New study finds an unstructured 5-minute break can help restore attention

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Researchers from University of Sydney set out to discover which common attention hacks really work. They found a 5-minute break from thinking is all you need to get your concentration back. There is no need for a walk along a river, or a lengthy video of bamboo forests swaying in

the wind (although that could be nice). A five-minute total break will do the trick.

New research has found a simple, unstructured five-minute break from a complex task is all you need to get your concentration back or restore attention.

Rest is increasingly recognized as important for performance, well-being and learning. Whether it's a two-week holiday, one good night's sleep, a walk in a park for an hour, or a few minutes spent getting up from your desk for a coffee, rest breaks come in different shapes and sizes. In workplaces and study environments, methods such as the Pomodoro Technique—setting a timer to take a short five-minute break after 25 minutes of concentrated work—are gaining popularity as reminders to recharge.

Spending time in nature has been found to restore attention in a range of studies since the 1980s. But not many of us can pop out to do some "forest bathing" to take a break from essay writing or learning a new skill at work. Some studies suggest simply looking at a video of a natural scene offers the same restorative effect.

"If you want your work or study to be more productive, you need to build in simple five-minute breaks of doing nothing," said Associate Professor Paul Ginns, an expert in educational psychology at University of Sydney. "You need to be doing something different for five minutes. Move away from your computer or device, do some breathing or just sit quietly to rest your brain from the task. Scrolling through social media does not count as rest—you need to take a break from devices."

Associate Professor Ginns said we need to use our brain to create attention so we can learn or solve problems, but attention is finite and can be quickly depleted.

"Our attentions spans differ individually, and we can be influenced by the time of day or by blood sugar levels or caffeine intake, so it is complicated," he said. "But we wanted to test how we can restore attention and it's delightful that it can be as simple as a five-minute rest break. It's an easy productivity hack that is accessible to everyone."

How the study worked

In the study, published in *Educational and Developmental Psychologist*, 72 Australian university students first completed a difficult mental mathematics pre-test under speeded testing conditions, in order to exhaust students' attentional resources. This part of the experiment was designed to last around 20 minutes.

Students in the control (no rest) group then continued straight on to study a short lesson on how to mentally multiply two two-digit numbers (e.g., 34 x 67). The second group of students took a five-minute unstructured rest break, with a simple count-down on a computer screen showing how much of the break time was left.

The third group watched a first-person perspective video of a walk in an Australian rainforest for five minutes. The study called this "nature-based rest" even though it was simply watching a video.

All students then completed a "directed attention" short survey on the extent to which they experienced distracting thoughts during the mental mathematics lesson, responding to questions such as "My attention was directed towards things other than the lesson" and "I found it hard to maintain my concentration for more than a short time." Lastly, students completed a 20-question problem-solving test to see how well they could apply the mental mathematics strategy.

Comparing results across the three groups, students in the unstructured

rest group reported higher average levels of directed attention than those in the no rest control group. On the problem-solving test, both the unstructured rest group and the nature-based rest group outperformed the control group.

While the nature-based rest group solved more problems on average than the unstructured rest group (60% vs. 53% correct), the difference between the two rest groups was not statistically significant.

Why rest helps learning

"Many skills—including cognitive skills like mathematics—take a lot of concentration to master, but our cognitive resources become depleted when we use our minds to solve problems or study," said Associate Professor Paul Ginns, the academic supervisor and co-author of the paper. "It may seem counter-intuitive to interrupt a study break to help learning, but short rest breaks—whether they're unstructured or watching 'virtual' nature videos—seem to be well-worth the time, helping students to concentrate better and learn more effectively. This could also be applied for workers learning a new skill or concentrating on a complex task."

What you can do to restore attention

Build in five-minute breaks after 20 minutes of complex cognitive work. This could be in classrooms or university settings. It could also be applied to a range of workplaces or at home doing complex cognitive tasks such as tax returns

"The Pomodoro Technique method—where people work for 25 minutes and then break for five minutes—is a popular life hack and we may have just found the first evidence for it working," said Associate Professor

Ginns. "Other hacks, such as deep breathing or finding a sense of stillness are centuries old. Whatever you choose to do, offer your brain a total break for just five minutes and see how your attention improves."

More information: Paul Ginns et al, Rest breaks aid directed attention and learning, *Educational and Developmental Psychologist* (2023). DOI: 10.1080/20590776.2023.2225700

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