

healthy living

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WHEN BABIES EMERGE INTO THE WORLD, THEIR FIRST BIG JOB IS TO INHALE. THE LAST ACT OF PEOPLE ON THEIR DEATHBEDS IS TO EXHALE. BETWEEN THESE EXTREMES, life is a long and continuous sequence of breaths—the urgent yet often unconscious taking in of air rich with oxygen and the slow deflation of the lungs as they push carbon dioxide out of the body.

This fundamental physical rhythm, essential and profound, is life itself.

Without respiration we could not survive longer than a few minutes. Yet people seldom stop to consider how effectively they breathe. They don't realize that when they are racing against the clock, arguing with a spouse, or absorbing alarming stories from the evening news, they literally hold their breath and forget to let go.

Breathing effectively is crucial to our well-being. Babies and animals breathe roundly and lushly, engaging their whole bodies in the act. Most of us, however, have lost this simple, natural gift. "Most people are chest breathers," says Tom Goode, a Boulder, Colorado-based naturopath who started the International Breath Institute, a school that con-

ducts breathing workshops across the country. "This type of shallow breathing produces a whole host of physiological symptoms and has been tied to everything from autoimmune diseases to cancer and heart disease." It is also tied to less-dire complaints like lack of energy, low resistance to disease, high anxiety, the blues, and the blahs.

Learning to breathe more fully and deeply, using more parts of your body—even parts that don't seem relevant, like your belly and lower back—can help you feel and function better. Here's why: When you take a breath, air is warmed, humidified, and filtered in the nose and mouth; travels to the larynx; and then moves past the vocal cords to the trachea, or windpipe. The trachea divides into left and right main bronchi, which convey air to the two lungs. In the lungs, oxygen is absorbed into the bloodstream, and carbon dioxide is removed from the blood and then exhaled.

"The real gas exchange happens in the lungs," says

Martha is a firm believer in the power of proper breathing. She credits a program of strenuous breathing exercises she has been doing for the past five years with improving her energy and her health.

Breathing

DO YOU KNOW that the average person breathes twenty-eight thousand times a day, inhaling between three and five quarts of air with each breath?

Laurence A. Smolley, a pulmonologist and a coauthor of *Breathe Right Now* (Norton, 1998), a guide to common breathing disorders. "If you don't take a deep-enough breath, you don't get the benefit of the gas exchange. You're just letting the air go up and down in your conducting airways."

But with diaphragmatic breathing, Smolley says, you can increase your gas exchange. The diaphragm, a dome-shaped muscle attached to the chest wall, separates the chest cavity from the abdomen and is the main provider of respiratory muscle force. Inhaling deeply pushes the diaphragm down into the abdomen, and this movement enlarges the chest cavity, creating a vacuum that sucks air into it.

"If you breathe deeply enough to engage the diaphragm, your chest should expand, and your abdomen should also expand significantly," says Smolley. "Put your hand on your stomach: If it moves up and out, you're doing it right."

Deep breathing has another important function: It causes the heart, liver, stomach, pancreas, and other organs to move around, jostling one another in a gentle, beneficial way. "It's like having your own internal massage therapist," says Dennis Lewis, a San Francisco educator and the author of *The Tao of Natural Breathing* (Mountain Wind, 1996). The direct and indirect massaging of organs and muscles promotes intestinal movement, blood and lymph flow, and the absorption of nutrients.

Martha has experienced other benefits from deep breathing: "When you do breathing exercises, you're actually strengthening your muscles from the inside," she says. "I can walk more

quickly, and find I can do hundreds of sit-ups easily now." Martha started visiting a breathing specialist five years ago, and she credits the exercises she learned with improvements in her well-being. "After a breathing session, I'm reenergized," she says. "It releases stress and lets me get through an eighteen-hour day, and that's pretty important." Proper breathing has also cleared up the hay fever that plagued her for decades. "I haven't been bothered by it since," she says.

Martha's exercises are quite strenuous. She begins by sitting with her back pressed to the wall, then takes a quick succession of deep breaths, with her stomach and chest pumping rapidly in and out. That's followed by ten minutes of very slow, deep inhalations and exhalations. "You feel silly when you first start, but then you experience the benefits," she says. She could do only fifty rapid breaths when she began the exercise program; she's now up to six hundred.

Goode notes that most people don't have adequate muscle tone to breathe really deeply for a sustained period of time. One way to get stronger is to lie down with a weight on your abdomen; with every inhalation, push the weight up with your stomach, then relax. Do

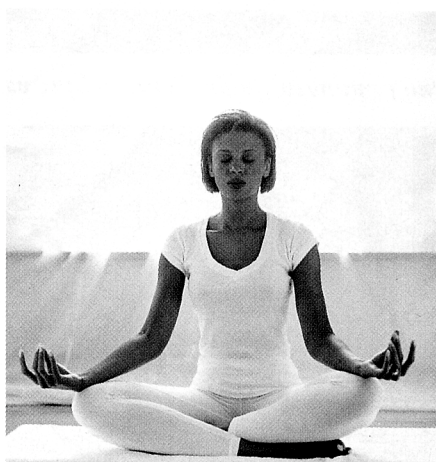
this for three minutes at a time; work your way up to ten. "There are expensive belly bags you can buy for this exercise," says Goode, "but I myself use the thirty-nine-cent variety: a resealable plastic bag filled with cat litter."

Even if you don't commit to a formal regimen of breathing exercises, deep breathing for at least five minutes once or twice a day is important. Naader Shagagi, a Los Angeles hatha yoga teacher, describes how: Imagine your lungs are a cup of water, three-quarters full. Empty the cup all the way out, and then fill it very slowly from the bottom up, until it is completely full.

Shagagi, who starts most yoga classes with a breathing exercise, says he has numerous students who claim that several sessions with him have helped alleviate conditions that have included chronic fatigue, back pain, alcoholism, depression, and even infertility.

When he's not teaching, Shagagi loves to sit in front of an open window, joyfully breathing fresh air. Most days, he'll wrap himself in a blanket and take a long walk in the breeze, choosing some leafy, green route, breathing deeply while clasping his fingers behind his back. He highly recommends this, blanket and all. If you have trouble holding your hands behind you, he of-

Breathing exercises are a foundation of yoga. Hatha yoga teacher Naader Shagagi suggests the following one for relaxation: Inhale for a count of seven; pause; exhale for a count of seven; without pausing, immediately begin to take the next breath. Repeat ten times, concentrating on your stomach, which should move outward with each intake of breath and back in with each release.



fers this substitute: Place a four-foot-long stick horizontally across the center of your back, and hook your arms around it as if you were hanging like a scarecrow. "Ten minutes of walking like that opens you up like you've never known yourself," he says.

Since the seventies, various schools of "breath work" therapies have proliferated, due in part to Americans' growing acceptance of non-Western beliefs and practices. In India and China, breathing exercises have traditionally been instrumental in achieving spiritual enlightenment as well as physical health. Recently, breathing has even become trendy. Oxygen bars, where people pay \$20 to breathe from tanks of tangerine- or lime-scented oxygen, have sprouted in the West. (Caveat emptor: Despite ecstatic claims from patrons, physicians say these oxygen cocktails will neither help nor hurt a normal breather.) But many ordinary Americans have relied on the power of proper breathing for years. Women who have studied the Lamaze technique know that the tumultuous, excruciating pain of childbirth can be mitigated by using controlled breathing. Though it by no means rivals that beloved anodyne, the epidural, in killing the pain of contractions, breathing in specific, patterned ways relaxes women so that they can stop fighting their bodies.

"Relaxation results in less work for your body and less exhaustion," says Mary Ann Nally, a certified Lamaze instructor in New Orleans. "During labor, the uterus *has* to work, but other muscles have no business being tense, and extra tension can increase pain and your perception of pain."

Marie Plette, a young opera singer based in New York City, learned to master her breathing for the sake of her art. "Breathing is the most important aspect of a singer's technique," she says.

"You can't control the sounds that you have—you have what God gave you. But breathing does give you control over the amount of sound you can make and also how long you can sustain a pitch. The whole point of good breath support is that you're able to make enough sound to carry to the back of the house." When she sings, Plette takes a rapid but full inhalation, then has a slow, controlled exhalation, making the air last upward of fifteen seconds.

"When you sing, you have to let the stomach expand through the rib cage, and your whole backside too," she says. "Most people spend their lives sucking in their ribs and trying to look slim. But there comes a point in every young singer's life where the ribs will almost pop out and clothes don't fit anymore."

People don't think of opera singers as athletes. But they are, Plette insists, and all athletes know that breathing can damn them or save them. There are operas, like *Götterdämmerung*, the last part of Wagner's Ring Cycle, which last six hours. Even an ordinary, three-hour opera is a long time to stand, singing at the top of your lungs.

"Turn on PBS, and watch Plácido Domingo sing," says Plette. "He's out there breaking a sweat, and for good reason. He's working hard to make that beautiful song, and it's all about being able to take a large breath, then another large breath, and then another."

Yet for most of us, breathing is such a quiet, unobtrusive miracle; it's no wonder we take it for granted. Although air is more valuable than gold, it is free and abundant. "Until you breathe and a smile comes on your face naturally, you're still struggling with your emotions, your stress," says Shagagi. "When you breathe and the smile comes, you're beginning to feel life the way it should be."