The benefits of physical fitness for kids spill over into their mental health, new research shows.

Getting plenty of exercise may guard against depressive symptoms, anxiety and attention-deficit hyperactivity disorder (ADHD), a new
And the more exercise, the better: Higher performance in cardiovascular activities, strength and muscular endurance were each associated with even greater protection against mental health issues.

The findings arrive as America continues to grapple with a surge in mental health diagnoses among children and adolescents.

The new study, conducted by researchers in Taiwan, compared data from the Taiwan National Student Fitness Tests and the National Insurance Research Database, which records medical claims, diagnoses, prescriptions and other medical information. The researchers used the anonymous data to compare students' physical fitness against their mental health.

The risk of mental health disorder was weighted against cardio fitness, as measured by a student's time in an 800-meter run; muscle endurance, indicated by the number of sit-ups performed; and muscle power, measured by the standing broad jump.

What did they discover? Higher performance in each activity was linked with a lower risk of a mental health disorder. For instance, a 30-second decrease in the 800-meter time was associated with a lower risk of anxiety, depression and ADHD in girls. In boys, it was associated with lower anxiety and a lower risk of ADHD.

Meanwhile, an increase of five sit-ups per minute was associated with lower anxiety and risk of ADHD in boys, and it was linked to a decreased risk of depression and anxiety in girls.

"These findings suggest the potential of cardiorespiratory and muscular fitness as protective factors in mitigating the onset of mental health
disorders among children and adolescents," the researchers wrote in the study.

U.S. Surgeon General Dr. Vivek Murthy has called mental health a national crisis and has focused heavily on adolescent mental health. In 2021, he issued a rare public advisory on the topic. Statistics at the time revealed alarming trends: From 2001 to 2019, the suicide rate for Americans ages 10 to 19 rose 40%, while emergency visits related to self-harm rose 88%.

Experts suggest that heavy screen use has replaced sleep, exercise and in-person activity, all of which are considered key to healthy development.

"The [new] finding underscores the need for further research into targeted physical fitness programs," the researchers concluded. Meanwhile, exercise programs "hold significant potential as primary preventative interventions against mental disorders in children and adolescents," they wrote.


The U.S. Centers for Disease Control and Prevention has more on mental health in kids.