

# Nutrition, Physical Activity and Academic Achievement

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Improved nutritional status has a positive and direct impact on academic achievement. When children's basic nutritional and fitness needs are met, they have the cognitive energy to learn and achieve. Schools continue to be a core place for students to learn and practice healthy eating habits<sup>1</sup>.

Research shows that healthy, well-nourished children are more prepared to learn, more likely to attend school and class, and able to take advantage of educational opportunities. Studies demonstrate:

- Undernourishment impacts the behavior of children, their school performance, and their ability to concentrate and perform complex tasks.<sup>2</sup>
- Inadequate nutrition during childhood can have lasting effects and compromise cognitive development and school performance.<sup>2</sup>
- Children's' brain function is diminished by short-term or periodic hunger or malnutrition caused by missing or skipping meals.<sup>3</sup>
- Iron deficiency is one of the most prevalent nutritional problems of children in the United States. Iron deficiency can increase fatigue, shorten attention span, decrease work capacity, reduce resistance to infection and impair intellectual performance. Consequently, anemic children tend to do poorly on vocabulary, reading and other tests.<sup>4</sup>

## ***School Breakfast***

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Research shows a direct relationship between a nutritious breakfast and educational achievement.

- Students who ate a school breakfast had a general increase in math grades and reading scores, increased attention, reduced nurse visits and improved behaviors.<sup>5,6</sup>
- Children who begin their school day without breakfast pay less attention in the late morning, have a negative attitude toward schoolwork, and attain less in class.<sup>7</sup>
- Participation in the School Breakfast Program was associated with greater improvements on standardized test scores and lower rates of tardiness and absenteeism.<sup>8</sup>

## ***Physical Activity***

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Studies suggest a connection between physical activity and increased levels of alertness, mental function and learning. Research indicates that:

- Schools that offer intense physical activity programs see positive effects on academic achievement, including increased concentration; improved mathematics, reading, and writing test scores; and reduced disruptive behavior, even when time for physical education classes reduces the time for academics.<sup>9,10</sup>
- Providing more opportunity for physical activity (by reducing class time) leads to increased test scores. In one program, a reduction of 240 minutes per week in class time for academics to enable increased physical activity led to higher mathematics scores.<sup>11,12,13</sup>
- Higher achievement was associated with higher levels of fitness for fifth-, seventh- and ninth-graders.<sup>14</sup>
- The relationship between academic achievement and fitness was greater in mathematics than in reading, particularly at higher fitness levels.<sup>14</sup>

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**For more information contact:**

**California Project LEAN**

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