

Brain computer interface may help learning

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Ohio researchers say they have discovered animal learning can be significantly enhanced by using a brain-computer interface.

Stephen Berry and colleagues from the Miami (Ohio) University Department of Psychology and Center for Neuroscience showed when older rabbits were trained in classical eyeblink conditioning -- a common task used by neuroscientists studying memory -- age-related learning impairments were eliminated.

The training tasks were administered during periods of a certain type of neural signaling called theta activity in the hippocampus region of the brain. Previous studies suggested theta activity accurately predicts the ability to learn different behaviors, and other studies have shown damage to the hippocampus via lesions or drug administration impairs learning.

Berry said his research reveals the critical modulatory role the hippocampus plays in learning, and raises the possibility of optimizing learning and counteracting deficits by coordinating learning tasks to coincide with theta brain activity.

The research is detailed in this week's early online edition of the Proceedings of the National Academy of Sciences.

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