

## WELL



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## Breast-feeding is good for mothers

Long-term health benefits are many, but too few women get the message

BY RONI CARYN RABIN

Most women know breast-feeding is good for their babies' health. But doctors and midwives rarely tell moms-to-be that it's also good for nursing mothers.

Nursing mothers reduce their relative risk of breast cancer by 4.3 percent for every 12 months they breast-feed, in addition to a relative decrease of 7 percent for each birth. Breast-feeding is particularly protective against some of the most aggressive tumors, called hormone receptor-negative or triple-negative tumors, which are more common among African-American women, studies show. It also lowers the risk by one-third for women who are prone because of an inherited mutation in a gene associated with breast cancer.

Women who breast-feed are also less likely to develop ovarian cancer, Type 2 diabetes and rheumatoid arthritis, and they may have improved cardiovascular health.

Yet only 16 percent of mothers surveyed — or fewer than one in five — said their doctors had told them that breast-

feeding is good for mother as well as baby, according to a study published this month in *Breastfeeding Medicine*.

"We have an ounce of prevention that could save lives," said Dr. Bhuvanewari Ramaswamy, the paper's senior author and an associate professor of medical oncology at Ohio State University. "But are we fully educating the mothers when they make this difficult choice? Because it is not an easy choice."

While companies market infant formula by claiming their products are effective substitutes for breast milk, Dr. Ramaswamy said, "formula is not going to help women live longer and be there for their families."

The new study surveyed 724 women ages 18 to 50 who had given birth to at least one child. The vast majority of them had breast-fed.

Just over half knew before they gave birth that breast-feeding reduced the risk of breast cancer, and over a third of those said the information influenced their decision to breast-feed.

But only 120 of the women said that their health care providers had informed them about the implications for their own long-term health. Most of those who knew about the health advantages to nursing mothers had gleaned the information from popular media or the internet. And these women tended to breast-feed for much longer — 13

months on average — than women who did not know about the health implications, who breast-fed for only nine months on average.

While 60 percent of white women surveyed knew breast-feeding could cut their breast cancer risk, only 47 percent of the African-American women knew, and 54 percent of women of other or unknown race knew.

**Breast-feeding mothers are less likely to develop breast and ovarian cancers, Type 2 diabetes and rheumatoid arthritis.**

Among racial groups in the United States, African-American mothers have the lowest rates of breast-feeding and are least likely to nurse for at least six months, according to government health statistics. Sixty percent have breast-fed, but only 28 percent were still breast-feeding at six months.

In comparison, 77 percent of white mothers, 80 percent of Hispanic mothers and 86 percent of Asian mothers have breast-fed, with rates of breast-feeding at six months at 45 percent, 46 percent and 58 percent, respectively.

Scientists do not entirely understand why lactation helps prevent breast cancer, but they say that the breasts un-

dergo changes during pregnancy as they develop more milk ducts in preparation for breast-feeding.

The breasts eventually go through a process called involution that returns them to their pre-pregnancy state and involves a large amount of cell death and tissue remodeling. That transition can occur slowly through gradual weaning or abruptly if there is no breast-feeding or only brief breast-feeding. When it happens abruptly, it creates an inflammatory condition that is conducive to cancer, Dr. Ramaswamy said.

Dr. Marisa Weiss, the founder of the website BreastCancer.org, who has done research in this area, often describes pregnancy and lactation as a bat mitzvah for the breasts, saying that breast-feeding "forces the breasts to finally grow up and get a job, and make milk, and show up for work every day, and stop fooling around." That maturation process causes changes in the milk ducts that make the breast more resistant to cancer.

Breast-feeding also appears to reset the body's metabolism after pregnancy, improving glucose metabolism and insulin sensitivity, burning calories and mobilizing stores of fat that have accumulated during pregnancy, which may explain why women who breast-feed have lower rates of diabetes and other problems.

## Get the brain going with a 10-minute walk

Fitness

GRETCHEN REYNOLDS

Ten minutes of mild, almost languorous exercise can immediately alter how certain parts of the brain communicate and coordinate with one another and improve memory function, according to an encouraging new neurological study.

The findings suggest that exercise does not need to be prolonged or intense to benefit the brain and that the effects can begin far more quickly than many of us might expect.

We already know that exercise can change our brains and minds. The evidence is extensive and growing.

Multiple studies with mice and rats have found that when the animals run on wheels or treadmills, they develop more new brain cells than if they remain sedentary. Many of the new cells are clustered in the hippocampus, a portion of the brain that is essential for memory creation and storage.

The active animals also perform better on tests of learning and memory.

Equivalent experiments examining brain tissue are not possible in people. But some past studies have shown that people who exercise regularly tend to have a larger, healthier hippocampus than those who do not, especially as they grow older. Even one bout of exercise, research suggests, can help most of us to focus and learn better than if we sat still.

But these studies usually have involved moderate or vigorous exercise, such as jogging or brisk walking and often for weeks or months at a time.

Whether a single, brief spurt of very easy exercise will produce desirable changes in the brain has remained unclear.

So for the new study, published in *Proceedings of the National Academy of Sciences*, scientists from the University of California, Irvine, and the University of Tsukuba in Japan turned to a group of college students.

They recruited students in part because bright, healthy, young men and women should have brains and memories that are functioning well.

For an experiment to produce improvements in their brain function, its effects would need to be potent.

The scientists invited 36 of the students to the lab and had them sit quietly on a stationary bicycle for 10 minutes or, on a separate visit, pedal the bicycle at a pace so gentle it barely raised their heart rates. In technical terms, the exercise was performed at about 30 percent of each volunteer's maximum heart rate. By comparison, brisk walking should raise someone's heart rate to about 50 percent of his or her maximum.

So this exercise was very easy. It also was short, lasting for only 10 minutes.

Immediately after each session of the sitting or slow pedaling, the students completed a computerized memory test during which they would see a brief picture of, for instance, a tree, followed by a variety of other images and then a new image of either the same tree or a similar one.

The students would press buttons to show whether they thought each image was new or the same as an earlier shot.

The test is difficult, since many of the images closely resemble one another. It requires rapid, deft shuffling through recent memories to decide whether a picture is new or known.

Next, the scientists had each student repeat this sequence — riding or sitting on the bike for 10 minutes and then completing memory testing — but the testing now took place inside an M.R.I. machine that scanned the young people's brains while they responded to the images.

Then the researchers compared results.

The effects of the exercise, undemanding as it was, were clear. The young people were better at remembering images after they had ridden the bike, especially when the images most closely resembled one another.

In other words, the

harder their memories had to strain, the better they performed after the exercise.

More unexpected, their brains also worked differently after they had ridden. The M.R.I. scans showed that portions of each

student's hippocampus lit up in synchronized fashion with parts of the brain associated with learning, indicating that these physically separate parts of the brain were better connected now than when the students had not first exercised.

And the greater the coordination between the disparate parts of the brain, the better the students performed on the memory test.

"It was exciting to see those effects occurring so quickly and after such light exercise," says Michael Yassa, the director of the Center for the Neurobiology of Learning and Memory at the University of California, Irvine, and senior co-author of the new study along with Hideaki Soya of the University of Tsukuba.

The findings show that exercise can change people's brains and minds right away, he said, without requiring weeks of working out.

Even better, the exertion required can be so slight as to allow almost anyone, even those who are out of shape or possibly disabled, to complete the exercise.

"We are not talking about marathons," he said. "It looks like people can improve their memories with a short walk or an easy session of something like yoga or tai chi."

## What's all this about journaling?

BY HAYLEY PHELAN

Once the domain of teenage girls and the literati, journaling has become a hallmark of the so-called self-care movement, right up there with meditation. And for good reason: Scientific studies have shown it to be essentially a panacea for modern life. There are the obvious benefits, like an increase in mindfulness, memory and communication skills. But studies have also found that writing can lead to better sleep, a stronger immune system, more self-confidence and a higher I.Q.

Research out of New Zealand suggests that the practice may even help wounds heal faster. How is this possible? James W. Pennebaker, a social psychologist at the University of Texas at Austin who is considered a pioneer of writing therapy, said there wasn't one answer. "It's a whole cascade of things," he said.

Labeling emotions and acknowledging traumatic events — both natural outcomes of journaling — have a known positive effect on people, Dr. Pennebaker said, and are often part of traditional talk therapy.

At the same time, writing is fundamentally an organizational system. Keeping a journal, according to Dr. Pennebaker, helps to organize an event in our mind and make sense of trauma. When we do that, our working memory improves, since our brains are freed from the taxing job of processing that experience, and we sleep better.

This in turn improves our immune system and our moods.

### WHAT DO I WRITE ABOUT?

This is often the first question a budding journal writer might ask. In some ways, though, it's the most misguided — one thing journaling has taught me is that the mind is a surprising place, and you often don't know what it may be hiding until you start knocking around in there. Writing in your journal is the only way to find out what you should be writing about.

Julia Cameron, author of "The Art-



ist's Way," recommends "three pages of longhand writing, strictly stream-of-consciousness," as soon as one wakes. They are "not meant to be art. Or even writing." They need not be smart or funny or particularly deep — in fact, it's better if they're not.

Ms. Cameron encourages practitioners to think of them as "brain drain," a way to expel "all that angry, petty, whiny stuff" that "eddies through our subconscious and muddies our days."

"I'd like to say here that morning pages differ from conventional journaling, in which we set a topic and pursue it," Ms. Cameron said. "In morning pages, we do not set a topic. It is as though we have A.D.D." — attention deficit disorder — "jumping from topic to topic, gathering insights and directions from many quarters."

But Dr. Pennebaker's research has found that journaling about traumatic

or disturbing experiences specifically has the most measurable effect on our overall well-being.

In a 1988 study outlined in his book "Opening Up: The Healing Power of Expressing Emotion," students were randomly assigned to write about either traumatic experiences or superficial topics for four days in a row. Six weeks later, those who had explored trauma reported more positive moods and fewer illnesses than the others.

### HOW OFTEN AND WHEN?

Dr. Pennebaker's research has found that even a one-time, 15-to-30-minute session of focused journal writing could be beneficial. In fact, he said, he

was not "a big fan of journaling every day."

"One of the interesting problems of writing too much, especially if you're going through a difficult time, is that writing becomes more like rumination, and that's the last thing in the world you need," he said. "My recommendation is to think of expressive writing as a life course correction, as opposed to something you have commit to doing every day for the rest of your life."

If you're distressed about something, Dr. Pennebaker advises, write for 15 to 20 minutes a day about it, for three to four days. If there is no benefit, stop.

Techies can take heart in knowing that, contrary to the romantic ideal, typing out journal entries on a laptop or even on a phone can yield effects that are just as positive as writing by hand. The point is simply to get started.

the authenticity available to us in that time frame."

### WILL IT CHANGE MY LIFE?

Journaling may sound hokey to some. But it can be one of the most useful and cost-effective tools we have to forge a better, more emotionally and mentally healthy life. As Dr. Pennebaker said of his research: "I'm not a granola-crunching kind of guy. I got into journaling because I'm interested in what makes people tick."

Ms. Cameron's book, on the other hand, is steeped in the kind of earnest spirituality that New Age skeptics will no doubt bristle at. Yet one of the quotations that has stuck with me the most is straightforward and practical: "It is very difficult to complain about a situation morning after morning, month after month, without being moved to constructive action."

When I started journaling, I was unhappily married and dissatisfied with my career. I had no idea what would make me happy.

The practice provided me with an important outlet for the anxiety that had come to paralyze me at odd hours each day.

Still, I remained unconvinced by Ms. Cameron's grander claims about how journaling could change one's life. And yet, today, as I write this, just two years later, my life has completely changed: I split from my partner of 10 years; began a new, fulfilling relationship; enrolled in a master of fine arts program; rekindled my freelance writing career; and am planning a move to Los Angeles.

I don't know how journaling helped me make these changes. Perhaps, as Dr. Pennebaker may suggest, it simply allowed me to purge some of my anxiety, leading to a better night's sleep and more energy to accomplish the task. Or maybe, as Ms. Cameron would say, it put me in contact with my very own spiritual guide.

In the end, though, I'm not sure I care how it worked. The point is, for me, it did.