

Multitasking makes you stupid, studies say

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You know the feeling. You're trying to save time by doing two or three things at once — sending e-mail while on the phone with your boss, listening to a colleague while sorting junk mail, making a list during a meeting.

Suddenly, your brain crashes. It can't recall what you just did, what was just said. Accusing eyes turn on you awaiting a response — to what?

Ted Ruddock calls it "having a senior moment" — and he's only 44. Making three points in a conversation recently, he got to No. 3 — and blanked. "It's a little scary," says Ruddock, a Newtown, Conn., chief corporate learning officer, father of three, husband, caregiver to his aged parents and — not surprisingly — inveterate multitasker.

A growing body of scientific research shows that one of jugglers' favorite time-saving techniques, multitasking, can actually make you less efficient and, well, stupider. Trying to do two or three things at once or in quick succession can take longer overall than doing them one at a time, and may leave you with reduced brainpower to perform each task.

"There's scientific evidence that multitasking is extremely hard for somebody to do, and sometimes impossible," says David Meyer, a psychology

BRAIN Having senior moments in middle age? Blame it all on trying to do too much at once.

professor at the University of Michigan. Chronic high-stress multitasking also is linked to short-term-memory loss.

Yet we're clearly engaged in a long-term trend toward doing more of it. Some 45 percent of U.S. workers feel they are asked or expected to work on too many tasks at once, says a study of 1,003 employees by the Families and Work Institute in New York.

Though the research has been applied mostly to the debate over driving with cell-phones, or aiding people in mind-boggling jobs such as air-traffic control, it has quality-of-life implications, too. Some findings:

■ People who multitask are less efficient than those who focus on one project at a time, says a study published in the *Journal of Experimental Psychology*. The time lost switching among tasks increases with the complexity of the tasks, according to the research by Meyer and others.

■ The process of switching back immediately to a task you've just performed, as many multitaskers try to do, takes longer than switching back after a bit more time has

passed, say findings published last fall by researchers from the National Institute of Mental Health. The reason is that the brain has to overcome "inhibitions" it imposed on itself to stop doing the task in the first place; it takes time, in effect, to take off the brakes. If you wait several seconds longer before switching back to the task, the obstacles imposed by that shutting-off process are reduced.

■ Managing two mental tasks at once reduces the brainpower available for either task, according to a study published in the journal *NeuroImage*. Marcel Just of Carnegie Mellon University asked subjects to listen to sentences

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while comparing two rotating objects. Even though these activities engage two different parts of the brain, the resources available for processing visual input dropped 29 percent if the subject was trying to listen at the same time. The brain activation for listening dropped 53 percent if the person was trying to process visual input at the same time.

"It doesn't mean you can't do several things at the same time," says Just, co-director of the university's Center for Cognitive Brain Imaging. "But we're kidding ourselves if we think we can do so without cost."

People who are multitasking too much experience various warning signs; short-term-memory problems can be one. Intense multitasking can induce a stress response, an adrenaline rush that when prolonged can damage cells that form new memory, Meyer says.

It's possible to consciously tone your multitasking muscles. Meditation can cultivate the ability to willfully control your mental focus. Other steps may help, such as weeding out distractions, honing your mental skills by making a point of continuously learning about new things, and getting plenty of rest.

Sometimes, though, the best answer is to put on the brakes. On a drive with his son, Ruddock caught himself missing his child's account of his day at school because his brain was processing a work problem.

In such moments, he consciously stops and refocuses. "We'd all be better off to stay in the moment briefly, to keep our focus and deal with that, and then move on to the next thing," he says.