

TOP 20  
SUPER  
FOODS

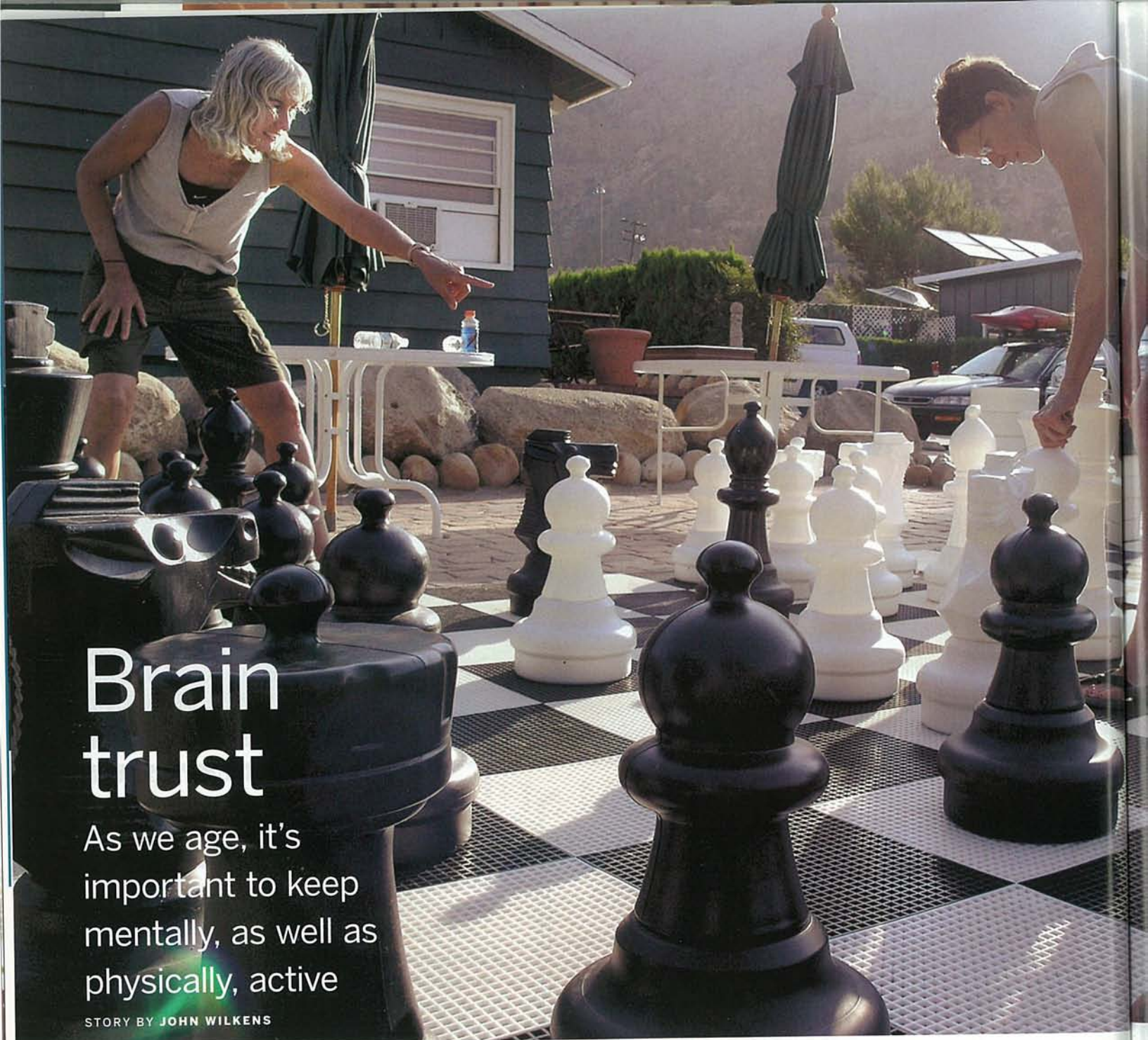
# sd health

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## Set for Life

Your healthy future starts now

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# Brain trust

As we age, it's important to keep mentally, as well as physically, active

STORY BY JOHN WILKENS

**T**he last decade has shattered long-held assumptions about what we're able to learn as we get older, turning our understanding of the brain on its head, fittingly enough.

New products aimed at keeping our noodles noodling arrive almost daily. Sales of brain-fitness computer software alone soared to \$225 million in the U.S. last year, up from \$70 million just four years earlier, according to SharpBrains, a San Francisco-based research and advisory firm.

"Today it is clear that there is no magical age when our brains start to be unable to learn new things," said Alvaro Fernandez, SharpBrains' co-founder. "It makes no sense, from a brain point of view, to fully retire at

age 60, 65 — and baby boomers won't."

Boomers drove the craze in physical fitness in recent decades, and Fernandez and others think they'll drive an expanding awareness of brain fitness, too — more research, more training, maybe even brain coaches and chains of brain gyms.

In fact, gyms are already out there, including vibrantBrains, in San Francisco, which features memory classes, lectures from scientists, and sessions with the latest in games.

All this thinking about thinking follows numerous studies demonstrating "neuroplasticity" in adult brains. That's a fancy word for the brain's ability to rewire itself when it's exposed to challenges, such as

learning how to play an instrument.

"When I went to medical school, we were taught that brain development happens mostly in the first years, that after age 20 or so there's no real change until we reach old age, and then it's all downhill," said Dr. Dilip Jeste, a geriatric psychiatrist who directs the Sam and Rose Stein Institute for Research on Aging at UCSD.

"Now we know that neurons can form in some parts of the brain even in old age, and it's shifted our thinking away from believing that old age is all gloom and doom and degeneration."

It is gloom and doom and degeneration for some, of course. Alzheimer's disease steadily expands its incurable reach; some-



Challenging the brain? Check. Teresa Boli (left) and Jane Hardy stay sharp by playing chess on a giant board in Kernville.

PEGGY PEATTIE

one is diagnosed with it every 72 seconds. Fear of the disease is driving a lot of the recent interest in brain fitness, too.

Cathryn Jakobson Ramin, a writer, was nearing age 50 when she started noticing a persistent brain fog. She was determined to understand its cause, and to fight through it.

For three years she became a guinea pig, trying medications and vitamins, mental aerobics, diets heavy in anti-oxidants, mindfulness meditation, neurofeedback, sleep therapy, even salsa dancing.

She got better, and she got a book out of it, "Carved in Sand," a *New York Times* best-seller recently released in paperback.

"People often think (drops in brain power) are just age, part of getting older," Ramin

said recently from Northern California, where she lives. "The assumption they make is there is nothing they can do to change it. That's wrong."

#### GET PHYSICAL

Exercising your other muscles has been shown in numerous studies to benefit what's between your ears. At the Salk Institute, for example, neuroscientist Fred Gage discovered that mice with exercise wheels in their cages were developing two to three times as many new brain cells as sedentary rodents.

Another recent study at the University of Kansas showed those patients with early Alzheimer's who weren't physically fit had four times as much brain shrinkage as those who exercised.

Physical activity increases the flow of blood to the brain, bringing with it oxygen and nutrients, according to doctors. Jeste said exercise also reduces stress, relieves depression and makes people feel more in control of their bodies and their lives.

"And it doesn't have to be strenuous exercise," he said. "Any increase in physical activity is better than nothing. You have to find what suits you. Working out on an elliptical machine or a treadmill is great, if you have access to them. But if you don't, walking is great. If you're in a wheelchair, move your legs. The key is to increase whatever you are doing."

At Belmont Village, a chain of senior assisted-living communities, they're seeing positive results with a dance-exercise program, said Beverly Sanborn, vice president of activities and memory programs.

Learning new steps, working on coordination — the brain gets a good workout along with the feet, she said.

#### BRAIN GAMES

Some people do crossword puzzles or Sudoku. But in these tech-heavy times, there are other options — lots of options.

Nintendo released "Brain Age" for its hand-held DS system two years ago and sold more than 100,000 units in three weeks. Other game platforms like PlayStation and Xbox have followed suit.

There are also software programs such as Mind Builder (\$20) and MindFit (\$140) and online services like Lumosity (\$10 per month) and My Brain Trainer (\$30 for one year).

All exercise the memory, reflexes, reasoning, attention-span and pattern recognition functions of the brain. They're fun, occasionally frustrating and mildly addictive. But do they work? And how do you know which ones are best?

The SharpBrains Web site ([sharpbrains.com](http://sharpbrains.com)) has a checklist of questions to use in evaluating the various programs. One sample: "What specific cognitive skill is the program training?"

"It's not really clear whether any of them is better than the others," Jeste said. "The

## SAN DIEGO ALIVE

 The senior years are no time to be retiring, says Dr. Dilip Jeste, director of the Stein Institute for Research on Aging. See how successful aging should include being engaged in stimulating activities at [uniontrib.com/more/sandiegoalive](http://uniontrib.com/more/sandiegoalive).

main principle should be whether it is stimulating, new, challenging and fun for you."

#### FOOD FOR THOUGHT

Turns out mom knew what she was talking about when she told you to eat your fruits and vegetables.

In his new book "The Anti-Alzheimer's Prescription," Dr. Vincent Fortanasce lists "The Golden Dozen" brain-boosting foods, and more than half of them are fruits or vegetables, high in anti-oxidants.

His list: berries, apples, fish, cruciferous vegetables (cabbage, broccoli, cauliflower), low-fat dairy, greens, dried beans or legumes, nuts, soy, sweet potatoes, tomatoes and whole grains.

Ramin, in one of her guinea-pig moments, went on a "brain-friendly" diet that included three meals and three snacks per day. She ate a lot of fruits and vegetables. The diet also emphasized lean protein and complex carbohydrates (oatmeal, brown rice, whole-grain pasta), which break down slowly, allowing a steady distribution of glucose — a crucial brain fuel — into the blood stream.

"Take a look at how you eat and what you weigh," she said. "Obesity is a huge factor in terms of development of cognitive deficit."

#### ISOLATING ISOLATION

Social interaction is important to healthy brains, too. Jeste said studies on rodents show that those put in "a kind of Disneyland for mice," instead of just standard cages with food and water, have better developed and better functioning brains.

Ramin likes to go to a farmers market in her community, not just for the fresh produce, but for the social interaction and the stimulation to the senses.

"They all get used there: smell, touch, taste, sight, sound," she said. "Doing that for a couple of hours beats sitting in front of a computer playing a game any day."

Fernandez said staying connected with other people is another way to beat stress, too. He said stress management is key to keeping the brain healthy.

"As we get older, we tend to fall into familiar habits," he said. "We really need to bring novelty and challenge to our lives, through education, our jobs, hobbies, travel, any number of things. And it's never too late to start." □