

Rhesus monkeys found to choke under pressure

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A team of researchers at Carnegie Mellon University has found that like humans, rhesus macaques can choke when facing a high-stakes situation. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes experiments they conducted involving training rhesus monkeys to carry out increasingly difficult tasks for

increasingly large rewards.

Prior research, along with anecdotal evidence, suggests that humans are prone, at times, to choking when faced with a high-pressure situation—a field goal kicker missing an easy kick in the Superbowl, for example. In this new effort, the researchers wondered if other [animals](#) might choke under pressure as well. To find out, they conducted a series of experiments with a group of [rhesus monkeys](#).

The experiments consisted of training three rhesus [monkeys](#) to engage in difficult virtual reaching tasks on a computer screen, where they knew beforehand that a desired treat would be the [reward](#). The researchers then set up four scenarios for the monkeys: small, medium and large, and a much bigger one they called the jackpot. As the tasks grew more difficult, the rewards grew larger. Each of the monkeys was tested 10 times.

After studying the behavior of the monkeys, the researchers found that all of them worked harder to get their treats as they moved up in difficulty levels and rewards and did well. But when it came time to try for the jackpot, the monkeys failed miserably at times. The researchers found that both speed and accuracy declined in such cases between 10 and 25% of the time, preventing the monkeys from receiving the biggest reward. They also noted that the experience of choking did not appear to change strategies the next time. Some of the monkeys would choke again and again.

The researchers acknowledge that their test case was small (due to animal welfare rules) but suggest that their findings were strong enough in the limited sample to state that it would likely hold true for larger numbers of tests cases. Their findings indicate choking in at least one other animal besides humans and suggest that it likely means other species experience it as well.

More information: Adam L. Smoulder et al, Monkeys exhibit a paradoxical decrease in performance in high-stakes scenarios, *Proceedings of the National Academy of Sciences* (2021). [DOI: 10.1073/pnas.2109643118](https://doi.org/10.1073/pnas.2109643118)

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