



# Here's To Your Health!

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## Brain slows at 40, starts body decline

Think achy joints are the main reason we slow down as we get older? Blame the brain, too: The part in charge of motion may start a gradual downhill slide at age 40.

How fast you can throw a ball or run or swerve a steering wheel depends on how speedily brain cells fire off commands to muscles. Fast firing depends on good insulation for your brain's wiring.

Now new research suggests that in middle age, even healthy people begin to lose some of that insulation in a motor-control part of the brain - at the same rate that their speed subtly slows. That helps explain why "it's hard to be a world-class athlete after 40," concludes Dr. George Bartzokis, a neurologist at UCLA, who led the work.

And while that may sound depressing, keep reading. The research points to yet another reason to stay physically and mentally active: An exercised brain may spot fraying insulation quicker and signal for repair cells to get to work.

To Bartzokis, the brain is like the Internet. Speedy movement depends on bandwidth, which in the brain is myelin, a special sheet of fat that coats nerve fibers.

Healthy myelin - good thick insulation wound tightly around those nerve fibers - allows prompt conduction of the electrical signals the brain uses to send commands. Higher-frequency electrical discharges, known as "actional potentials," speed movement - any movement, from a basketball rebound to a finger tap.

Consider someone like Michael Jordan. "The circuitry that made him a great basketball player was probably myelinated better than most other mortals," Bartzokis notes.

But while myelin builds up during adolescence, when does production slow enough that we fall behind in the race to repair fraying, older insulation?

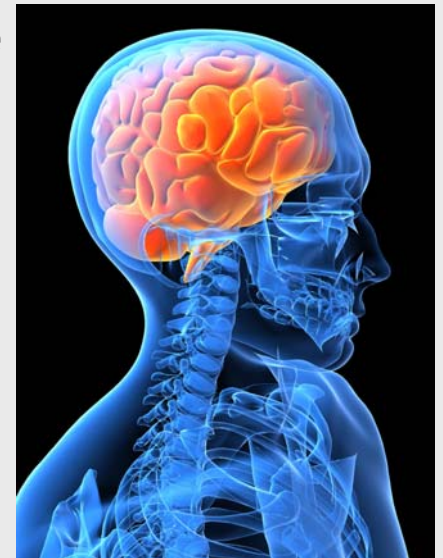
Enter the new research. First, Bartzokis recruited 72 healthy men, ages 23 to 80, to perform a simple test: How fast they tapped an index finger. Anyone can do this; it doesn't depend on strength or fitness.

Researchers counted how many taps the men made in 10 seconds, recording the two fastest of 10 attempts. Then, brain scans checked for myelin in need of repair in the region that orders a finger to tap.

Strikingly, tapping speed and myelin health both peaked at age 39. Then both gradually declined with increasing age, the researchers reported last month in the journal *Neurobiology of Aging*.

That doesn't mean the rest of the brain is equally affected. Bartzokis has some evidence that myelin starts to fray a decade or so later in brain regions responsible for cognitive functions - higher-level thinking - than in motor-control areas.

So back to his example of Jordan, who last played professionally at age 40: "Even he started getting older. That circuitry started breaking down a little," contends Bartzokis. "He can become Michael Jordan the big-shot businessman ... but not be Michael Jordan the super-duper basketball player anymore."



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Bartzokis isn't looking to build a better athlete. His ultimate goal is to fight Alzheimer's disease. The connection: Building memories requires high-frequency electrical bursts, too, and Bartzokis' earlier research suggests an Alzheimer's-linked gene may thwart myelin repair.

But the new research has broader implications because it sheds light on normal aging, says Dr. Zoe Arvanitakis, a neurologist at Chicago's Rush University Medical Center.

"We knew at some age you peak and there's a sense it would disintegrate as you grow older. But we didn't have a sense of where that age would be," says Arvanitakis, who next wants to see if myelin and cognitive functions show a similar trajectory.

Bartzokis' research supports a recent report from German scientists, that with age comes a weakening of the system that's supposed to repair broken myelin, adds Dr. Bradley Wise of the National Institute on Aging.

"Any disruption in these neural circuits and networks will have problems for functioning," says Wise, who says the two reports are spurring increased interest into myelin's role in aging. Until recently, most myelin research has focused on multiple sclerosis, where myelin doesn't gradually degrade but disappears.

While much more research is needed, Bartzokis has some practical advice:

-Keeping active and treating high blood pressure, high cholesterol and diabetes already are deemed important for good brain health. But physical and mental activity also may stimulate myelin repair, while unused neural pathways wouldn't send out a "help" signal, he says.

"Remember, these are average people I tested," Bartzokis says. "Someone that's really practicing could make it (myelin) last longer because you're sending the signals to repair, repair, repair."

-Stress hormones, however, may hurt myelin.

-He's also testing whether consumption of omega-3 fatty acids - the oils, found in fatty fish, already recommended for cardiovascular health - might help maintain myelin.

Source: Luran Neergaard for the Associated Press

## **The No-Statin Heart Plan**

In 2001, a statin marketed under the name Baycol was pulled from pharmacy shelves after being associated with rhabdomyolysis -- a muscle-wasting condition in which toxic by-products from muscle fragments enter the bloodstream and clog the kidneys, potentially causing organ failure and eventual death. Five years later the National Lipid Association's statin-safety task force put the odds of muscle-related side effects from the current crop of statins at 1 in 20,000. But researchers suggest that intense training, such as for a marathon, may bump the number up. Some scientists have also questioned whether statin-associated spikes in blood levels of liver enzymes indicate trouble in the organ, and there is ongoing debate about the drugs causing memory loss.

While experts warn of understated risks, a growing number suggest that the benefits are equally overstated. A recent article in *BusinessWeek* cited aggressive drug company marketing that employs tricky statistics (one **statin** ad boasted a 36 percent reduction in the risk of a heart attack even though the drug was only slightly more effective than a placebo). "If you've already had a heart attack, taking a statin has a small but very real effect," says Jerome Hoffman, M.D., a professor of clinical medicine at UCLA. "But you'd need at least 50 people to take it for 5 years for one of them to benefit. Yet all will incur great costs for the drugs and the doctor visits, and will worry and risk side effects."

Just as a diversified stock portfolio yields more reliable results over the long term, a diversified dietary portfolio can pay off with life-extending dividends. It combines foods high in soluble fiber (yep, beans), nuts (they can lower LDL cholesterol and help improve HDL and triglycerides), soy protein (it reduces LDL), and plant sterols (compounds that block cholesterol absorption).

"Each of these foods can lower cholesterol about 5 percent," says Cyril Kendall, Ph.D., a research scientist at the University of Toronto who helped develop the dietary-portfolio concept. "By putting them all in the same diet, you produce an additive effect resulting in about a 20 percent reduction." Limit your intake of saturated fat and dietary cholesterol, and you subtract another 10 percent. The total payoff: Some people in Kendall's studies saw their cholesterol drop, on average, 25 to 35 percent, a reduction similar to that produced by some statins. *Statins can't on page 2*

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A 2005 review of HDL-management strategies in the *New England Journal of Medicine* identified physical activity and weight loss as primary methods of raising HDL cholesterol.

### The no-statin heart plan

There isn't one uberfood that can keep your arteries clean, but there's a buffet that can do the job. Try to fill your plate with a few foods from each category below, while keeping your total calories in check.

#### Lowers LDL

Red grapefruit: 1 daily reduces levels by 20 percent  
Steel-cut oatmeal: 3/4 cup daily reduces levels by 15 percent  
Pecans: 1 oz daily reduces levels by 13 percent  
Pistachios: 3 oz daily reduces levels by 12 percent  
Promise activ spread: 3 servings daily reduces levels by 10 percent  
Macadamia nuts: 1.5 oz daily reduces levels by 9 percent  
Pinto beans: 1/2 cup daily reduces levels by 7 percent  
Walnuts and almonds 1 oz daily reduces levels by 7 percent  
Peanuts: 1 oz daily reduces levels by 6 percent



#### Raises HDL

Orange juice: Three 8 oz glasses daily boosts levels by 21 percent  
Hazelnuts: 1.5 oz daily boosts levels by 13 percent  
Dark chocolate: 2.5 oz daily boosts levels by 11 percent  
Extra-virgin olive oil: 2 Tbsp daily boosts levels by 4 percent

#### Lowers triglycerides

Fish oil: 4 grams daily reduces levels up to 45 percent  
Peanuts: 3 oz daily reduces levels by up to 24 percent  
Pistachios: 2 to 3 oz daily reduces levels by 10 points  
Source: Michael Perry, *Escape From Statins*, MensHealth.com



## Build Your Biking Legs

Flat roads are inviting, but you benefit the most from a cycling training workout if you vary the terrain. According to a study in the *Journal of Sports Sciences*, the exertion required in a 3-mile hill climb equals 24 miles on the flats. And half a mile of off-road biking equals a mile on the road. Make sure you prepare your quads, glutes, and hamstrings for the added burn. To boost your cycling training program in the gym, try these exercises from Robert dos Remedios, M.A., C.S.C.S., director of speed, strength, and conditioning at the College of the Canyons, in Santa Clarita, California. *Source: David Schipper for MensHealth.com*



#### SWISS-BALL LEG CURL

Start with your upper back and shoulders on the floor, arms to the sides, and calves on a Swiss ball. Raise your hips and pull the ball until your feet are flat against it. Pause, then push it away until your legs are straight. Do five to 10 repetitions.



#### DROP LUNGE

Holding a barbell across your shoulders, step back with your right foot and place it outside your left foot. Bend your knees, lowering your body a few inches. Push back up to the starting position and repeat with your other leg. Do eight to 10 repetitions with each leg.



#### SPLIT SQUAT

Hold a barbell across the back of your shoulders. Place your right foot back. Keeping your torso upright, lower your body until your left thigh is parallel to the floor. Pause, then push yourself back up. Perform three or four sets of eight to 10 repetitions on each leg.