

# Nutrition Action

DECEMBER 2012 \$2.50

HEALTH LETTER<sup>®</sup>  
CENTER FOR SCIENCE IN THE PUBLIC INTEREST

## It's *Your* Move

no more excuses



Diabetes. Heart disease. Stroke. Breast and colon cancer. Memory loss. Depression. Anxiety. Brittle bones. Weak muscles. Falls. Flab.

That's the short list of what you may be able to dodge by getting out of your seat and onto the sidewalk, treadmill, bike, tennis court, golf course, or dance floor. You're also likely to feel better.

Don't have much time? *Any* exercise is better than none. And recent studies suggest that by switching back and forth from vigorous to moderate-intensity exercise, you can get the same benefits in less time.

If you have time to check your e-mail, go out for coffee, or catch the latest episode of "Dancing with the Stars," surely you can find some time to dance (or walk, run, swim, or bike). Off that couch. *Now*.

*Continued on page 3.*

MEMO FROM MFJ

# SODA WARS

STAFF

EDITORIAL

**Michael F. Jacobson, Ph.D.**  
*Executive Editor*

**Bonnie Liebman, M.S.**  
*Director of Nutrition*

**Stephen B. Schmidt**  
*Editor-in-Chief*

**Jayne Hurley, RD**  
**David Schardt**  
*Senior Nutritionists*

**Kate Sherwood**  
*Culinary Director*

**Emily Caras, RD**  
**Paige Einstein, RD**  
*Project Coordinators*

**Jorge Bach**  
*Art Director*

CIRCULATION MANAGEMENT

Bill Dugan

Myriam Boucher	Debra Brink
Damon Dorsey	Louella Fennell
Greg Hildebrandt	James Nocera
Cecilia Saad	Chris Schmidt
Ken Waldmiller	

SCIENTIFIC ADVISORY BOARD

**Kelly D. Brownell, Ph.D.**  
*Yale University*

**Greta R. Bunin, Ph.D.**  
*Children's Hospital of Philadelphia*

**Caldwell B. Esselstyn Jr., M.D.**  
*Cleveland Clinic Foundation*

**Stephen Havas, M.D., M.P.H., M.S.**  
*Northwestern University Medical School*

**Norman M. Kaplan, M.D.**  
*Southwestern Medical Center  
University of Texas, Dallas*

**JoAnn E. Manson, M.D., Ph.D.**  
*Harvard Medical School*

**Susan Taylor Mayne, Ph.D.**  
*Yale University*

**Julie Mares, Ph.D.**  
*University of Wisconsin*

**J. Glenn Morris, Jr., M.D., M.P.H. & T.M.**  
*Emerging Pathogens Institute  
University of Florida*

**Susan B. Roberts, Ph.D.**  
*USDA Human Nutrition Research Center  
on Aging, Tufts University*

**Frank Sacks, M.D.**  
*Harvard Medical School*

**Jeremiah Stamler, M.D.**  
*Northwestern University Medical School*

**Regina G. Ziegler, Ph.D., M.P.H.**  
*National Cancer Institute*

*Nutrition Action Healthletter* (ISSN 0885-7792) is published 10 times a year (monthly except bi-monthly in Jan./Feb. and Jul./Aug.).

**POSTMASTER:** Send changes to *Nutrition Action Healthletter*, 1220 L Street, N.W., Suite 300, Washington, DC 20005.

Application to mail at Periodical postage rates approved at post office of Washington, DC, and at additional offices.

Subscriber Services

The cost of a one-year subscription or gift (10 issues) is \$24; two years are \$42. For bulk subscriptions, please write for details. To change your address, send us your subscriber number and your old and new address. If you don't want us to exchange your name, send us your name and mailing-label information. **Mail:** CSPI, 1220 L Street, NW, #300, Washington, DC 20005. **Fax:** (202) 265-4954. **E-mail:** [circ@cspinet.org](mailto:circ@cspinet.org). **Internet:** [www.cspinet.org](http://www.cspinet.org). **Expiration date** is in the upper center of your mailing label. **Your subscriber number** precedes the expiration date.

**GUARANTEE!** We'll give you 2 FREE ISSUES of *Nutrition Action* if there's ever a problem with your subscription.



On October 10, 2012, the Center for Science in the Public Interest (publisher of *Nutrition Action*), in effect, declared war on soda pop and other sugary drinks.

The initial shots didn't come from guns or missiles, but from our first music video. "The Real Bears" ([www.therealbears.org](http://www.therealbears.org)) features a catchy, cheerful song by Grammy Award-winning singer-songwriter Jason Mraz. The story line isn't so cheerful, though. It describes the fate of a cuddly polar-bear family that consumes too much soda and ends up with obesity, diabetes, tooth decay, and erectile dysfunction.

The video quickly went viral, with close to two million views by presstime.

People loved it. The soft-drink industry hated it. Coca-Cola sputtered and fumed. "This is irresponsible and the usual grandstanding from CSPI," it charged. How juicy and hypocritical is that, coming from a company that spends some \$2 billion a year to convince Americans to buy its sugary drinks? That includes not only the cost of ads, but also the enormous sums that the company doles out to fast-food restaurants to sell only Coke products, to supermarkets to display Coke products, and to health and civic organizations to not criticize soft drinks.

The truth is that sugary beverages (sodas and energy, fruit, and sports drinks) are nutritionally worthless and a major cause of obesity. That means they contribute to higher rates of diabetes (with its blindness, amputations, and erectile dysfunction), heart attacks,

strokes, and other illnesses. Soft drinks cause so much harm because Americans consume so much and because beverages are more likely than solid foods to make you gain weight.

Fortunately, the word is getting out. Soft drinks have been kicked out of schools, people are switching to bottled water, and health officials are calling for taxes on sugary drinks. Since we published our first report on "Liquid Candy" in 1998, per-capita consumption has declined by 25 percent and, for the first time in 30 years, obesity rates appear to be leveling off. But we're not close to returning sugary drinks to their 1950s role: an occasional treat consumed in small portions.

The irony is that now, more than ever, the beverage industry can afford to reduce its reliance on full-sugar products. Coke, Pepsi, and smaller companies are marketing a wider range of low- and no-calorie drinks. The race is on to replace sugar with intensely sweet natural substances

(like stevia and monk fruit). And a biotech company is working on compounds that sensitize the sweetness detectors on the tongue, which could slash the need for sugar (or high-fructose corn syrup) in drinks.

I predict that, with continued pressure from parents and professionals, in 10 years the beverage market will look very different from today, with the happy result—for soda-swigging bears and people—that rates of obesity, diabetes, heart attacks, and strokes will be lower.



**Bad news bears.** Not everything goes better with Coke.

*Mike Jacobson*

Michael F. Jacobson, Ph.D.  
Executive Director  
Center for Science in the Public Interest

Subscribe or renew



The contents of NAH are not intended to provide medical advice, which should be obtained from a qualified health professional.

The use of information from *Nutrition Action Healthletter* for commercial purposes is prohibited without written permission from CSPI.

© 2012 by Center for Science in the Public Interest.

For permission to reuse material, go to [copyright.com](http://copyright.com) and search for Nutrition Action.

The Center for Science in the Public Interest (CSPI) is the nonprofit health-advocacy group that publishes *Nutrition Action Healthletter*. CSPI mounts educational programs and presses for changes in government and corporate policies.

# It's Your Move

## no more excuses

Less than 5 percent of adults get at least 30 minutes of exercise a day, according to studies that actually measure activity. Children aged 8 to 18 now spend more than seven hours a day in front of a TV, video game, or computer. Here's why it's time to get moving.



**Timothy Church** is professor of preventive medicine at the Pennington Biomedical Research Center at Louisiana State University. He has

written more than 100 research papers, and he co-authored *Move Yourself: The Cooper Clinic Medical Director's Guide to All the Healing Benefits of Exercise (Even a Little!)* (Wiley & Sons, 2007). Church spoke to *Nutrition Action's* Bonnie Liebman by phone from Baton Rouge.

### Q: How can exercise keep us young?

**A:** When you think about aging, the two most critical elements are the ability to move the way you want to and the ability to think the way you want to.

When it comes to moving, from about age 40 to 50 on, we start to lose 1 to 2 percent of our muscle every year. So we tend to lose strength. Think about how critical strength is to healthy aging—to being able to carry your own luggage, play with your grandkids, take that trip to Europe when you want to, or just push yourself out of bed or off the toilet.

So maintaining strength and function is critical for healthy aging and avoiding disability. There's no pill for that. Physical activity is about the best thing we know for maintaining physical function. If you don't use it you're going to lose it. And no place is that as true as it is for muscles.

### Q: Does exercise strengthen bone?

**A:** We lose bone as we age, and we lose the strength of the bone that's there. The more weight and stress you put on the bone, the more it grows. So physical

activity is a tremendous way to maintain bone strength.

### Q: What about the brain?

**A:** I often say that 90 percent of the benefits of exercise are above the shoulders. It's a pretty good treatment for depression, to lower anxiety and stress levels, to feel energized, and to improve your sleep. And a physically active lifestyle may be one of the most important things for preventing dementia and Alzheimer's disease.

### Q: Can exercise protect against both Alzheimer's and vascular dementia?

**A:** It may. Exercise is important for both because vascular dementia, which is caused by clogged blood vessels in the brain, is just another form of cardiovascular disease. And exercise lowers the risk of cardiovascular disease. It also lowers blood sugar, and there's some evidence that high blood sugar increases the risk of Alzheimer's disease. It's such an exciting area of research, and it's evolving quickly.

If you mentioned exercise to dementia researchers 15 years ago, they would have laughed you out of the room. Now it's suddenly high up on their radar to possibly treat or slow the disease. It's a hot area of research right now.

### Q: So exercise helps prevent clogged blood vessels in the brain?

**A:** Things that are bad for the heart are also bad for the brain because they both are dependent on blood flow.

And diabetes, high levels of insulin, and lack of blood sugar control are bad for your heart and your brain. Diabetes and heart disease go hand in hand. Once you've got diabetes you're going to have heart disease. Exercise is fantastic at keeping blood sugar and insulin lower.

The more things wrong with you, the more you stand to benefit from being physically active.

## DIABETES

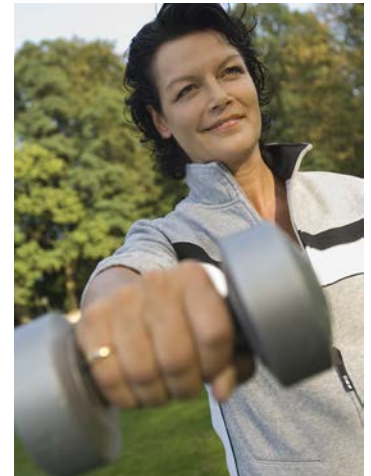
### Q: How does exercise prevent diabetes?

**A:** Diabetes is a failure of the body to control the amount of sugar in your blood, but I like to call it a disease of the muscle. That's because skeletal muscle is the biggest consumer of sugar in your blood.

When muscle is healthy, it's chewing up blood sugar all the time. When it's not, it's pretty much leaving the sugar in the blood.

If you have a person with diabetes do a bout of physical activity, for the next 48 hours their muscles will be chewing up more sugar. So it's not just the exercise. It's the shadow that the exercise leaves.

And if you start stacking those 48-hour periods together, you get long-term



You only need strength training twice a week. The CDC's online videos show how.

([www.cdc.gov/physicalactivity/growingstronger/exercises/more.html](http://www.cdc.gov/physicalactivity/growingstronger/exercises/more.html))

benefits. So physical activity is central for preventing and controlling diabetes.

### Q: Does exercise work because it lowers blood sugar without the need for insulin?

**A:** Yes, but it also makes the muscle more active in pulling sugar out of the blood, and it makes the body more sensitive to insulin.



# HIT It!

**W**hat if you could exercise for less time and get as much—or more—out of it? Researchers think they've found a way. It's called high-intensity interval training (HIT).

## THE HEART

### Q: How does exercise help the heart?

**A:** Most people know that physical activity has benefits when it comes to cardiovascular disease. But it doesn't help in the ways people think.

For example, exercise improves the health of the blood vessels. It allows them to open up more. And it improves the effect of the nervous system on the heart.

When you exercise, your nervous system shifts from the sympathetic tone, which is the stress tone, to the parasympathetic tone, which is the rest tone. That's why people who are physically active have lower heart rates.

### Q: Why is more rest tone better?

**A:** If you have more of the stress tone and you have a heart attack, you're more likely to go into deadly arrhythmia—a loss of the regular heartbeat. The calm and relaxation that comes with being physically active helps both the head and the heart.

### Q: Does the rest tone kick in all day or just while you're exercising?

**A:** All day. It may contribute to better sleep, too. You just chill out more the rest of the day. We and others have shown that when people are physically active, they report fewer sleep problems.

### Q: What else does exercise do for the heart?

**A:** It increases the density of capillaries—the smallest blood vessels—as well as the number of receptors on cells, the number of channels in cells to let blood sugar in, and the number of mitochondria, which burn blood sugar for energy, in cells. Your blood volume expands as you exercise more. There's almost nothing that doesn't change.

### Q: Does exercise lower blood pressure?

**A:** It may, but not in everybody. Blood pressure has a huge genetic component that's sometimes hard to override.

It's important for people not to focus on one risk factor. They say, "My doctor told me to exercise to lower my blood pressure and it didn't, so I'm not doing it anymore." They're missing the point. There are so many things that benefit, we could talk about it all day.

"The number-one reason that people give for not exercising is lack of time," says Martin Gibala, chair of the department of kinesiology at McMaster University in Ontario. With HIT, "you can get away with less exercise time."

## WHAT IS HIT?

High-intensity interval training means alternating high- and low-intensity bouts of exercise. When researchers first came up with a HIT model for athletes, the high-intensity intervals—each 30 seconds long—were really intense.

"It's getting on a stationary cycle at the gym and setting the resistance at 19 or 20 out of 20," explains Gibala. "You're pedaling as hard as you can, so even after 15 seconds, your pedaling starts to slow down because the intensity is so high. The running equivalent would be running as hard as you can to save your child's life. It's as all-out as you can go."

But that isn't too practical. "We knew that it wasn't going to be widely adopted or necessarily safe for some populations," says Gibala.

So the researchers came up with a more appealing version. "We've settled on the model of one minute hard, one minute easy, repeated 10 times, because it's easy for people to remember."

In Gibala's recent studies, "hard" meant getting your heart rate up to 85 to 95 percent of your maximum, rather than 100 percent. "It's not all-out, but it is demanding," he notes.

Don't know your maximum heart rate? Check the Centers for Disease Control's Web site.<sup>1</sup> Or "you can estimate your maximum heart rate based on a common formula like 220 minus your age," suggests Gibala, "though that can over- or underestimate your true value."

You can also skip heart rates and use what researchers call a "rating of perceived exertion." The goal: to rate your exertion as an 8 or 9 on a 10-point scale of intensity. "Those ratings correlate quite well with heart rate," says Gibala.

The exertion rating can change as you get tired. "When people start out, they might rate the exertion as a 5 on a 10-point scale," he says.

### Q: Does heart function decline slowly as people age?

**A:** Your heart is clearly not as strong at 60 as it was at 20. There's a natural degradation, but exercise can reduce that.

And there's never a point when exercise no longer helps. We're doing a study on

"But if you do 10 intervals, the rating creeps up."

Another approach: "We sometimes say, 'Just get out of your comfort zone,'" says Gibala. "For someone whose normal activity is walking around the block at their average pace, we'd say, 'For these next two light poles, you're going to go harder.'"

Even without taking your pulse, "you feel that you're breathing at a higher rate, you feel your heart rate going up, you might feel that you're out of breath or it's hard to talk," says Gibala. "It's getting out of your comfort zone



**What's moderate and what's vigorous? The CDC's videos can help.** ([www.cdc.gov/physicalactivity/everyone/videos/index.html](http://www.cdc.gov/physicalactivity/everyone/videos/index.html))

for a bit and then backing off. It's just alternating periods of high- and low-intensity exercise."

## THE PAYOFF

To test HIT's benefits, researchers have pitted it against continuous aerobic exercise.

"For example, in one of our studies we had people doing five days a week of up to an hour a day of moderate-intensity exercise, and we compared that to people who did three days a week of intervals for 20 to 30 minutes a day," says Gibala. (That study used 30-second "all-out" intervals with 4½ minutes of low-intensity cycling in between.<sup>2</sup>)

"The training sessions lasted about half an hour," he explains. "But within each session, there was only 2 to 3 minutes of intense exercise.

70-to-90-year-olds who were sedentary when we started. They couldn't walk a block. Our goal was to get them to walk for 150 minutes a week at whatever pace they could do. But that was pretty challenging.

In our large pilot study on 400 people, we showed that even that amount of

So any way you slice it—total time or total exercise—both were much less with the intervals.”

The results: heart rate and the muscles’ ability to burn oxygen for energy improved equally in both groups. “That’s evidence that HIT is a very efficient way to train,” says Gibala.

On the other hand, “if you were to spend equal amounts of time, you would see greater improvements with interval training than with continuous moderate training,” he notes.

“And that’s been seen in both healthy individuals and in people with coronary artery disease, heart failure, or the metabolic syndrome.”

A recent meta-analysis looked at six trials on 153 middle-aged or older people who had those health problems or who were simply overweight. Most of the trials alternated 4-minute intervals at high intensity (85 to 95 percent of maximum heart rate) with 3-minute periods at moderate intensity three times a week.

After 4 to 16 weeks, maximum aerobic capacity was higher after interval training than after continuous moderate training.<sup>3</sup> “And maximum aerobic capacity is one of our best indicators of risk of dying,” says Gibala.

HIT may also protect the heart by making blood vessels less rigid.<sup>4</sup> “Because you’re moving a greater volume of blood through your heart, your blood vessels stretch out a bit,” he explains.

However, studies that track thousands of people for years to see if exercise protects against heart disease, cancer, diabetes, and other illnesses have yet to look at interval training. “We don’t know about the long-term benefits that have been studied with continuous training,” notes Gibala.

Is HIT better for losing weight?

“As a rule of thumb, in our lab, 20 minutes of intervals can be equivalent to 40 minutes of continuous training,” says Gibala. So 40 minutes of intervals burns more calories.

And vigorous exercise may keep your metabolic rate higher after you stop. “This afterburn may be greater if the preceding exercise has been more intense,” notes Gibala. “The increase may be only a small elevation in energy expenditure, but it persists for a long period of time.”

But so far, the small studies comparing interval to continuous training find little or no difference in weight loss.<sup>5-7</sup> “The main way to lose weight is by what we put in our mouth, not by exercising to burn calories,” says Gibala.

## HOW DOES HIT WORK?

How does HIT yield more bang for your buck?

“All physiological systems respond to stress by adapting,” says Gibala. “And the demand on the system for that brief period of time is relatively stressful.”

One example: “Our muscles are composed of two types of fibers,” he explains. “Slow-twitch fibers are the routine day-to-day fibers that we use to do low- or moderate-intensity exercise. They’re made for endurance, not speed.”

High-intensity training also “challenges the fast-twitch fibers that are otherwise not called upon in daily living or even in moderate-intensity training,” says Gibala. “And when those fibers get stressed, they adapt and respond.”

The major adaptation: skeletal muscles grow more mitochondria, the powerhouses in cells that burn fuel for energy.<sup>8</sup>

“We’ve known for decades that endurance training increases mitochondria,” notes Gibala. “Now we’re looking at how short, intense bursts of activity stimulate the same pathways



**On a treadmill, you can hit a high intensity by boosting the incline or your speed.**

that tell your muscles to build new mitochondria. And that means you can run longer or walk up more flights of stairs before you get tired.”

## RISKY BUSINESS?

Almost-all-out running, pedaling, or walking may sound like risky business for non-athletes. It’s not.

“Always check with your physician if you’re going to change or start on a new exercise regime,” cautions Gibala. “But people don’t need to be afraid of intervals.”

The risk may seem high because we’ve all

heard about people who appeared to overdo it. “Sure, there’s always the individual who shovels snow and has a heart attack because of a huge pressure load on the heart, or the person who drops dead in a bicycle race,” says Gibala. “But HIT is not a heart attack waiting to happen.”

Vigorous exercise does briefly raise the risk of a heart attack.<sup>9</sup> (That’s based on studies that track thousands of people doing *any* vigorous exercise, not necessarily interval training.) But the risk is still extremely low.

In one study that tracked more than 21,000 men for 12 years, the risk of a sudden death heart attack was 1 per 1.51 million episodes of vigorous exertion.<sup>10</sup> The risk was also quite low in a Norwegian study of 4,846 people with heart disease who did HIT in supervised cardiac rehab programs.<sup>11</sup>

“The greater risk to your heart is sitting on the couch all day,” says Gibala.

And HIT may be less boring. “You can vary the length of the intervals, the length of the recovery, whether it’s 9 on a 10-point scale or 7½,” explains Gibala. You can also vary what you do.

“Non-weight-bearing activities like swimming or cycling may be best for some people,” he adds. “With high-intensity running, the impact forces on your knees are greater and you’re more likely to be sore.”

If you’re on a treadmill, it may be better to boost the incline than the speed. “That way, you don’t have to worry about tumbling off the treadmill,” notes Gibala. “Boosting the incline lets you walk at a significant stress without having to run at a breakneck pace.”

Just remember to bump up your effort if you cut your exercise time.

“There’s no free lunch,” warns Gibala. “If you want to get away with less total exercise, you have to work harder. But if you’re willing to go hard, it appears that you can get away with less time and still reap the same benefits.”

<sup>1</sup> [cdc.gov/physicalactivity/everyone/measuring/hearttrate.html](http://cdc.gov/physicalactivity/everyone/measuring/hearttrate.html).

<sup>2</sup> *J. Physiol.* 586: 151, 2008.

<sup>3</sup> *J. Cardio. Rehab. Prev.* 31: 378, 2011.

<sup>4</sup> *Clin. Sci.* 115: 283, 2008.

<sup>5</sup> *Circ.* 118: 346, 2008.

<sup>6</sup> *Res. Sports Med.* 17: 156, 2009.

<sup>7</sup> *Int. J. Obes.* 32: 684, 2008.

<sup>8</sup> *J. Appl. Physiol.* 111: 1554, 2011.

<sup>9</sup> *Circ.* 115: 2358, 2007.

<sup>10</sup> *N. Engl. J. Med.* 343: 1355, 2000.

<sup>11</sup> *Circ.* 126: 1436, 2012.

exercise had a benefit for markers of disability like hand grip strength. Now we’re measuring disability itself.

## WEIGHT

**Q: Do people have unrealistic goals for**

### losing weight by exercising?

**A:** Some people say, “Okay, I’m going to go out and exercise and lose 40 pounds this week.” That’s not how it works.

We know that physical activity can contribute to not putting on weight and to losing weight, but if you want to lose

a fair amount, you’re going to have to be physically active *and* eat less.

### Q: And then people get discouraged?

**A:** Yes, but they shouldn’t. It’s not what you weigh, but *where* you weigh. Weight in the abdomen is particularly danger-



ous. And there's something magical about physical activity because it almost preferentially makes that belly fat disappear.

That may explain why you can get some benefits of physical activity without substantial weight loss. It's because the weight loss that does occur is in the abdomen.

### Q: And people may not notice that?

**A:** Right. What I hear from people is, "I've been exercising. I feel great and my pants fit differently. But the scale hasn't changed much."

The pants fit differently because they've lost belly fat. And that's the fat they want to lose because it's the dangerous fat.

### Q: Why is belly fat dangerous?

**A:** It's associated with an increased risk of diabetes and heart disease. There are two reasons. First, fat cells in the abdomen are different than fat cells in the thigh or arms. Abdominal fat cells produce more harmful substances.

Second is the plumbing in the abdomen. Abdominal fat drains directly to the liver. So anything the fat cells produce kicks the liver right in the teeth. It's not circulating around the body getting degraded.

## EXERCISE Rx

### Q: How much and what kind of exercise do we need?

**A:** As of 2008, we've had federal physical activity guidelines. They're great. Shoot for 150 minutes a week of brisk walking. If you like to jog, the goal is 75 minutes a week. On top of that, do at least two days a week of weight training.

I tell people that 150 minutes is the goal, but guess what? If that's too much, even 80 or 100 minutes is of considerable benefit. Anything is better than nothing.

### Q: So it's not just walking?

**A:** Walking is the most popular, but biking or swimming or dancing—or whatever you like to do—is fantastic. There's no perfect formula. Just get out and do it.

When people say, "I love exercise but hate running," I say, "Then don't run."

### Q: Does it matter when you exercise?

**A:** You've got the people who love to go in the morning, the folks who want to go at lunch, those who go after dinner. Figure out what you like and do it.

Maybe 1,500 people have gone through our studies. There's the 65-year-old retired school teacher who wants to get on the

We start with 10 reps. As soon as you can do two sets of 12 reps, you go up in weight. We recommend lower weights and higher reps to reduce the risk of injury. With weight training, people often need someone who teaches them how to get started. That's where YMCAs come in. They're a great place to get started and they're everywhere. Or you can find videos on the Web site of the Centers for Disease Control and Prevention.

## Why Move?



### Strong Evidence

- Lower risk of early death
- Lower risk of coronary heart disease
- Lower risk of stroke
- Lower risk of high blood pressure
- Lower risk of adverse blood lipid profile
- Lower risk of type 2 diabetes
- Lower risk of metabolic syndrome
- Lower risk of colon cancer
- Lower risk of breast cancer
- Prevention of weight gain
- Weight loss, particularly when combined with reduced calorie intake
- Improved cardiorespiratory and muscular fitness
- Prevention of falls
- Reduced depression
- Better cognitive function (for older adults)

### Moderate to Strong Evidence

- Better functional health (for older adults)
- Reduced abdominal obesity

### Moderate Evidence

- Lower risk of hip fracture
- Lower risk of lung cancer
- Lower risk of endometrial cancer
- Weight maintenance after weight loss
- Increased bone density
- Improved sleep quality

Source: [www.health.gov/paguidelines/pdf/paguide.pdf](http://www.health.gov/paguidelines/pdf/paguide.pdf).

stationary bike and just hammer away, get it done. Or the college student who gets on the recumbent bike and reads a book. Whatever works for you is what works.

### Q: Any rules for weight training?

**A:** It shouldn't take more than about 20 minutes. You're doing one circuit of the equipment in the gym. It's about eight different exercises—one for each major muscle group. You can do two sets of 10 to 12 reps per machine.

### Q: What if you can only do aerobic or weight training?

**A:** The combination is best across the board, but if you can do only one, do aerobic. There have been three studies of the right size and run the right way. We did one of them. They all show that weight training alone doesn't get it done.

### Q: Then why is weight training worth doing?

**A:** Aerobic training is good for reducing risk factors, while weight training is more of a quality-of-life issue. As you get older, you want to maintain your strength. And unless you're stressing the muscles by lifting weights, you can't.

### Q: I find it hard to get myself to do weight training because it hurts.

**A:** You need a good trainer. If you focus on lower weight and higher reps, you shouldn't ever be sore.

Some women say, "I don't want to do strength training because I don't want to look like muscle-bound women in magazines." But once they get

into it, we can't get them out of there. They love how their shoulders and arms look. And they don't look muscle-bound at all.

### Q: Should we avoid sitting too much?

**A:** Yes. Even when you're not exercising, lead a physically active life. When you have the grandkids, go to the zoo instead of the movies—anything you can do to be active and minimize sitting. Get a step counter. They're wonderful because you'll find out how active you are. 🍌



**M**ore than 80 percent of American adults consume caffeine regularly. That's no surprise, what with a coffee shop seemingly on every corner and in every supermarket, and tiny \$3 bottles of 5-hour Energy popping up like mushrooms wherever there's a checkout counter. Caffeinated energy drinks have become so mainstream that major players like V8 and Ocean Spray have introduced their own versions to stay competitive.

Here's a rundown of what scientists are learning about the world's most popular drug.

## WHEN CAFFEINE MAY HELP

### Sleep Deprivation

"Caffeine is definitely beneficial for keeping individuals who are sleep deprived more alert," says Timothy Roehrs of the Sleep Disorders and Research Center at Henry Ford Hospital in Detroit.

And that's potentially a lot of people. In a national survey, about 30 percent of the participants reported averaging six hours or less of sleep a night.<sup>1</sup> And in Roehrs' study of 259 working adults, about 15 percent were so sleepy during the day that they fell asleep within six minutes when they had the opportunity in a sleep lab.<sup>2</sup>

Why does caffeine help people who are sleep deprived?

Caffeine works mainly by temporarily binding to adenosine receptors in the brain. That prevents adenosine, which is a natural sedative produced by the brain, from occupying those receptors and making us feel drowsy. (See illustration.) Adenosine levels build up during waking hours and then drop as we sleep.

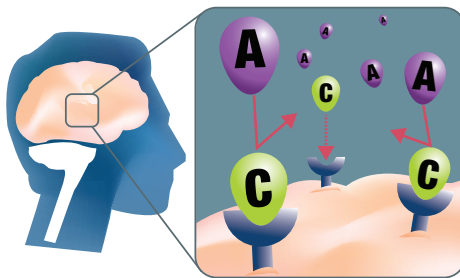
"But if you stay up late to watch the World Series and don't get a full night's sleep, you'll wake up with more adenosine in your brain than you normally would," Roehrs explains. A hit of caffeine will, in effect, neutralize the extra adenosine and help you feel less sleepy.

If you're a regular caffeine user, though, you may need an extra boost to counter your late night. That's because regular users build up a tolerance to caffeine.

"As tolerance develops, the brain makes more receptors for adenosine to occupy," says Roehrs. "So you need more caffeine to block the new added receptors."

### Mental Stimulation

People who don't use caffeine regularly and who haven't developed a dependence on it "usually become significantly more alert and better able to perform cognitive and motor tasks—such as paying attention during boring tasks or typing—if they're



**Why caffeine keeps you up.** Caffeine (C) binds to adenosine receptors in the brain. That prevents adenosine (A), which is a natural sedative, from attaching itself and making you feel drowsy.

given the right dose of caffeine," says Laura Juliano, a professor of psychology at American University in Washington, D.C.

If they use caffeine regularly, however, it offers few, if any, benefits. For example, in 2005, researchers gave 96 regular caff-

eine users a battery of tests after two weeks on and two weeks off caffeine. The participants did no better when they were consuming caffeine than when they weren't.<sup>3</sup>

"What feels good and stimulating about caffeine to habitual caffeine users is mostly due to the alleviation of withdrawal symptoms," explains Juliano. In other words, their brains have become dependent on caffeine, so when they haven't had some for a day or two, they experience unpleasant withdrawal symptoms, like headache, drowsiness, and difficulty concentrating.

If they have a cup of coffee or an energy drink, the symptoms disappear and they feel much better again. "But they're probably not feeling or performing any better than if they didn't have a caffeine habit," notes Juliano.

### Physical Performance

"Caffeine can improve physical performance in endurance exercise like running, but the effect is less for short bursts of movement such as lifting weights or sprinting," says Matthew Ganio, a professor of kinesiology at the University of Arkansas.<sup>4</sup>

That's true of people who consume caffeine as well as those who don't, but the benefit may be smaller in regular users.

Caffeine helps people last longer during exercise because it prompts the body to burn more of its ample stores of fat instead of the limited stores of carbohydrate that are in our muscles. When the muscles run out of carbohydrate, we get tired.

"Caffeine also reduces the perception of muscle pain and the perception of how hard we are working, which makes us feel better when exercising and may help us exercise longer," adds Ganio.

### Headaches

When you have a headache, the blood vessels in your brain often dilate, or widen. Caffeine constricts blood vessels. That's one reason why caffeine is added



to Excedrin, Anacin, and some other headache remedies. Another reason: caffeine is a mild pain reliever.

### Parkinson's Disease

Several large studies have “uniformly concluded that higher caffeine intake seems to be closely associated with a reduced chance of developing Parkinson’s disease,” says Michael Okun, medical director of the National Parkinson Foundation.

For example, in a study of more than 600,000 U.S. men and women, those who consumed the most caffeine (at least 600 milligrams a day) were about 20 percent less likely to be diagnosed with Parkinson’s over the next 10 years than those who consumed the least caffeine (less than 20 mg a day).<sup>5</sup> The risk was no lower in people who got less than 600 mg of caffeine a day, however.

What’s the connection? Parkinson’s patients gradually lose the nerve cells that produce the neurotransmitter dopamine. But when caffeine blocks adenosine receptors, that stimulates brain cells that control muscle movements to release dopamine.

Caffeine may even help people who have the disease. Researchers at McGill University in Montreal recently gave 100 to 200 milligrams of caffeine or a placebo twice a day to 61 Parkinson’s patients to see if it would make them less sleepy. The caffeine didn’t help, but it did improve their tremors or other motor symptoms.<sup>6</sup>

“However, patients should be aware that in most studies, participants develop tolerance to the effects of caffeine, and this could negate any long-term benefits,” cautions Okun.

### Gallstones

Women in the Nurses’ Health Study who drank two to three cups of regular coffee a day were about 20 percent less likely to be diagnosed with gallstones over a 20-year period than women who drank no regular coffee.<sup>7</sup> And men in the Health Professionals Follow-Up Study who drank two to three cups of regular coffee a day were 40 percent less likely to be diagnosed with gallstones.<sup>8</sup> In both studies, decaf drinkers had no lower risk.

One possible explanation: caffeine may stimulate the gallbladder to contract and expel cholesterol and bile pigments that can form gallstones.

### Dementia

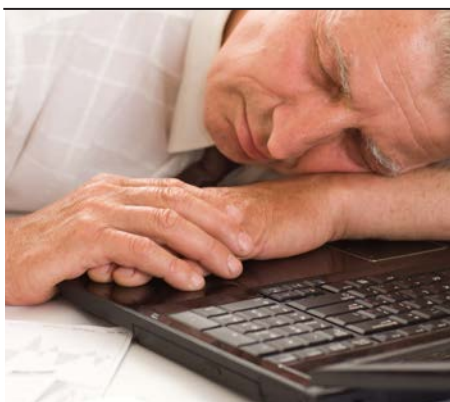
“Evidence is building that caffeine might be the first dietary component able to protect against Alzheimer’s disease,” says Gary Arendash of Arizona State University.

“In mice bred to develop the disease, caffeine not only protects against inevitable memory impairment,” he explains, “but it also substantially decreases the amount of beta-amyloid, the bad protein in the brain that many researchers believe is the root cause of the disease.”<sup>9</sup>

The few human studies have been inconsistent.

For example, in a Hawaiian study that tracked nearly 3,500 middle-aged men for 25 years, those who had reported consuming at least 400 mg of caffeine a day were 55 percent less likely than those who said they consumed less than 140 mg a day to have the brain lesions characteristic of dementia at their death. However, they were no less likely to be diagnosed with dementia during their lifetime.<sup>10</sup>

That kind of research can’t prove whether or not caffeine wards off Alzheimer’s in people. “To determine that, we need a clinical trial,” notes Arendash.



**Sleep deprived?** Caffeine could help. But if you’re a regular user, you may need an extra boost.

## WHEN CAFFEINE MAY HURT

### Pregnancy

The March of Dimes recommends that women who are pregnant or trying to become pregnant consume no more than 200 mg of caffeine a day because the harmful effects of more than that on fertility, miscarriage, and fetal growth “cannot be ruled out.”

The Food and Drug Administration’s advice: “Pregnant women should avoid caffeine-containing foods and drugs, if possible, or consume them only sparingly.”

### Disrupted Sleep

“People who routinely rely on caffeine to overcome too little sleep can end up in a vicious cycle,” cautions Henry Ford Hos-

pital’s Timothy Roehrs. “Disturbed sleep leads to sleepiness and then to increased caffeine consumption, which can lead to more disturbed sleep.”

“People don’t realize how much caffeine affects their sleep,” says American University’s Laura Juliano. “For those who are slow metabolizers of caffeine, there’s still enough in their system to disrupt sleep at night even if they stop consuming it much earlier in the day.”

People who go off caffeine typically report sleeping longer and sounder, both Roehrs and Juliano report.

## WHEN CAFFEINE DOESN'T MATTER

■ **Heart.** This fall, the parents of a 14-year-old Maryland girl sued the manufacturer of Monster Energy drink after their daughter drank two large (24 oz.) cans containing a total of 480 mg of caffeine within 24 hours and suffered cardiac arrest. The autopsy report cited “cardiac arrhythmia due to caffeine toxicity” that exacerbated an underlying heart condition.

However, in a study that followed more than 130,000 Kaiser Permanente members in California for 30 years, drinking coffee (regular or decaf) didn’t increase the risk of cardiac arrhythmias, even among those with existing heart conditions.<sup>11</sup>

■ **Weight.** Many companies add caffeine to their weight-loss supplements because it speeds up the metabolic rate, at least for a short period of time.<sup>12</sup> Yet “there’s little evidence that consuming caffeine leads to significant weight loss or helps people keep weight off,” says the University of Arkansas’ Matthew Ganio.

■ **High blood pressure.** While caffeine users experience a modest increase in blood pressure, “researchers have detected no substantial link with the development of hypertension in long-term studies of caffeinated coffee intake,” notes Rob van Dam of the National University of Singapore.<sup>13</sup>

<sup>1</sup> *Morbid. Mortal. Wkly. Rep.* 61: 281, 2012.

<sup>2</sup> *Sleep* 26: A194, 2003.

<sup>3</sup> *Neuropsychobiology* 52: 1, 2005.

<sup>4</sup> *Int. J. Sport Nutr. Exerc. Metab.* 14: 626, 2004.

<sup>5</sup> *Am. J. Epidemiol.* 175: 1200, 2012.

<sup>6</sup> *Neurology* 79: 651, 2012.

<sup>7</sup> *Gastroenterology* 123: 1823, 2002.

<sup>8</sup> *JAMA* 281: 2106, 1999.

<sup>9</sup> *J. Alzheimers Dis.* 20 (Suppl 1): S117, 2010.

<sup>10</sup> *J. Alzheimers Dis.* 23: 607, 2011.

<sup>11</sup> *Perm. J.* 15: 19, 2011.

<sup>12</sup> *Obes. Rev.* 12: e573, 2011.

<sup>13</sup> *Am. J. Clin. Nutr.* 94: 1113, 2011.



# Take 2 Diet Cokes and Don't Call Us in the Morning

If companies had to list caffeine on their labels or menuboards (get the hint, FDA?), here's some of what you would see.

Coffee	Caffeine (mg)	Caffeine (mg)	
Dunkin' Donuts Coffee with Turbo Shot ( <i>large, 20 fl. oz.</i> )	436	Dr Pepper or Sunkist—Diet or regular	41
Starbucks Coffee ( <i>venti, 20 fl. oz.</i> )	415	Pepsi	38
Starbucks Coffee ( <i>grande, 16 fl. oz.</i> )	330	Coca-Cola, Coke Zero, or Diet Pepsi	35
Panera Frozen Mocha ( <i>16.5 fl. oz.</i> )	267	Barq's Root Beer, regular	23
Starbucks Coffee ( <i>tall, 12 fl. oz.</i> )	260	7-Up, Fanta, Fresca, ginger ale, or Sprite	0
Starbucks Caffè Americano ( <i>grande, 16 fl. oz.</i> )	225	Root beer, most brands, or Barq's Diet Root Beer	0
Panera Coffee ( <i>regular, 16.8 fl. oz.</i> )	189	<b>Energy Drinks</b> ( <i>16 fl. oz. unless noted</i> )	
Starbucks Espresso Frappuccino ( <i>venti, 24 fl. oz.</i> )	185	5-hour Energy ( <i>1.9 fl. oz.</i> )	208*
Dunkin' Donuts Coffee ( <i>medium, 14 fl. oz.</i> )	178	Full Throttle	200
Starbucks Caffè Mocha ( <i>grande, 16 fl. oz.</i> )	175	Monster Energy	160
Starbucks Iced Coffee ( <i>grande, 16 fl. oz.</i> )	165	Rockstar	160
Maxwell House Ground Coffee—100% Colombian, Dark Roast, Master Blend, or Original Roast ( <i>2 Tbs., makes 12 fl. oz.</i> )	100-160	AMP Energy Boost Original	142
Dunkin' Donuts Cappuccino ( <i>large, 20 fl. oz.</i> )	151	Red Bull ( <i>8.4 fl. oz.</i> )	80
Starbucks—Caffè Latte, Cappuccino, or Caramel Macchiato ( <i>grande, 16 fl. oz.</i> )	150	V8 V-Fusion+Energy ( <i>8 fl. oz.</i> )	80
Starbucks Espresso ( <i>doppio, 2 fl. oz.</i> )	150	Ocean Spray Cran-Energy ( <i>8 fl. oz.</i> )	55
Keurig Coffee K-Cup, all varieties ( <i>1 cup, makes 8 fl. oz.</i> )	75-150	Glacéau Vitaminwater Energy ( <i>20 fl. oz.</i> )	50
Folgers Classic Roast Instant Coffee ( <i>2 tsp., makes 12 fl. oz.</i> )	148	Starbucks Refreshers ( <i>12 fl. oz.</i> )	50
Starbucks Doubleshot Energy Coffee, can ( <i>15 fl. oz.</i> )	146	<b>Ice Cream &amp; Yogurt</b> ( <i>4 oz. unless noted</i> )	
Starbucks Mocha Frappuccino ( <i>venti, 24 fl. oz.</i> )	140	Cold Stone Creamery Mocha Ice Cream ( <i>Gotta Have It, 12 oz.</i> )	52
Starbucks VIA House Blend Instant Coffee ( <i>1 packet, makes 8 fl. oz.</i> )	135	Starbucks Coffee Ice Cream	45
McDonald's Coffee ( <i>large, 16 fl. oz.</i> )	133	TCBY Coffee Frozen Yogurt ( <i>large, 13.4 fl. oz.</i> )	42
Maxwell House International Café, all flavors ( <i>2 2/3 Tbs., makes 12-16 fl. oz.</i> )	40-130	Dannon All Natural Coffee Lowfat Yogurt ( <i>6 oz.</i> )	30
Seattle's Best Coffee—Iced Latte or Iced Mocha, can ( <i>9.5 fl. oz.</i> )	90	Häagen-Dazs Coffee Ice Cream	29
Starbucks Frappuccino Coffee, bottle ( <i>9.5 fl. oz.</i> )	90	Stonyfield Gotta Have Java Nonfat Frozen Yogurt	28
International Delight Iced Coffee ( <i>8 fl. oz.</i> )	76	Starbucks Mocha Frappuccino Ice Cream	25
Maxwell House Lite Ground Coffee ( <i>2 Tbs., makes 12 fl. oz.</i> )	50-70	Baskin Robbins Jamoca Ice Cream	20
Dunkin' Donuts, Panera, or Starbucks Decaf Coffee ( <i>16 fl. oz.</i> )	15-25	Dreyer's or Edy's Grand Ice Cream—Coffee or Espresso Chip	17
Maxwell House Decaf Ground Coffee ( <i>2 Tbs., makes 12 fl. oz.</i> )	2-10	Breyers Coffee Ice Cream	11
<b>Tea</b>		Häagen-Dazs Coffee Almond Crunch Snack Size Bar ( <i>1.8 oz.</i> )	10
Starbucks Tazo Awake—Brewed Tea or Tea Latte ( <i>grande, 16 fl. oz.</i> )	135	Dreyer's, Edy's, or Häagen-Dazs Chocolate Ice Cream	less than 1
Starbucks Tazo Earl Grey—Brewed Tea or Tea Latte ( <i>grande, 16 fl. oz.</i> )	115	<b>Chocolate Candy &amp; Chocolate Drinks</b>	
Starbucks Tazo Chai Tea Latte ( <i>grande, 16 fl. oz.</i> )	95	Starbucks Hot Chocolate ( <i>grande, 16 fl. oz.</i> )	25
Starbucks Tazo Green Tea Latte—Iced or regular ( <i>grande, 16 fl. oz.</i> )	80	Hershey's Special Dark ( <i>1 bar, 1.5 oz.</i> )	20
Black tea, brewed for 3 minutes ( <i>8 fl. oz.</i> )	30-80	Hershey's—Milk Chocolate ( <i>1 bar, 1.6 oz.</i> ) or Kisses ( <i>9 pieces, 1.4 oz.</i> )	9
Snapple Lemon Tea ( <i>16 fl. oz.</i> )	62	Hershey's Cocoa ( <i>1 Tbs.</i> )	8
Lipton Pure Leaf Iced Tea ( <i>18.5 fl. oz.</i> ) <sup>1</sup>	60	Dove Dark Chocolate Silky Smooth Promises ( <i>5 pieces, 1.4 oz.</i> )	4
Green tea, brewed for 3 minutes ( <i>8 fl. oz.</i> )	35-60	Silk Chocolate Soymilk ( <i>8 fl. oz.</i> )	4
Lipton 100% Natural Lemon Iced Tea, bottle ( <i>20 fl. oz.</i> )	35	Hershey's Chocolate Lowfat Milk, bottle ( <i>12 fl. oz.</i> )	2
Arizona Iced Tea, black, all varieties ( <i>16 fl. oz.</i> )	30	<b>Over-the-Counter Pills</b>	
Nestea Unsweetened Iced Tea Mix ( <i>2 tsp., makes 8 fl. oz.</i> )	20-30	Zantrex-3 weight-loss supplement ( <i>2 capsules</i> )	300
Arizona Iced Tea, Green, all varieties ( <i>16 fl. oz.</i> )	15	NoDoz or Vivarin ( <i>1 caplet</i> )	200
Lipton Decaffeinated Tea—black or Green, brewed ( <i>8 fl. oz.</i> ) <sup>1</sup>	5	Excedrin Migraine ( <i>2 tablets</i> )	130
Herbal tea, brewed ( <i>8 fl. oz.</i> )	0	Midol Complete ( <i>2 caplets</i> )	120
<b>Soft Drinks</b> ( <i>12 fl. oz.</i> )		Bayer Back & Body ( <i>2 caplets</i> )	65
Pepsi MAX	69	Anacin ( <i>2 tablets</i> )	64
Mountain Dew—Diet or regular	54		
Diet Coke	47		

<sup>1</sup> Average. \*Number from ConsumerLab.com analysis. Sources: Company information, *J. Anal. Toxicol.* 32: 702, 2008.



## Multivitamin Win?

**M**ultivitamins may lower the risk of cancer in men, says the first large-scale trial to test a multi against a placebo.

Researchers randomly assigned roughly 14,600 men in the Physicians' Health Study II aged 50 or older to take an ordinary multivitamin (Centrum Silver) or a placebo.

After 11 years, there was an 8 percent lower risk of cancer (89 fewer cases) in the men who were given the multi than

**A daily multi may cut cancer risk slightly in men.**

in those who got the placebo.

However, the vitamin takers had no lower risk of prostate cancer, which was by far the most common cancer in the men. The risk of other cancers—including lung, colorectal, bladder, and pancreatic, as well as lymphoma and leukemia—was also no lower in the multi takers, perhaps because too few men were diagnosed with any given cancer for the researchers to see a statistically significant difference.

**What to do:** This trial is the strongest evidence so far that a multivitamin may slightly lower cancer risk, at least in men. (Earlier studies—which typically saw no lower risk in multivitamin takers—didn't compare a multi to a placebo, so they carry less weight.) But the small difference in risk in this trial means that the results may be due to chance. So it's reasonable to take an ordinary multi. Just don't count on it to slash your risk of cancer.

*JAMA*. DOI:10.1001/jama.2012.14641.

## Weight-Loss Trial Stopped

**I**n September, researchers halted a trial two years early when it became clear that modest weight loss didn't lower the risk of heart attacks or strokes in people with diabetes.

The Look AHEAD trial had assigned 5,145 overweight or obese men and women with type 2 diabetes to an intensive weight-loss and exercise program or to a diabetes education program. The intensive program included portion-controlled diets designed to cut calories and at least 175 minutes of moderate-intensity exercise a week.

After 11 years, the dieters and exercisers had lost an average of 5 percent of their body weight. But their risk of heart attack, stroke, and other cardiovascular events was no lower than the risk of those in the education program, who had lost 1 percent of their body weight.

One explanation: by the end of the study, both groups had similar levels of LDL ("bad") cholesterol, blood pressure, and blood sugar, thanks in part to medications

taken by both groups (though the dieters took fewer or lower doses of drugs).

**What to do:** If you have type 2 diabetes, it's still worth trying to lose weight and to exercise to lower your risk of cancer, dementia, depression, anxiety, osteoporosis, and muscle loss. But it's also worth checking with your physician to see if you should be taking medications that might lower your risk of cardiovascular disease, which is 2½ times higher—and the leading cause of death—in people with diabetes.

Keep in mind that these results apply only to people who already have type 2 diabetes. An earlier trial, the Diabetes Prevention Program, found that modest weight loss (about 5 percent of body weight) and exercise (about 30 minutes a day) cut the risk of being diagnosed with diabetes by 58 percent in people who have prediabetes. That's roughly one in four adults.

[www.nih.gov/news/health/oct2012/niddk-19.htm](http://www.nih.gov/news/health/oct2012/niddk-19.htm).

## D Fails to Stop Colds

**V**itamin D failed to lower the risk of colds or other upper respiratory infections in the largest trial done so far, despite earlier evidence that people with lower vitamin D levels in their blood have a higher risk of colds and tuberculosis.

Researchers randomly assigned 322 healthy adults in New Zealand to get either a placebo or a high dose of vitamin D—100,000 to 200,000 IU a month. (Vitamin D is stored in the body's fat, so a large monthly dose may be equal to a more modest daily dose.)

After 18 months (including two winter seasons), the risk of upper respiratory infections was no lower in the vitamin D takers than in those who took the placebo.

**What to do:** It's worth taking the recommended levels of vitamin D (600 IU a day up to age 70 and 800 IU if you're older) to protect your bones. However, unless larger, ongoing trials find that vitamin D helps, don't rely on it to ward off colds.

*JAMA* 308:1333, 1375, 2012.

## B Vitamins & the Colon

**H**igh doses of B vitamins don't lower—or raise—the risk of colorectal cancer. Some earlier studies had suggested both possibilities.

Researchers randomly assigned roughly 1,470 female health professionals to take either a daily placebo or high doses of three B vitamins: folic acid (2,500 micrograms), vitamin B-6 (50 milligrams), and vitamin B-12 (1,000 micrograms) for seven years.

Two years after the trial ended, the risk of precancerous colorectal polyps (adenomas) was no different between the two groups, even among women who had low blood levels of B vitamins when they entered the study.

There was a hint that the risk of adenomas might be lower among B vitamin takers who had a history of adenomas, but the number of adenomas in the women in the study was so small that the findings might have been due to chance.

**What to do:** Don't take high doses of B vitamins to cut your risk of colorectal cancer. And don't worry that they will raise your risk. 🍌

*J. Natl. Cancer Inst.* 104:1525, 1562, 2012.



## WHAT'S IN YOUR SPOON?

BY JAYNE HURLEY & BONNIE LIEBMAN

### THE BEST SOUPS

It's all about sodium. Our Best Bites have no more than 300 milligrams of sodium per serving. Honorable Mentions have no more than 410 mg.

Soups in both categories also have no more than 2 grams of saturated fat. But unless you're a fan of certain cream or ramen noodle soups, that's largely irrelevant. It's the sodium that matters.

Why? Because one cup (eight fluid ounces) of regular canned or dried soup has about 800 mg of sodium. That's half a day's worth.

It gets worse. Millions of people don't stop at a one-cup serving. In a 2010 survey that we commissioned, nearly two out of three consumers said that they typically eat not one cup of soup (about half a can), but at least twice that much (a whole can of Campbell's Chunky or Condensed Soup) at one sitting. Whoops! There goes a day's worth of sodium.

And most single-serve containers hold more than eight ounces. Asian soup bowls, for example, range from about 900 to 1,600 mg of sodium in part because they

Soup sales are off slightly since 2009. And the industry isn't taking the news with its spoons down.

Instead, it's giving labels a makeover, rolling out new cartons and pouches, and launching gourmet lines. Chicken Noodle? Try Moroccan Style Chicken with Chickpeas, Creamy Gouda Bisque with Chicken, and Roasted Chicken & Chardonnay.

And companies are saying whatever it takes about protein, fiber, vegetables, whole grains, sodium, and calories to get your attention.

Here's what matters and what's hogwash in the soup aisle.

*The information for this article was compiled by Emily Caras.*

typically hold 12 to 16 ounces. Campbell's trendy new Go microwaveable pouches hold 14 ounces. Eat a whole pouch of Coconut Curry with Chicken & Shiitake Mushrooms, and you've pretty much shot your sodium allowance for the whole day.

Some companies *do* use less sodium, though. Most of our Best Bites come from Amy's Organic, Dr. McDougall's, Health Valley Organic, Imagine Or-

ganic, Pacific Organic, Tabatchnick, and Trader Joe's Organic lower-sodium lines. (See photos below for the best-tasting Best Bites and Honorable Mentions.)

Even the big boys are trying to cut back. Campbell's Healthy Request Soups clock in at 410 mg of sodium. (They used to be 480 mg.) And Healthy Choice has three soups with 390 mg per serving.

You can even find ramen-like noodle soups that don't break the sodium bank. Dr. McDougall's Lower Sodium Chicken Noodle and Chinese Noodle Vegan Soup cups come in at 360 mg per container.

The bottom line: look for "no salt added," "low sodium" (that means 140 mg or less per serving), or "light in sodium" (at least 50 percent less than the regular version). Or pick up any Campbell's Healthy Request Soup (410 mg). ("Reduced sodium," which means at least 25 percent less, is typically still too much.) And stick to just one cup.

Just about everything else is souper salty.

>>>>>



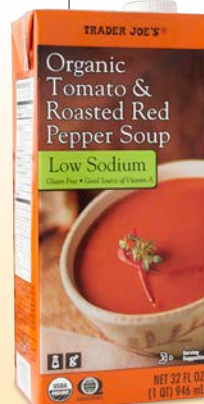
Plenty of vegetables and lentils in a mild broth.



Rich, smoky flavor. Thick and satisfying.



That's real peppers, corn, and onion. You'll swear it's homemade.



Smooth and tangy. It can double as a pasta sauce in a pinch.



Real butternut taste with a touch of sweet spices.

## DON'T BE FOOLED

These claims may (or may not) mean much.



A full serving of tomato paste.

■ **Vegetables.** “Full serving of vegetables,” boasts Progresso Vegetable Classics Tomato Basil Soup. “10% of daily vegetables,” announces Healthy Choice Chicken with Rice.

The claims may be technically true, but Progresso’s tomato paste and Healthy Choice’s carrot and celery bits aren’t what you would call impressive.

■ **All Natural.** Campbell’s 100% Natural, Imagine All



100% natural...but too salty.

Natural, Pacific All Natural, Annie Chun’s All Natural. “Natural” is in.

Most “natural” soups do have fewer additives than their competitors. That’s a plus. (Though Annie Chun’s All Natural ingredients include not-so-natural malto-dextrin and caramel color. Not exactly Mom’s recipe.)

Just remember: salt is “100% natural.” Arteries, beware.



Extra fiber, just not the kind you need.

■ **High fiber.** Progresso’s High Fiber Soups have 7 grams of fiber per serving. That would be terrific if it were all unprocessed fiber from beans and vegetables. But Progresso adds processed soluble corn fiber to three of its five High Fiber Soups. And processed fiber may not be as good at lowering LDL (“bad”) cholesterol as unprocessed, whole-food fiber. Be suspicious of fiber claims.

■ **Whole grain.** Kudos to Campbell for its 100% Natural Healthy Request

Chicken with Whole Grain Pasta and Whole Grain Pasta Fagioli Soups. (Too bad the pastas aren’t 100% whole grain. But at least they have more whole than refined grain. That’s more than can be said for dozens of other Campbell soups.)

## KEEP IN MIND

These claims are more likely to mean something.

■ **BPA.** BPA (bisphenol A) is a chemical that’s used in the linings of most cans and some hard plastic containers. It’s an estrogen “mimic” that raises no red flags in standard toxicity tests.

However, newer tests have led the National Institute of Environmental Health Sciences to have “some concern” about BPA’s “effects on the brain, behavior, and prostate gland in fetuses, infants, and children.”

Amy’s is the only soup we found that comes in cans with liners that aren’t made using BPA. (There may still be old packaging around, so check the bottom of the can for the letters “NB” next to the “best before” date to be sure.) Pregnant women and young children can minimize their exposure to BPA by sticking with soups in cartons, pouches, or microwaveable bowls.



“NB” on Amy’s bottom means made without BPA.



Looking for protein? Get a bean soup.

■ **Protein.** “Good source of protein,” declares Amy’s Organic Light in Sodium Lentil Soup. (With 8 grams of protein in every 8 oz. cup, it is a good source.)

If you’re looking for a soup that can fill in for a sandwich or another main dish, protein matters. And some experts argue that people who are middle-aged or older need at least 20 grams of protein at every meal to avoid losing muscle.

But don’t assume that any soup with chicken, beef, or ham will do. Campbell’s Condensed Chicken Noodle and Progresso Light Italian Style Meatball, for example, have just 3 grams of protein per cup. Your best bet: a bean, split pea, or lentil soup.

■ **Soluble fiber.** “May Help Lower Cholesterol,” crow six of Progresso’s Reduced Sodium Soups. Their beans and vegetables supply about 1 gram of soluble fiber per serving, enough to make that claim, says the Food and Drug Administration. Just don’t expect miracles. You’d need to increase your soluble fiber intake by 5 to 10 grams a day to lower your LDL cholesterol by about 5 percent.



Not “light,” yet still low-cal (and lower-sodium).

■ **Calories.** Campbell and Progresso market “light” soups that have 100 calories or less per serving. And calories count, especially if you eat more than a cup.

But lights can be as salty as regulars. Campbell’s 100% Natural Light Soups, for example, have 650 mg of sodium per cup. The Progresso Lights average 550 mg. And plenty of lower-salt soups that aren’t called “light” have no more than 100 calories.

■ **American Heart Association Certified.**

To get a “Heart-Check,” a soup must have no more than 480 mg of sodium per serving and stay under the AHA’s limits for fat, saturated fat, and cholesterol. (And the company better not forget to enclose its hefty check to the Heart Association.) The catch: the Heart-Check is based on the (small, one-cup) serving listed on labels. But if you eat, say, an entire (15 oz.) Campbell’s Chunky Healthy Request Classic Chicken Noodle microwaveable bowl, you’re going to swallow 770 mg of sodium. Yikes. 🍲

That lower-sodium cup of soup need a little help? Try adding:

**TOMATO**

- ▶ a few fresh basil leaves
- ▶ a light sprinkle of dried oregano, thyme, or tarragon

**BUTTERNUT SQUASH**

- ▶ a pinch of dried sage
- ▶ a pinch of curry powder with a swirl of plain yogurt

**BEAN or LENTIL**

- ▶ chopped roasted red peppers and freshly ground black pepper
- ▶ some baby spinach and a drizzle of olive oil

**VEGETABLE**

- ▶ chopped fresh parsley and a teaspoon of grated Parmesan cheese
- ▶ a dab of basil pesto

**CHICKEN**

- ▶ freshly grated ginger and a squeeze of lime juice
- ▶ a dash of hot sauce and a few cilantro leaves

Photos: Jorge Bach/CSP1.

ZIP IT UP

# Super Bowls

**Best Bites** (✓✓) have no more than 300 milligrams of sodium per serving.

**Honorable Mentions** (✓) have no more than 410 mg. Both contain no more than 2 grams of saturated fat. Within each section, soups are ranked from least to most sodium, then least to most sat fat, then least to most calories.

**Multi-Serve** (about 1 cup prepared, unless noted)

	Calories	Saturated Fat (g)	Sodium (mg)
✓✓ Health Valley Organic No Salt Added <sup>1</sup>	110	0	70
✓✓ Tabatchnick Low Sodium <sup>F1</sup>	120	0	80
✓✓ Trader Joe's Organic Low Sodium <sup>1</sup>	90	1.5	120
✓✓ Tabatchnick—Cabbage or Wilderness Wild Rice <sup>F1</sup>	90	0	190
✓✓ Imagine Organic Light in Sodium Creamy <sup>1</sup>	90	0	210
✓✓ Pacific Organic Light Sodium Creamy Butternut Squash	90	0	280
✓✓ Dr. McDougall's Lower Sodium <sup>1</sup>	100	0	290
✓✓ Dr. McDougall's Organic Lower Sodium <sup>1</sup>	110	0	290
✓✓ Amy's Organic Light in Sodium—Butternut Squash, Lentil, or Minestrone <sup>1</sup>	120	0.5	290
✓ Amy's Organic Light in Sodium—Chunky Tomato Bisque, Cream of Tomato, Lentil Vegetable, or Split Pea <sup>1</sup>	130	1	340
✓ Trader Joe's—Carrot Ginger or Sweet Potato Bisque <sup>1</sup>	110	0	370
✓ Pacific Organic Light Sodium, except Creamy Butternut Squash <sup>1</sup>	110	1.5	370
✓ Tabatchnick Organic <sup>F1</sup>	180	0	380
✓ Healthy Choice—Chicken Noodle, Chicken Tortilla, or Chicken with Rice <sup>1</sup>	110	0.5	390
✓ Imagine Organic Creamy Corn & Lemongrass	110	0.5	390
✓ Tabatchnick—Corn Chowder or Cream of Spinach <sup>F1</sup>	110	2	390
✓ Campbell's Condensed, Healthy Request <sup>1</sup>	80	0.5	410
✓ Campbell's 100% Natural, Healthy Request <sup>1</sup>	110	0.5	410
✓ Campbell's Chunky, Healthy Request <sup>1</sup>	130	1	410
Healthy Choice—except Chicken Noodle, Chicken Tortilla, or Chicken with Rice <sup>1</sup>	130	0.5	460
Progresso Reduced Sodium <sup>1</sup>	110	0.5	470
Health Valley Organic 40% Less Sodium <sup>1</sup>	100	0	480
Dr. McDougall's—Organic or regular <sup>1</sup>	120	0	480
Tabatchnick—Black Bean, Minestrone, Southwest Bean, Split Pea, or Yankee Bean <sup>F1</sup>	170	0	480
Campbell's Condensed, Light <sup>1</sup>	70	0.5	480
Campbell's Condensed—Cream of Mushroom with Roasted Garlic, Harvest Orange Tomato, or Tomato <sup>1</sup>	90	0.5	480
Health Valley Organic <sup>1</sup>	90	0.5	480
Imagine All Natural 30% Less Sodium—Chicken Corn Tortilla, Chicken Noodle, or Italian Style Wedding <sup>1</sup>	120	1	480
Imagine Organic Creamy, except Corn & Lemongrass <sup>1</sup>	80	0	530
Progresso Light <sup>1</sup>	80	0.5	550
Imagine Organic 25% Less Sodium—Loaded Baked Potato or Tomato Bisque <sup>1</sup>	110	2	620
Imagine Organic Bistro <sup>1</sup>	110	0	640
Campbell's 100% Natural, Light <sup>1</sup>	80	0.5	650
Amy's Organic <sup>1</sup>	130	0.5	650
Progresso High Fiber <sup>1</sup>	120	1	650
Campbell's 100% Natural <sup>1</sup>	120	1	660

	Calories	Saturated Fat (g)	Sodium (mg)
Campbell's Condensed, 25% Less Sodium <sup>1</sup>	80	1.5	660
Pacific Organic <sup>1</sup>	110	2	670
Lipton Soup Secrets <sup>1</sup>	70	0	680
Progresso Vegetable Classics <sup>1</sup>	120	0.5	690
Progresso Traditional <sup>1</sup>	110	1	710
Wolfgang Puck—Organic or regular <sup>1</sup>	150	3.5	710
Pacific All Natural <sup>1</sup>	200	3	720
Campbell's Condensed, 98% Fat Free <sup>1</sup>	70	0.5	730
Progresso Rich & Hearty <sup>1</sup>	140	1.5	750
Marie Callender's <sup>1</sup>	120	1.5	760
Campbell's Gourmet Bisques <sup>1</sup>	180	5.5	760
The Original SoupMan <sup>1</sup>	190	5	770
Pacific Organic Condensed <sup>1</sup>	90	2	780
Campbell's Condensed—except Cream of Mushroom with Roasted Garlic, Harvest Orange Tomato, or Tomato <sup>1</sup>	90	1	820
Campbell's Chunky <sup>1</sup>	140	1	820
Bertolli Meal Soup (about 1½ cups) <sup>F1</sup>	370	6.5	1,020
<b>Single-Serve</b> (1 container, about 1-3 cups prepared)			
✓✓ Trader Joe's Low Sodium Minestrone (10 fl. oz.)	200	0.5	140
✓✓ Campbell's Ready to Serve Low Sodium Chicken with Noodles (11 fl. oz.)	160	1.5	140
✓ Dr. McDougall's Lower Sodium (8 fl. oz.) <sup>1</sup>	170	0	350
✓ Campbell's Soup on the Go, Healthy Request (11 fl. oz.) <sup>1</sup>	100	0.5	410
Lipton Cup-a-Soup (6 fl. oz.) <sup>1</sup>	50	0	560
Dr. McDougall's (11 fl. oz.) <sup>1</sup>	220	0	640
Healthy Choice (13 fl. oz.) <sup>1</sup>	190	0.5	680
Maruchan Instant Lunch 35% Less Sodium—Beef or Chicken (13 fl. oz.) <sup>1</sup>	290	6	710
Campbell's Healthy Request (15 fl. oz.) <sup>1</sup>	160	0.5	770
Campbell's 100% Natural, Healthy Request (15 fl. oz.) <sup>1</sup>	200	1.5	770
Campbell's Chunky, Healthy Request (15 fl. oz.) <sup>1</sup>	230	2	770
Campbell's Soup on the Go (11 fl. oz.) <sup>1</sup>	130	1	830
Annie Chun's All Natural Soup Bowl (12 fl. oz.) <sup>1</sup>	270	0	880
Simply Asia Soup Bowl—Miso or Szechwan Hot & Sour (13 fl. oz.) <sup>1</sup>	250	0.5	900
Maruchan Ramen 35% Less Sodium—Beef or Chicken (16 fl. oz.) <sup>1</sup>	380	7	1,040
Nissin Cup Noodles—Beef or Chicken (13 fl. oz.) <sup>1</sup>	300	7	1,090
Maruchan Instant Lunch—Beef or Chicken (13 fl. oz.) <sup>1</sup>	290	6	1,200
Campbell's 100% Natural, Light (15 fl. oz.) <sup>1</sup>	140	0.5	1,220
Campbell's 100% Natural (15 fl. oz.) <sup>1</sup>	190	2	1,220
Simply Asia Rice Noodle Soup Bowl—Sesame Chicken, Shiitake Mushroom, or Spring Vegetable (13 fl. oz.) <sup>1</sup>	250	0.5	1,240
Campbell's Go (14 fl. oz.) <sup>1</sup>	300	5.5	1,330
Campbell's bowls (15 fl. oz.) <sup>1</sup>	180	1	1,390
Campbell's Slow Kettle Style (15 fl. oz.) <sup>1</sup>	370	6.5	1,440
Thai Kitchen Rice Noodle Soup Bowl—Hot & Sour, Mushroom, or Thai Ginger (14 fl. oz.) <sup>1</sup>	250	1	1,470
Campbell's Chunky (15 fl. oz.) <sup>1</sup>	270	2.5	1,550
Maruchan Ramen—Beef or Chicken (16 fl. oz.) <sup>1</sup>	380	7	1,630
Nissin Big Cup Noodles (16 fl. oz.) <sup>1</sup>	370	8	1,630
Nissin Top Ramen—Beef or Chicken (16 fl. oz.) <sup>1</sup>	380	7	1,680
Nissin Souper Meal Chicken (26 fl. oz.)	580	10	1,680

✓✓ Best Bite. ✓ Honorable Mention. <sup>1</sup> Average. <sup>F</sup> Frozen.  
**Daily Limits** (for a 2,000-calorie diet): **Sodium:** 1,500 milligrams.  
**Saturated Fat:** 20 grams.

Source: company information. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.

# 2012 INDEX

## NUTRITION ACTION HEALTHLETTER



### Alzheimer's Disease (see "Memory")

#### Antioxidants

and asthma, Oct., p. 9  
and cancer, Jun., p. 1  
claims on cereals, May, p. 12  
claims on juices, Jan./Feb., p. 12  
in popcorn, Sept., p. 1  
and stroke, Nov., p. 1

#### Bones

and animal protein, Jun., p. 1  
and calcium, vitamin D, Sept., p. 1

#### BPA (bisphenol A)

how and why to avoid, Jun., p. 9  
levels in cans, Jan./Feb., p. 8

#### Caffeine

and dementia, gallstones, headaches, Parkinson's, performance, sleep, etc., Dec., p. 7  
and sleep, Apr., p. 9

#### Cancer

breast, colorectal and exercise, Jul./Aug., p. 8  
breast and soy, Sept., p. 8  
breast and vegetables, Apr., p. 8  
colon and constipation, Sept., p. 1  
colorectal and B vitamins, Dec., p. 10  
and excess weight, vitamins, Jun., p. 1  
how to reduce your risk, Jan./Feb., p. 1  
and iron, Jan./Feb., p. 9  
and multivitamins, Dec., p. 10  
pancreatic and vitamin D, Mar., p. 12  
prostate and dairy foods, Apr., p. 8  
prostate and pomegranate, Mar., p. 9, Nov., p. 9  
prostate and vitamin D, Jun., p. 8  
and sugars, Sept., p. 1  
and vegetables, Oct., p. 13

#### Carbohydrates (see "Sugars" and "Whole Grains")

#### Claims, misleading, Nov., p. 9

#### Coconut Oil and Alzheimer's, heart disease, weight loss, Jun., p. 10, Nov., p. 13

#### Coffee (see also "Caffeine")

and risk of dying, Jul./Aug., p. 8

#### Day's Worth of Food, Jul./Aug., p. 1, Nov., p. 1

#### Diabetes (type 2)

and BPA, Jun., p. 9  
and coffee, Jul./Aug., p. 8  
and exercise, Dec., p. 1  
and iron, Jan./Feb., p. 9  
and magnesium, Jun., p. 1  
and metabolic syndrome, Jul./Aug., p. 1  
and microbiome, Jul./Aug., p. 9  
and sleep, Apr., p. 9, Jun., p. 8  
and vegetables, Oct., p. 13  
and vitamin D, May, p. 10

and weight loss, exercise, Dec., p. 10

#### Dish of the Month (back cover)

Berry Yogurt Bliss, May  
Chickpea-Tomato Dream, Jun.  
Couscous Salad, Jan./Feb.  
Creamy Dijon Dressing, Mar.  
Creamy Spinach Bulgur, Jul./Aug.  
Late-Summer Gazpacho, Sept.  
Lemon-Parsley Pesto, Oct.  
Roasted Asparagus, Apr.  
Roasted Sweets & Onions, Nov.  
Simple-As-Can-Be Broccoli, Dec.

#### Editorials – Memos from MFJ (p. 2)

Less obesity, heart disease, salt, soda, trans fat, Jun.  
Food Day, Oct.  
Food industry blocks progress, Mar.  
Laws should be implemented, Sept.  
Spending to save on obesity, Jan./Feb.  
Sugary drinks, Apr., Dec.  
Teaching kids to cook, Jul./Aug.

#### Environment

and meat, Oct., p. 8  
and organic foods, Oct., p. 1

#### Erectile Dysfunction and pomegranate juice, Mar., p. 9, Nov., p. 9

#### Exercise

aerobic vs. strength training, Jun., p. 8  
and blood pressure, Nov., p. 1  
and bones, diabetes, heart disease, high-intensity, memory, muscle, weight, Dec., p. 1  
to burn off snack calories, Mar., p. 8  
and cancer, Jan./Feb., p. 1, Jul./Aug., p. 8  
and chocolate, Mar., p. 12  
and diabetes, Dec., p. 10  
and metabolic syndrome, Jul./Aug., p. 1  
more reps benefit older people, Oct., p. 9  
and sleep, Apr., p. 9, Dec., p. 1  
step while watching TV, Apr., p. 8  
and tart cherries, Mar., p. 9

#### Eyes

and vegetables, Oct., p. 13  
and vitamins C, E, Nov., p. 8

#### Fats and Oils

and calorie burning, Sept., p. 1  
coconut oil, Jun., p. 10, Nov., p. 13  
DHA, EPA and stroke, Nov., p. 1  
DHA and memory, Sept., p. 9  
fish oil and heart attacks, Sept., p. 1  
fish oil and metabolic syndrome, Jul./Aug., p. 1  
omega-3 claims on breads, Sept., p. 13  
omega-3 claims on juices, Jan./Feb., p. 12  
omega-3 claims on spreads, Nov., p. 13  
omega-6 and inflammation, Jun., p. 1, Nov., p. 9

and sudden death heart attacks, Oct., p. 9

#### Fiber

claims on breads, Sept., p. 13  
claims on cereals, May, p. 12  
claims on juices, Jan./Feb., p. 12  
and weight gain, Sept., p. 1

#### Food Addiction, May, p. 1

#### Food Porn (back cover)

Applebee's Fried Green Tomato & Turkey Club, Jun.  
Buitoni Riserva Chicken & Spinach Cannelloni, Mar.  
California Pizza Kitchen Red Velvet Cake, Apr.  
Campbell's Tomato & Sweet Basil Bisque, Jan./Feb.  
Duncan Hines Frosting Creations, Dec.  
Dunkin' Donuts Frozen Caramel or Mocha Coffee, Sept.  
IHOP French Toast, Oct.  
Quiznos Chicken Carbonara Sub, Nov.  
Romano's Macaroni Grill Carbonara, May  
Tony's Mac & Cheese Original Crust Pizza, Jul./Aug.

#### Fruits and Vegetables

and blood pressure, Jun., p. 1, Nov., p. 1  
and calorie density, Mar., p. 1  
claims for açai, berries, grapefruit, mangosteen, noni, pomegranate, tart cherries, Mar., p. 9  
and pesticides, Oct., p. 1  
pomegranate juice claims, Nov., p. 9  
and stroke, Nov., p. 1  
vegetables and breast cancer, Jan./Feb., p. 1  
vegetables and cancer, diabetes, eyes, heart disease, stroke, weight gain, Oct., p. 13  
vitamins in vegetables, Oct., p. 10

#### Healthy Cook Recipes

Apple & Walnut Salad, Oct., p. 12  
Arctic Char with Green Apple-Dill Sauce, Jul./Aug., p. 12  
Badda-Boom Bulgur, Jun., p. 12  
Baked Tilapia, Nov., p. 12  
Black Bean Fiesta, May, p. 11  
Cannellini Beans & Chorizo, Nov., p. 12  
Chicken with Grilled Salsa, Jul./Aug., p. 12  
Chicken & Peanut Curry, Mar., p. 13  
Chipotle Chicken Lettuce Wraps, May, p. 11  
Chopped Salad, Apr., p. 12  
Coconut Peanut Tofu, Sept., p. 12  
Cool Quinoa, Jun., p. 12  
Fish Stew, Mar., p. 13  
Green Beans & Caramelized Shiitakes, Oct., p. 12  
Hunter's Chicken, Nov., p. 12  
Ma Po Tofu, Sept., p. 12  
Outrageous Orzo, Jun., p. 12  
Pan-Roasted Tomato & Chickpea Salad, Apr., p. 12  
Pomegranate & Pumpkin Seed Tabouli, Oct., p. 12  
Sesame Tofu, Sept., p. 12  
Shredded Salad, Apr., p. 12  
Summer Shrimp Salad, Jul./Aug., p. 12  
Tilapia with Cilantro-Lime Sauce, May, p. 11

# 2012 INDEX NUTRITION ACTION HEALTHLETTER



White Beans, Sausage, & Kale, Mar., p. 13

## Heart Disease

and BPA, Jun., p. 9  
and caffeine, Dec., p. 7  
and coconut oil, Jun., p. 10  
and coffee, Jul./Aug., p. 8  
and exercise, Dec., p. 1  
and fish oil, Sept., p. 1  
and HDL ("good") cholesterol, Jul./Aug., p. 8  
and iron, Jan./Feb., p. 9  
and metabolic syndrome, Jul./Aug., p. 1  
and polyunsaturated fats, Oct., p. 9  
and pomegranate juice, Mar., p. 9, Nov., p. 9  
and potassium, Jun., p. 1  
and salt, Sept., p. 1  
and sleep, Apr., p. 9  
and soft drinks, May, p. 10  
and vegetables, Oct., p. 13  
and weight loss in diabetics, Dec., p. 10

**Inflammation** and omega-6 fats, Jun., p. 1, Nov., p. 9

## Meat

impact on environment, Oct., p. 8  
and iron, Jan./Feb., p. 9

## Memory

and berries, Mar., p. 9  
and caffeine, Dec., p. 7  
and coconut oil, Jun., p. 10  
and DHA, ginkgo, huperzine A, phosphatidylserine, vinpocetine, vitamins (A, B's, C, E), Sept., p. 9  
and exercise, Dec., p. 1  
and iron, Jan./Feb., p. 9  
and silent strokes, Nov., p. 1  
and vitamin B-12, Sept., p. 8

**Metabolic Syndrome**, Jul./Aug., p. 1

**Microbiome**, Jul./Aug., p. 9

**Organic Food** and nutrients, pesticides, Oct., p. 1

## Probiotics

and constipation, Nov., p. 9  
for constipation, diarrhea, immune function, vaginal infections, Jul./Aug., p. 9

## Protein

and bones, Jun., p. 1  
and regained fat, Mar., p. 12

## Ratings of Brand-Name & Restaurant Foods

Bread, Sept., p. 13  
Cold cereal, May, p. 12  
Hard cheese, Mar., p. 14  
Ice cream, Jun., p. 13  
Juice, Jan./Feb., p. 12  
Salad dressing, Jul./Aug., p. 13  
Soft cheese, sour cream, Apr., p. 13  
Soup, Dec., p. 11

Spreads, Nov., p. 13  
Vegetables, Oct., p. 13

## Right Stuff (back cover)

Cascadian Farm Organic Harvest Berries, Nov.  
Dole frozen fruit, Jan./Feb.  
Earthbound Farm Protein PowerMeals, Oct.  
House Foods Tofu Shirataki Spaghetti, Sept.  
Kitchen Basics Unsalted Cooking Stock, Dec.  
Papaya, Jun.

PB2 Peanut Butter, Apr.

Ready Pac Ready Snax, Mar.  
Sustainable Seas Wild No Salt Tuna, Jul./Aug.  
Wilson Produce or Pero mini sweet peppers, May

## Salt (see also "Ratings of Brand-Name Foods")

and blood pressure, Nov., p. 1  
and heart attacks, strokes, Sept., p. 1  
and risk of dying, Jan./Feb., p. 8  
and taste of bread, Mar., p. 12

## Sleep

and alcohol, baths, exercise, heart disease, kava, melatonin, valerian, weight, yoga, Apr., p. 9  
and caffeine, Apr., p. 9, Dec., p. 7  
and diabetes, obesity, Apr., p. 9, Jun., p. 8  
and overeating, Oct., p. 9

## Stroke

and coffee, Jul./Aug., p. 8  
and fish oil, Sept., p. 1  
how to lower your risk, Nov., p. 1  
and magnesium, Apr., p. 8  
and salt, Sept., p. 1  
and triglycerides, May, p. 10  
and vegetables, Oct., p. 13

## Sugars

and cancer, Sept., p. 1  
and diabetes, heart disease, obesity, Apr., p. 1  
and food addiction, May, p. 1  
and metabolic syndrome, Jul./Aug., p. 1  
soft drinks and heart disease, May, p. 10  
sugary drinks and weight gain, Nov., p. 8

## Supplements

ADHD and Synaptol, Nov., p. 9  
flat belly pills, Nov., p. 9  
memory and antioxidants, B vitamins, DHA, ginkgo, huperzine A, PS, vinpocetine, Sept., p. 9  
muscle strength and HMB, Nov., p. 9  
sleep and kava, melatonin, valerian, Apr., p. 9  
weight and açai, caffeine, chromium, CLA, glucomannan, green tea, hoodia, lichi, mango, May, p. 8  
weight loss and raspberry ketone, Nov., p. 9

## Vitamins and Minerals

antioxidants, B vitamins and memory, Sept., p. 9  
B-vitamin claims on juices, Jan./Feb., p. 12  
B vitamins and colorectal cancer, Dec., p. 10

calcium, selenium, vitamins B-6, D, E and cancer, Jan./Feb., p. 1, Jun., p. 1

calcium, vitamin D and bones, falls, Sept., p. 1  
chromium and weight loss, May, p. 8  
iron and ALS, Alzheimer's, cancer, diabetes, heart disease, overload, Parkinson's, Jan./Feb., p. 9  
magnesium and diabetes, Jun., p. 1  
magnesium and stroke, Apr., p. 8  
multivitamins and cancer, Dec., p. 10  
potassium and arteries, blood pressure, Jun., p. 1  
preserving vitamins in vegetables, Oct., p. 10  
vitamin D and colds, Dec., p. 10  
vitamin D and diabetes, May, p. 10  
vitamin D in mushrooms, Oct., p. 10  
vitamin D and pancreatic cancer, Mar., p. 12  
vitamin D and prostate cancer, Jun., p. 8  
vitamin K in vegetables, Oct., p. 13  
vitamin-fortified foods and immunity, Mar., p. 12  
vitamins (B's, C, D, E) and stroke, Nov., p. 1  
vitamins C, E and eyes, Nov., p. 8

## Weight and Weight Loss

and açai, African mango, caffeine, chromium, CLA, glucomannan, green tea, hoodia, lichi, May, p. 8  
and aerobic vs. strength training, Jun., p. 8  
and alcohol, lack of sleep, TV, Oct., p. 9  
and almonds, Sept., p. 8  
and blood pressure, Nov., p. 1  
and caffeine, Dec., p. 7  
and calorie density, Mar., p. 1  
calories equal to 1 pound, Jun., p. 1  
calories and longevity, Nov., p. 8  
and cancer, Jan./Feb., p. 1, Jun., p. 1  
claims on cereals, May, p. 12  
and coconut oil, Jun., p. 10  
daily dieting vs. intermittent fasting, Jan./Feb., p. 8  
and diabetes, Dec., p. 10  
and exercise, Dec., p. 1, Mar., p. 8  
and fiber, Sept., p. 1  
flat belly infomercial and pills, Nov., p. 9  
and food addiction, May, p. 1  
and low-fat or low-carb diets, Sept., p. 1  
and metabolic syndrome, Jul./Aug., p. 1  
and microbiome, Jul./Aug., p. 9  
and portion size, May, p. 10, Jun., p. 1  
and raspberry ketone, Nov., p. 9  
and regained fat, Mar., p. 12, Sept., p. 8  
and restaurant food, Jul./Aug., p. 8  
and salad, Jan./Feb., p. 8  
and sleep, Apr., p. 9, Jun., p. 8  
and subtle cues to eat, Jun., p. 8  
and sugars, Apr., p. 1, Nov., p. 8

## Whole Grains

claims on breads, Sept., p. 13  
claims on cereals, May, p. 12  
cutting back on grains, Jun., p. 1

The Center for Science in the Public Interest (CSPI), founded in 1971, is an independent nonprofit consumer health group. CSPI advocates honest food labeling and advertising and safer and more nutritious foods. CSPI's work is supported by *Nutrition Action Healthletter* subscribers and foundation grants. CSPI accepts no government or industry funding. *Nutrition Action Healthletter*, first published in 1974, accepts no advertising.

## RIGHT STUFF

## FOOD PORN

### BACK TO BASICS



How many times have you seen a recipe that calls for cooking stock, which you would love to make if only you had the time? How many times have you reached for a store-bought stock that's loaded with salt, MSG, and who knows what all else?

Too many, we're guessing. But those days are over. **Kitchen Basics Unsalted Chicken Stock** relies on the same ingredients you'd use to make homemade stock, and it has no added salt, and it's the best-tasting unsalted cooking stock out there. (Insert applause.)

The stock—the company also makes **Vegetable** and **Beef** versions—is a real find. Its ingredients: chicken stock, chicken flavor, vegetable stocks (carrot, onion, mushroom, celery), honey, bay, thyme, and pepper. There's so much chicken that each cup has 5 grams of protein.

It's not sodium free, because some of its ingredients (like celery and chicken stock) have naturally occurring sodium. But at 150 milligrams per cup (200 mg for the Beef and 240 mg for the Vegetable), it has a fraction of the usual. Progresso Chicken Broth, for example, has 850 mg of sodium (not to mention chicken powder, chicken fat, autolyzed yeast extract, and other ingredients to pump up the flavor).

Instead, Kitchen Basics slowly simmers its ingredients so they cook down to a rich intensity that will brighten up your soups, stews, grains, and other dishes. And it comes in a handy 32 oz. flip-top carton (you can freeze what you don't use) or an 8.25 oz. mini-carton.

Finally. A stock worth investing in.

**Kitchen Basics: (800) 632-5847**

## dish OF THE MONTH

### Simple-As-Can-Be Broccoli

Steam 1 lb. of broccoli florets until tender-crisp, 2-3 minutes. Mix 2 tsp. of reduced-sodium soy sauce with 1 tsp. of balsamic vinegar, 1 tsp. of toasted sesame oil, and ¼ tsp. of brown sugar. Drizzle over the hot broccoli and sprinkle with 2 Tbs. of chopped peanuts. The dressing also goes great on steamed asparagus, snow peas, or bok choy.

### FROSTING FUN!



"Grab a starter. Select a flavor. Get inspired." That's how **Duncan Hines** entices shoppers to try its new **Frosting Creations**.

The company must have been searching for an exciting new way to sell its frosting. After all, another tub of sugar, partially hydrogenated soybean and cottonseed oils, corn syrup, corn starch, and artificial flavor and color is kind of a snore.

Well, snore no more. You can light a fire under your frosting experience by dumping the contents of the Flavor Mix packet into the Frosting Starter tub. Choose from more than a dozen flavors, like Strawberry Shortcake, Bubble Gum, or Cotton Candy. Each has 10 calories from sugar plus natural and artificial flavors and food dyes like Red 40, Yellow 5, and Blue 2. Some food dyes can make ADHD worse in some children and may slightly increase the risk of cancer. How exhilarating!

Then you get to stir the flavor into the starter frosting *yourself*. How inspiring to watch a tub of sugar and partially hydrogenated oil (dyed white) turn cotton-candy blue.

Each two-tablespoon serving of Frosting Creations adds 130 calories and four teaspoons of sugar to the calories (from sugar, fat, and white flour) that are already in your cake. Bonus: because Duncan is still using partially hydrogenated oil, you get—in addition to the two grams of saturated fat in each serving—two grams of trans fat (a day's worth).

"So moist. So delicious. And so much more." That's Duncan's motto.

So much more indeed.

**Duncan Hines: (800) 362-9834**