	25.2
60-69	26.6	27.3
70-79	27.0	27.8

*Source: American Journal of Clinical Nutrition*

**10 WAYS TO REDUCE YOUR CANCER RISK**

These 10 recommendations for cancer prevention are drawn from the American Institute for Cancer Prevention and World Cancer Research Fund:

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of energy-dense foods.
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to two for men and one for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium).
8. Don’t use supplements to protect against cancer.
9. It is best for mothers to breastfeed exclusively for up to six months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

*Source: Fitness Magazine*

## FRUITS AND VEGETABLES = LONGEVITY

If you've been trying to follow the advice to eat five servings of fruits and vegetables a day, new studies might inspire you to try harder—and to aim for even more. Studies found even greater benefits from consuming more than five daily servings of fruits & vegetables.

There are a number of reasons to maintain a relatively high intake of fruits and vegetables. First, they tend to be low in calories and high in nutrients. Second, they tend to crowd out less-healthy foods during meals and at snack time. Third, eating lots of fruits and vegetables tends to be related to other health behaviors such as engaging in regular physical activity and avoiding tobacco products.

**More is better:** One new finding found a “robust association” between fruit and vegetable consumption and all-cause mortality, including cardiovascular and cancer risk. The greatest benefits were seen in people eating seven or more servings of produce daily: Compared to people eating less than one daily serving, those consuming the most fruits and vegetables were 33% less likely to die of any cause during the follow-up period. Their risk of death from cardiovascular disease was 31% lower and risk from cancer was 25% less.

*Source: Baylor Clinic Healthletter*

## GO NUTS

People who eat nuts tend to live longer than those who don't eat them, according to new research. The more often people ate nuts, the greater the benefit. The biggest effect was seen in reduced deaths from cardiovascular disease; the cancer death rate was also lower among nut eaters. People who ate more nuts tended to be leaner and more active, consumed more produce, and were less likely to smoke than nut avoiders. But even when the researchers controlled for such factors, nut eating was still associated with reduced mortality rates.

*Source: The New England Journal of Medicine*

## ANOTHER BENEFIT OF STATINS

They may help reduce the chronic gum inflammation that is characteristic of periodontal disease. In a recent study, people with heart disease or at high risk for it were given either a high or low dose of statins. After 12 weeks, the high-dose group had less gum inflammation than the low-dose group. The greatest improvements were seen in those with the most severe gum disease, and the changes tracked closely with changes in arterial inflammation (statins are known to reduce inflammation, which is involved in atherosclerosis). This adds to the evidence linking heart disease and gum disease.

*Source: The Journal of the American College of Cardiology*

## SOCIAL MEDIA

Is it Good or Bad for Your Relationships?

Research shows that social connections have health benefits such as reducing harmful levels of stress and warding off depression. But, do these benefits carry over with our online friends and social media accounts? In most cases, the answer seems to be yes.

Research shows that social media has indeed enhanced relationships. To be sure, joining an online community might help you make or maintain connections, and it can help connect you to people and opportunities that would not have been possible without it.

Of course, just always remember to exercise caution when sharing personal information or arranging an activity with someone you've only met online.

*Source: American Heart Association*

## DO THE ONE MILE WALK TEST!

There's a quick and simple test that can help you evaluate your cardiovascular fitness as well as determine where you land.

**The Test: Walk one mile as fast as you can without jogging or running.**

### What You'll Need:

- ✓ A timer (smart phone or stopwatch) to monitor your start and end time.
- ✓ A good pair of walking shoes.
- ✓ A designated one-mile walking area.

### What to Do:

1. Find a local high school track, walking trail or treadmill where you can safely and comfortably walk for one mile.
2. Before you begin, be sure to warm up. This can include walking for a few minutes at a much slower pace.
3. Once you have warmed up, begin your test by starting your timer.
4. Walk as fast as you possibly can for the designated one-mile distance.
5. After you reach a mile, immediately stop your timer and record your score.

If you completed your one-mile walk in:

**16 minutes or more:** You're likely a novice/beginner. Definitely ease into physical activity. Work on building endurance and speed gradually.

**13-15 minutes:** Completing the test in this time places you in the intermediate zone. You likely exercise regularly and are capable of pushing yourself a bit. Proceed with optimism, but of course with caution if you want to add some intensity to your workouts.

**12 minutes or less:** This time places you in the advanced category. Exercise is likely a part of your daily routine and you're probably already reaping the amazing benefits.

**DO I REALLY NEED TO SEE A DOC?**

The benefits of regular exercise are practically endless—weight control, reduced risk of heart disease and an improved mood just to name a few. But can exercise prove risky? Should you see your doctor before beginning an exercise program? For the good majority of people, the biggest risk remains in not getting active. But if you haven't exercised for some time and you have health concerns, you may want to talk to your doc.

**YES NO**

- Has your doctor ever said you have heart trouble?
- Do you suffer frequent chest pains?
- Do you often feel faint or have spells of severe dizziness?
- Has your doctor ever told you that you have a bone or joint problem (arthritis) that has been aggravated or worsened by exercise?
- Has your doctor ever said your blood pressure was too high?
- Are you over age 65 and not accustomed to any exercise?
- Are you taking any prescription medications, such as those for heart problems or high blood pressure?
- Is there a good physical reason not mentioned here why you should not follow an activity program even if you wanted to?

If you answered “yes” to any of these questions, you should strongly consider consulting your physician before beginning your exercise program.

*Source: Archives of Internal Medicine*

**FRIENDS WITH BENEFITS (HEALTH BENEFITS)**

You probably count on your friends for a good laugh and lively conversation, but did you know that you can count on your friends to help you live longer too? According to an Australian study, those who had a large network of friends outlived those with the fewest friends by 22 percent. And the perks don't stop there. Friends can also increase your sense of belonging and purpose, boost your happiness, reduce your stress, and improve your self-confidence and self-worth.

Researchers suspect that good friends discourage unhealthy behaviors such as smoking and heavy drinking, and the social connections established with your friends may ward off depression, and help you deal with stress in healthy instead of destructive ways.

*Source: Harvard HEALTHbeat*

**DIET MISTAKE**

**Not Eating Enough -- Or Often Enough.**

While overeating and under-eating may seem like contradictory nutrition mistakes, they are related. If you don't eat at regular intervals throughout the day, you risk disrupting your blood sugar and insulin levels, which in the end can promote fat storage and lower your metabolism -- both of which lead to weight gain.

**The solution:** Eat something every four hours and never let yourself "starve" from one meal to the next.

*Source: American Dietetic Association*

**EXECUTIVE EXERCISE**

According to a recent survey of America's corporate executives who exercise, here are their most popular forms of exercise in order of their popularity:

- Running
- Walking
- Weight training
- Cycling
- Golf

*Source: Hope Health Letter*

## 2.5

The average numbers of hours Americans spend daily glued to their tablets and smart phones.

### SURPRISING NEWS ABOUT WEIGHT LOSS

Confused by headlines proclaiming new ways to lose weight and get fit? Here's the truth behind a recent report in the news.

#### Story: Exercise won't help you lose weight

What if being a couch potato was as effective in helping you lose weight as hitting the gym? Well, some researchers now claim it might be even more effective. The theory is that exercise makes you hungry, so you eat more than you normally would, canceling—or even reversing—any positive effects from your workout. And the more strenuously you exercise, the more calories you will consume later. Supporters of this idea say that those who simply change their diet have a better shot at weight loss, even if they remain sedentary.

**Behind The Story:** If you're looking for an excuse to skip the gym, this isn't it. Regular exercise has been proved to reduce the risk of heart disease, diabetes, some cancers and mild depression. And while fitness proponents concede that working out may make you hungrier, they maintain that it's still an important part of weight control. The key is simply not consuming more calories than you burn.

**What To Do:** Drop the remote and pick up some hand weights. And watch your diet. Don't reward yourself for a good sweat session with a cheeseburger.

*Source: Healthy Living*

### MARRIAGE A RISK FACTOR?

Marriage appears to be a risk factor for obesity in men. A survey of 8,000 U.S. men found that those who were married had a higher prevalence of being obese than men who were single or divorced.

*Source: Health*

### HOW MANY CALORIES A DAY?

Here's a guideline from the Mayo Clinic on how many calories to consume each day.

- Multiply your weight in pounds by 13.
- To lose weight multiply your weight by 10

Remember, a sensible weight loss program includes daily exercise and eating less.

*Source: Mayo Clinic Health Letter*

### FITNESS PAYS

Three Ohio companies decided to try a novel approach to fitness. They offered to pay 700 workers \$350 to lower their body fat, total cholesterol and blood pressure by taking part in an exercise, smoking cessation and stress reduction program.

The program reduced the company's net cost by \$1.6 million—28 percent in health care costs and 37 percent in reduced absenteeism, and 7 percent in lower workman's compensation costs.

Besides boosting employees' quality of life—which wasn't measured—company savings from sponsoring wellness plans were \$762 per employee per year.

*Source: Reader's Digest*

### GOT THE FLU? HOW LONG SHOULD YOU STAY HOME

The CDC recommends that people with influenza-like illness remain at home until at least 24 hours after they are free of fever (100° F), or signs of a fever without the use of fever-reducing medications.

This is a change from the previous recommendation that ill persons stay home for 7 days after illness onset or until 24 hours after the resolution of symptoms, whichever was longer. The new recommendation applies to camps, schools, businesses, mass gatherings, and other community settings where the majority of people are not at increased risk for influenza complications.

*Source: CDC*

### OBESITY INCREASES

Here's a look at the trend in weight for Americans:

Decade	Obesity
1960s	1 in 7
1970s	1 in 4
2000s	1 in 3

*Source: Nutrition Action HealthLetter*

### EYE DOCS: WHO'S WHO?

There are three kinds of eye-care professionals:

**Ophthalmologist.** An M.D. who specializes in eye care and has several years of residency training beyond medical school. Ophthalmologists diagnose and correct refractive errors, treat eye disorders, screen for glaucoma, perform surgery, and prescribe medicine.

**Optometrist.** A doctor of optometry has four years of graduate training at an optometric school. Optometrists diagnose and correct refractive errors, screen for glaucoma, and identify other eye disorders. In some states they are licensed to treat certain diseases of the eye, including glaucoma.

**Optician.** A practitioner licensed to fit and sell corrective lenses as prescribed by an optometrist or ophthalmologist.

*Source: L A Health News*

**EXERCISE AND SELF-WORTH**

Exercise changes how you feel about yourself. According to a study by the National Institute on Aging, older adults began an exercise program. Some of them did aerobic walking; others followed a program of stretching and toning.

After six months, all of them perceived themselves as stronger and more attractive, showing improvement in overall self-esteem.

*Source: UC Berkeley Wellness Letter*

**DECLINING RISK**

A man’s risk of dying from a heart attack is about 40 percent less than it was for his father at the same age. The same is true for women, compared to their mothers.

*Source: University of California at Berkeley Wellness Letter*

**DID YOU KNOW...**

...If you’re a pack-a-day cigarette smoker, you’ll ingest 400 milligrams of nicotine in a week. If ingested all at once, it would be lethal.

...That it is impossible to catch a cold or flu outdoors in winter at the North Pole. The temperatures are so cold that the disease-causing viruses can’t live there.

*Source: Longevity*

**BINGEING AT NIGHT?**

Find yourself eating too much after supper. Here are some tips that might help:

- ✓ Don’t skip meals. Eat breakfast, lunch and dinner.
- ✓ If you eat after supper, do it in the kitchen, sitting down at the table.

- ✓ Eat without engaging in any other activity (TV-watching, reading, sitting at the computer).
- ✓ Try unsweetened raspberry tea to keep your taste buds occupied.
- ✓ If you’re eating at night due to emotions, get in touch with the issues and find a non-food method of coping.

*Source: Prevention*

**THE GROWTH OF FRENCH FRIES**

**1950s** McDonald’s introduced french fries. The only order size was just over 2 ounces (about 200 calories—today’s “small” order).

**1970s** The 200 calorie size became the “small” order and the 320 calorie “large” order was introduced.

**1980s** The new “large” order became 400 calories.

**1990s** The “large” order grew to have 450 calories and the “super” size had 540.

**2000s** The “large” became “medium”; the “super size” became “large”; and the new seven-ounce “super size” weighs in at 620 calories.

*Source: Centers for Science in the Public Interest*

**EXERCISE REGIMENS**

Which is better: 30 minutes of continuous exercise or three 10-minute bouts of exercise? Answer: they both produce the same benefits.

According to a recent Irish study of sedentary people in their mid-forties, both regimens, done five days a week for six weeks produced similar improvements in blood cholesterol levels and aerobic ability, as well as decreases in tension and anxiety.

It seems that the critical issue is the total calories burned each week, not whether they are burned in few or several episodes of activity.

*Source: UC Berkeley Wellness Letter*

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The importance of early and active AeroMedical Assistance cannot be stressed enough. Whenever you have a new medical condition arise, you should immediately contact your company's AeroMedical advisory organization to see if your condition or medication could affect your ability to fly legally. Many medications that are cleared by the FAA actually require a mandatory "wait and see" period. This period of time can be a couple of days, weeks, or months. Some "approved" medications actually require approval by the FAA after your case has been presented to them, prior to your return to flight status.

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**Harvey W. Watt & Co. • P.O. Box 20787 • Atlanta, GA 30320**  
**[www.harveywatt.com](http://www.harveywatt.com) • (800) 241-6103**