

PSYCHIATRY

Physical activity and depression

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Credit: Sergey Pykhonin / Alamy Stock Vector

People who are more physically active are less likely to be depressed, but it is not clear whether physical activity actually causes a reduction in depression.

Karmel Choi of Harvard and colleagues used Mendelian randomization—a method that treats genetic variation as a natural experiment and therefore provides evidence for causal influence—to assess bidirectional relationships between physical activity and depression. Using summary-level data from prior genome-wide association studies composed of a total of 611,583 adult participants, the authors used the Mendelian randomization technique to investigate the relationship between the top genetic variants associated with self-reported physical activity, objective accelerometer-based measures of physical activity, and major depressive disorder. They found that higher levels of objective—but not self-reported—physical activity were linked with a reduced probability of becoming depressed. The reverse was not true (i.e., depression was not associated with a decreased probability of being physically active).

Taken together, these results suggest that physical activity is an effective way to protect against potential depression.

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