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*How exercise may help you avoid health conditions*

BY DENISE SCHIPANI

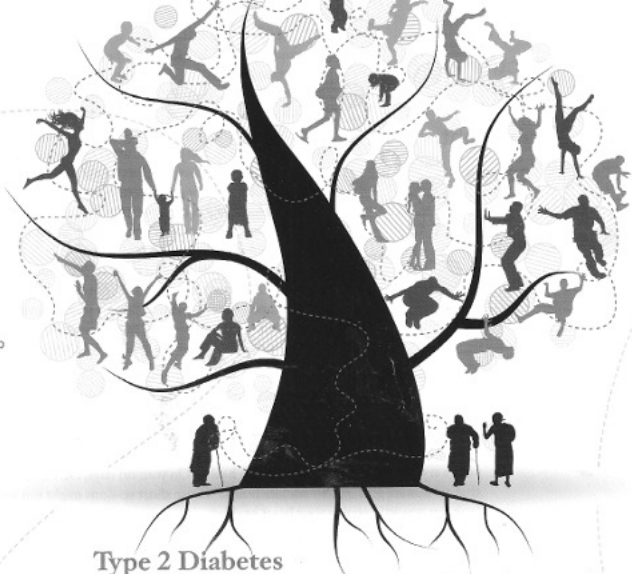
A few years back, Leslie Thompson received a dreaded late-night phone call: Her grandmother was being rushed to the hospital. "She was in bad shape; her diabetes was out of control," Leslie remembers. "It was very scary." Once her grandmother was stabilized and back at home, the now-28-year-old took stock: Though Leslie wasn't diabetic, her cholesterol had hit a shocking high of 311. Wake-up call!

Already a member of Curves, Leslie, who lives in Bakersfield, California, turned her workout focus toward improving her health as well as dropping pounds. "My mom joined, too," she says. "Five years later, my mom has lost weight and my cholesterol is down to 186. We were both motivated by not wanting to end up like Grandma."

As we age, it's natural to look to the generation before us for clues about our own health future. Will we get more than Mom's gray hair and also develop her diabetes? Or inherit Grandmother's propensity for fractures thanks to osteoporosis? Plenty of common conditions have at least some genetic component. The good news is that exercise and healthy living have been proved to increase your chances of avoiding these conditions, delaying their onset, or drastically reducing how onerous they might be for you. Here, meet members who are taking active steps to outsmart what might otherwise be their genetic fate, and find out what you can do to stave off type 2 diabetes, heart disease, and osteoporosis.

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your mother has



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—Debbie Burr



## Type 2 Diabetes

When Debbie Burr was diagnosed with type 2 diabetes last year, she was upset but not all that surprised, given her family history. The 53-year-old, who lives in Forest, Ontario, Canada, has a handful of diabetic family members and a mom who has heart disease and suffered a stroke at age 61. “My doctor told me my diabetes was still mild, but I took that very seriously,” Debbie says.

She should: “Diabetes has a strong genetic component,” says Carmen Castaneda-Sceppa, MD, an associate professor of health science at Northeastern University in Boston. Type 2 diabetes is primarily the result of insulin resistance, the body’s decreased ability to effectively process glucose (sugar). Factors such as abnormal levels of cholesterol, high blood pressure, a high waist circumference (and an unhealthy amount of fat in your midsection), and high blood-sugar levels may lead to insulin resistance.

### What you can do:

- Losing weight is one part of the picture, but Dr. Castaneda-Sceppa points out that “you can be of normal weight but have too much fat around your midsection.” So while it’s smart to pay attention to the number on the scale, an overall healthy lifestyle—especially exercise and healthy eating—is also important.
- Even modest lifestyle changes (more fruits, vegetables, and whole grains in your diet; exercise on most days) may reduce your risk of developing type 2 diabetes by about half, according to a 2007 study at the University of Leicester, in the United Kingdom.
- Definitely don’t skip your regular circuit workouts, which include strength training. Because insulin works on skeletal muscle, a body with more muscle mass is more efficient at metabolizing sugar.

### Payoff

Debbie Burr found it hard at first to get into an exercise routine. “For 18 months, I didn’t lose much weight,” she says, “but gradually I started feeling better. I gained muscle and lost inches. My doctor suggested I lose another 10 pounds. Meanwhile, I’m still keeping my diabetes under control without any medication, which is great.”



"I made the connection between losing weight and feeling better."

—Alexandrea Dunn

## Heart Disease

Alexandrea Dunn loves her mother, but she doesn't want a heart like hers. "My mother had a triple bypass at age 68," says Alexandria, 40, who runs a home day care in Villa Park, Illinois. "She's always had a heart murmur and been overweight, and she has a pacemaker." Afraid of heading down that same path (a handful of other family members also have heart disease), Alexandria began paying attention to her own health. She joined Curves to drop some weight.

"I'd lost weight before, maybe 5 or 10 pounds at a time, but always gained it back," she says. After reaching a high of 250 pounds and, even more scary, being put on medication for high blood pressure, a major risk factor for heart disease, she got more serious. "My doctor told me if I could lose even a little weight, I could reduce the medication," Alexandria says.

Genetics certainly affect a person's likelihood of developing heart disease, the biggest killer of women in the U.S., but this is not the only piece of the puzzle, says Dr. Castaneda-Sceppa. "Risk factors include smoking, being overweight, lack of activity, and high cholesterol, but if you have a family history of heart disease *in addition* to some or all of the other risk factors, your chances go up."

### What you can do:

- Try to get at least 30 minutes of exercise a day on most days of the week. Your regular Curves workout covers you for three days. And it provides your heart the benefit of combining an aerobic workout with strength training. A 2010 study at Appalachian State University, in Boone, North Carolina, found that resistance training increased blood flow to muscles, making it an effective companion to aerobic exercise when you're trying to improve cardiovascular health. On your off days, Dr. Castaneda-Sceppa says, "you can split that 30-minute goal into 10-minute bouts." Those short sessions might not seem like much, but they go a long way toward keeping your heart healthy.
- Lose weight (even a little). Shedding pounds puts less strain on your cardiovascular system, blood pressure and stress level, which helps to improve your heart health. That said, try not to focus too much on the number on the scale, says Dr. Castaneda-Sceppa: "Some people tend to lose weight quickly but then rebound and gain it back, plus more, which doesn't help and can hurt." For that reason, losing slowly or otherwise maintaining your weight as you age may be a smarter move.
- Know your waist circumference and body mass index (BMI). In general, women should aim for an under-35-inch waist and a BMI lower than 25 for optimal heart health. A BMI of 25 or higher is linked to higher blood fats, higher blood pressure, and an increased risk of heart disease and stroke. Your Curves coach can help you measure and monitor these numbers.

### Payoff

Six months after starting on blood-pressure medication, Alexandria had lost 10 pounds. Encouraged, she kept going. As of last year, she was down to 187, from a high of 250. And the best news is that her blood pressure is completely under control: no medication necessary. "When I first joined Curves, I did it mostly to ease stress," Alexandria says. "But then I made the connection between losing weight and feeling better, and possibly avoiding what happened to my mother. My doctor says there's still that chance that I could develop heart problems, but I'm on the right path, with my cholesterol numbers good and my blood pressure normal."



## Osteoporosis

"My memories of my grandmother are of her being more and more hunched over as the years went on," says Joanne Cuccio, 45, a member of the Riverhead, New York, Curves. At her age—perched between her childbearing years and menopause—Joanne is smart to look at her exercise regime as a way to shore up her own bones and avoid becoming frail, fragile, and prone to fractures. (She also works out, she says, to keep herself from experiencing the health problems from which her mother suffers: diabetes and high blood pressure.)

An estimated 40 million Americans either have osteoporosis, a condition characterized by brittle bones that are prone to fracture, or are at risk of developing it, according to the National Institutes of Health. A lot of factors play into your chances of developing osteoporosis, and genetics is a big one. You're more likely to be headed that way if your mother or grandmother developed osteoporosis at a relatively young age, says Marci Goolsby, MD, a primary care physician at the Women's Sports Medicine Center at New York's Hospital for Special Surgery. But other factors make your chances either better or worse. You are more prone to osteoporosis if you smoke, consume a diet deficient in calcium and vitamin D (especially as a child or young woman), and use or have used steroids (such as an asthma inhaler). "Thinner women, as well as white and Asian women, are also at greater risk," says Dr. Goolsby.

### What you can do:

- Begin or increase weight-bearing exercise (Curves counts; swimming and cycling don't). Why? "Bones are living tissue. They build up, and they break down. When bones are stressed during weight-bearing exercise, they respond by rebuilding themselves," says Dr. Goolsby. In a 2010 osteoporosis study at the Medical College of Georgia, participants who exercised for at least three hours per week retained greater bone density.
- As for your weight (on the scale), osteoporosis is one of the few conditions that worsens if you're thinner, simply because your own body weight stresses bones, keeping them stronger. Even so, women are at far greater risk for cardiovascular disease, which is exacerbated by being overweight or obese. "It's better to keep yourself trim to avoid chronic conditions like heart disease and diabetes," explains Dr. Goolsby.

### Payoff

"One of the reasons I joined Curves is because of my mother," says Joanne. "She's in pain every day when she gets out of bed, and I don't want to be that way." Though she has yet to have a bone-density test, Joanne credits her three- to four-times-per-week Curves habit with making her feel stronger, healthier, and fitter. Who can argue with that?


## MORE REASONS TO MOVE

The following conditions may not be hereditary, and at least one (menopause) is unavoidable. All, however, are ameliorated with—you guessed it—exercise. So take to the circuit and help yourself out if you suffer from any of these.

**Depression** Researchers at the Anxiety Research & Treatment Program at Southern Methodist University, in Dallas, analyzed years of studies and concluded that exercise has a profoundly positive effect on depression. Like antidepressant drugs, exercise appears to act on neurotransmitter systems in the brain, and it helps patients with depression re-establish positive behaviors. For patients with anxiety disorders, exercise reduces their fears and related sensations, such as a racing heart and rapid breathing.

**Postmenopausal symptoms** A 2008 study at Temple University, in Philadelphia, found that previously sedentary postmenopausal women who did aerobic exercise three times a week reduced postmenopausal symptoms and significantly decreased chemical imbalances that may lead to heart disease and stroke in this demographic.

**Migraines** Some migraine sufferers find their pain gets worse if they try to work out with a headache. But one study (conducted at a headache clinic in Sweden in 2008 and published in *Headache: The Journal of Head and Face Pain*) found that an aerobic exercise program may reduce the frequency of migraines. This is likely because it increases the body's ability to take in and use oxygen.



"My mother is in pain every day, and I don't want to be that way."

—Joanne Cuccio

