

## Why is 30 minutes of physical activity important?

PREPARED BY JEAN BLAYDES NEUROKINESIOLOGIST/ CONSULTANT WWW.ACTIONBASEDLEARNING.COM

When humans exercise for 30 minutes, positive changes happen in the brain and body that increase student performance. Less than 30 minutes of exercise doesn't bring the same results as rapidly.

Thirty minutes of exercise has the following benefit:

- Repetitive gross motor movement strengthens secondary dendritic branching (the part of the neuron that remembers details). Daily exercise cements the details learned in the last 48 hours, making a case for daily physical activity.
- Neurogenesis: Growth of new brain cells in the hippocampus (learning and memory center of the brain)
- BDNF (brain derived neurotropic factor) causes neurons to fire more efficiently.
- Oxygen and glucose (brain fuel) get to the brain faster.
- The vestibular system is activated for better balance enabling the student to better read numbers and letters left to right on the page.
- Crossing the midline integrates and energizes the brain for better focus and retrieval of memory.
- Exercise activates brain chemicals that reduce stress and elevate self esteem.
- Basic motor skills lay the foundation for other learning. What makes us move is also what makes us think.
- The brain needs time to consolidate new information to take learning from short term to working memory to long term memory. Exercise helps anchor the new information.

The opposite of exercise, sitting in a chair, inhibits learning. When a human sits for longer than about 17 minutes, blood begins to pool in the hamstrings and calf muscles pulling needed oxygen and glucose from the brain. Melatonin kicks in because the brain thinks it's at rest because no navigation has occurred lately. The learner gets lethargic and sleepy and struggles to focus. Learning declines. Movement is the body's way of balancing itself physically, chemically, electrically and emotionally. Exercise brings the brain and body into biobalance creating a better learning state for the student.

The bottom line is that all things being equal, a healthy active student learns better. By allowing students to exercise for at least 30 minutes a day, we give students an advantage to learn. By eliminating exercise and physical activity from the school day, students are at a disadvantage for learning. Let's give our students every advantage. Texas students deserve to be healthy active learners.

