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Writing about fears before tests boosts student grades: study

By PAUL TAYLOR
From Friday's Globe and Mail

The technique helps alleviate anxiety, freeing up more cognitive horse power for the task at hand, researchers claim

Small doses: Three pieces of hot health news

Many students "choke" under exam-time pressure. They become so worried about doing badly that they are unable to perform to the best of their abilities.

But a new study suggests that students can overcome their nervousness - and actually get better grades - if they spend 10 minutes immediately before the examination writing about their fears. It's as though the writing exercise helps them unload their angst so they can focus all their attention on the test.

"We showed that students who are normally test-anxious were able to perform just as well as their other classmates," said the senior author of the study, Sian Beilock, an associate professor of psychology at the University of Chicago.

For the study, the researchers recruited 20 university students who were given a series of math tests in the lab as well as in a real classroom setting. In the central experiment, the students were divided into three groups. One was asked to write about their feelings concerning the upcoming test; the second was instructed to write about events of the previous day and the third group was told to sit back and relax in the 10 minutes before the start of the exam.

The overall findings, being published Friday in the journal *Science*, revealed that students prone to jitters did 10 to 15 per cent better when given the opportunity to write about their feelings prior to the test.

The researchers repeated the experiments with high-school students and got very similar results. The writing task boosted the grade of extremely anxious students from an average of B- to B+.

But how could such a simple pre-test task make such a big difference?

According to Dr. Beilock, pressured-filled situations can deplete a part of the brain's processing power known as working memory.

"You can think of it as a mental scratch pad that allows us to work with whatever information we have held in [our]consciousness," she explained. "And when people are worrying, they don't have as much of this cognitive horse power to devote to the test."

By writing about their fears, "it allows the students to almost get rid of their worries ahead of time," she said. Indeed, an assessment of what they wrote indicated that many students gained some insight into their fears and actually began to down play the overall importance of the test. Essentially, they could mentally relax a little.

"How students score on a test is not necessarily indicative of their ability," said Dr. Beilock. "We think we have come up with a good technique that will allow students to perform at their best. It doesn't take a lot of time. It doesn't take a lot of money and it's something students can do on their own."

Dr. Beilock is a leading expert on performing under pressure and is author of the book *Choke: What the Secrets of the Brain Reveal About Getting it Right When You Have To*.

She believes the writing exercise tested on the students could also help others do their best in a variety of high-pressure situations, "whether it is a big presentation to a client, a speech to an audience or even a job interview."

Move it, move it

It's no secret that a sedentary lifestyle is unhealthy. But if you must sit a lot, then at least get up and walk around every once in a while for the sake of your heart, suggests a study by a team of Australian and U.S. researchers.

The findings are based on a review of 4,757 people who participated in the U.S. National Health and Nutrition Examination Survey. The analysis showed that people who spend the most time sitting tended to have wider girths and more risk factors for heart disease, but the results also showed that even small breaks from sitting can help mitigate the harm.

"What we found was that those who took more breaks - regardless of their total sedentary time - had, on average, lower waist circumference and C-reactive protein, an inflammatory marker [linked to cardiovascular disease]," Genevieve Healy of the University of Queensland in Australia said in an e-mail.

The breaks didn't need to involve exercise and could be as short as one minute. The study was published in the *European Heart Journal*.

Flu-stopping chickens

British scientists say they have developed a way to genetically modify chickens so they can't spread "bird flu."

There are many different subtypes of avian flu that primarily afflict birds in the wild and occasionally they have infected domestic poultry flocks. The real concern is that one of these viruses will get into a poultry flock and then mutate into a highly pathogenic strain that can infect humans - starting a major influenza pandemic.

In Friday's edition of the journal Science, researchers at the universities of Cambridge and Edinburgh report they have created chickens with an extra gene which produces a molecule that interferes with the normal reproductive process of the virus.

So transgenic chickens can still be infected with the avian flu, but the virus can't replicate inside them. That means a sick chicken won't spread the virus to its cage-mates.

One of the researchers, Laurence Tiley of the University of Cambridge, noted that the current flock of experimental chickens won't be turned into food. A lot more work must be done to refine the genetic alternation process.

Indeed, it could be some time before a pot of chicken soup contains transgenic fowl. Government regulators would have to deem the chicken safe for human consumption - and consumers would have to be willing to eat it.

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