

How to predict who will suffer the most from stress

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More than 23 per cent of Canadians report being stressed or very stressed on most days. While chronic stress increases the risk of poor mental and physical health, not everyone is affected the same way. Some cope well, but for others—especially those most likely to sweat the small stuff—chronic stress can be harmful.

Thankfully, new research from Concordia University has found a way to identify those most susceptible to [stress](#). That's a huge help for healthcare professionals working to stop stress before it gets out of control.

The proof is in the pulse

In a paper recently published in the journal *Stress*, Concordia psychology professor Jean-Philippe Gouin followed 76 university students during periods of lower stress at the beginning of term and higher stress during the exam period. He found that, although all students experience similar challenges during finals, only some of them develop significant distress.

With the help of Concordia colleague Sonya Deschênes and Michel Dugas from the Université du Québec en Outaouais, Gouin recorded participants' [heart rate variability](#) while they were relaxing and while they were thinking about things they tend to worry about most. They also tracked participants' moods at a time of low stress early in the semester and at a time of high stress right before exams.

They found that those who exhibited a less variable heartbeat when they started worrying were more likely to be highly stressed later on, when faced with finals.

Gouin, who holds a Canada Research Chair in Chronic Stress and Health, explains: "At rest, a more variable heartbeat is a good thing. It shows that your parasympathetic nervous system is hard at work. That's the system that's responsible for the 'rest-and-digest' state of being—the opposite of 'fight-or-flight.' The rest-and-digest phase puts you in a calm state that allows you to conserve and replenish your energy."

Real threat or misplaced worry?

"When you're facing a real threat in your life, a regular heartbeat helps you deal with the situation. If you encounter a lion in the jungle, you want your heartbeat to stay at consistently high levels so that you can run away as fast as you can," says Gouin. "But if your body shows the same reaction when you worry about something that may or may not happen—like failing an exam—then you might be more susceptible to stress."

"By pinpointing those in the general population who are most vulnerable to stress, we can intervene before they hit the breaking point—and hopefully prevent the negative consequences of stress by doing so. That's why it's important to have an objective diagnostic tool like this one."

More information: "Respiratory sinus arrhythmia during worry forecasts stress-related increases in psychological distress" (Stress, September 2014) informahealthcare.com/doi/abs/10.1080/10753890.2014.949666

Provided by Concordia University

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