

# Researchers find breathing-in before doing a task might make you better at doing it

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A team of researchers at the Weizmann Institute of Science in Israel, has found that people sometimes do better on tasks if they inhale first. In their paper published in the journal *Nature Human Behavior*, the group

describes experiments they carried out with volunteers and what they found.

Sports fans have grown used to seeing athletes take a big breath before they execute a task such as serving a tennis ball or carrying out a play on the gridiron. Others have likely done the same before embarking on a task themselves, such as taking a final exam. It is an activity that has come to be associated with diving into a difficult task. In this new effort, the researchers have found that inhaling before carrying out certain tasks can actually help people do better on them.

In their experiments, volunteers looked at shapes on a computer screen determined if such a shape could truly exist in the real world. Each participant was monitored by a device that could detect nasal air passage—inhaling or exhaling. Subjects pressed a button to start each round of image viewing.

Comparing data from the nasal detectors to the scores received by the volunteers, the researchers found that those volunteers who inhaled before carrying out their task scored on average 73 percent correct. Those who exhaled instead, scored on average just 68 percent.

The researchers performed the same test on another group of volunteers but did not allow them the use of the button—each round was started by the researchers. In this experiment, they saw no difference in [test scores](#). They also saw no difference in test scores when they asked volunteers to report whether a word was real or not, instead of a shape.

When the researchers repeated the first experiment while monitoring volunteers via EEG, they found what they describe as shifts in brainwave activity when volunteers inhaled before executing a task—a sign, they claim, that the brain is becoming more focused by increasing awareness of what is about to occur. They were not able to explain why there was

no improvement, however, when volunteers were asked to do the word task rather than the object [task](#).

**More information:** Ofer Perl et al. Human non-olfactory cognition phase-locked with inhalation, *Nature Human Behaviour* (2019). [DOI: 10.1038/s41562-019-0556-z](https://doi.org/10.1038/s41562-019-0556-z)

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