

Maintaining good cardiorespiratory fitness can protect your memory from the effects of sleep loss

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If you're sleep deprived, you will likely have a harder time remembering things than if you're well-rested. But if you have good cardiorespiratory

fitness, your memory may be less affected by the effects of sleep deprivation than others, according to a recent McGill study published in the journal *Medicine & Science in Sports & Exercise*.

The study, led by The Memory Lab team and Marc Roig, Associate Professor in the School of Physical and Occupational Therapy, found that fit people appeared to be more protected from the negative effects of sleep loss on their memories.

The participants were deprived of sleep for 30 hours and then asked to view a set of 150 images. Four days later, when compared to another group that had a normal amount of sleep, the sleep-deprived group had a difficult time recalling the 150 images, demonstrating that sleep loss before viewing the [images](#) negatively affected their memory. However, subjects in the sleep-deprived group who had higher levels of cardiorespiratory fitness scored much higher on the image recall task and thus appeared to be protected from the negative effects of sleep loss.

The researchers believe that maintaining a good cardiorespiratory fitness through exercise can lead to the development of a resilient superbrain that is less susceptible to the effects of sleep loss on memory.

These findings could be important for people with [sleep](#) problems or those exposed to long periods of wakefulness and responsible for critical tasks on the job (pilots, surgeons, [health care professionals](#)) and need to avoid mistakes and maintain a good memory capacity.

More information: Beatrice Ayotte et al, Does Cardio-Respiratory Fitness Protect Memory from Sleep Deprivation?, *Medicine & Science in Sports & Exercise* (2023). [DOI: 10.1249/MSS.0000000000003200](https://doi.org/10.1249/MSS.0000000000003200)

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