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Multitasking Makes You Stupid:

Studies Show Pitfalls of Doing Too Much at Once

By Sue Shellenbarger.

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 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 Mr. 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 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 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% of American 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, NY.

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

-- People who multitask are actually less efficient than those who focus on one project at a time, according to 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 Dr. 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 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 first task in the first place; it takes time, in effect, to take off the brakes. If you wait several seconds longer before switching tasks, 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 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% if the subject was trying to listen at the same time. The brain activation for listening dropped 53% 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 Dr. 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, Dr. Meyer says. Other red flags are changes in your ability to concentrate or gaps in your attentiveness.

And some kinds of multitasking just don't work very well. If the tasks require the same parts of the brain, such as two assignments that both draw on language skills, "it's going to be extremely hard to succeed efficiently," Dr. Meyer says. Listening for a child playing in the next room while talking to your boss by phone, for instance, creates conflicting auditory-processing demands.

How about sorting junk mail and listening to your child? "We all do that, but we're short-changing the child a little," Dr. Just says. Folding laundry and talking to the boss on the phone? "It depends on the complexity," he says. "For me, towels are easy. But I'd think twice about some complex shirt that needs the folds in the right place."

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. Practice can also help; studies show it takes less time to switch between tasks you've repeated many times, like tying your shoes and signing your name.

Sometimes, though, the best answer is to put on the brakes. On a drive with his son, Mr. 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 re-focuses. "There's so much energy and wasted time and frustration caused by not being in the moment, and having to go back and retrace ground at the least, and repair damaged relationships at the worst," he says. "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."

Warning Signs: Some signals you may be trying to multitask too much:
-- Lapses in attentiveness
-- Loss of concentration
-- Gaps in short-term memory
-- Communication problems with others
-- Stress symptoms, such as shortness of breath