



BEWARE OF THE CHAIR

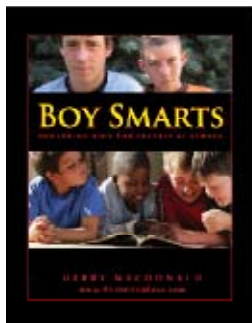
Dear Barry,

Last month's newsletter really got me thinking about the link between my son's struggle with schoolwork and his complaints about physical inactivity. Ben just hates sitting still at his desk. His previous teachers made allowances for him to get up and move around while he did his work (just as long as he didn't disrupt others), but this year is different. His Grade 5 teacher expects him to remain seated at his desk.

At a recent parent-teacher conference I highlighted the part of your recent article saying physical activity can boost a child's learning, but she dismissed it outright and honed in on having him assessed for hyperactivity. Having read your chapter on ADHD in *Boys on Target*, I knew that I needed to first understand how reasonable her expectations might be before I took him to the doctor. As I listened, I realized that she genuinely believes that all kids need to sit still to learn. She was not even slightly open to the idea that movement gets the brain in gear. "Physical activity is for gym time and recess," she said. She would not agree to let Ben stand or move about during school lessons.

Like forcing the proverbial square peg through a round hole, I worry that my son's need for physical activity is going to grow into a bigger problem for him at school. Is it necessary for kids to sit still in order to learn?

Kirsten, Calgary





Dear Kirsten,

At one time in traditional schools, teachers were rewarded for classrooms filled with the sounds of silence and stillness. Some students learned to perform the act of attention, but sitting with head bowed did not

always mean that they were learning. Now we know that learning involves the body as well as the mind, and that kinesthetic learners in particular learn best when they can use movement.

The human body is wired to learn through movement. For thousands of years our human struggle to find food demanded physical movement in order to develop the cognitive abilities needed to survive. As Ben walks, runs, climbs, hangs upside down, spins around, or stands as he shifts his weight, his sensory perceptions and critical brain pathways are being optimally engaged.

Experts believe that the more a child moves, the more the brain is stimulated. Research has shown that even the simple act of walking to school increases a child's ability to concentrate in the classroom. A recent Danish study found that children who were driven to school, or who took public transport, performed less well in a test measuring concentration levels than those who had walked or cycled. Another 2012 study published in the *Journal of Sports Sciences* titled *Childhood aerobic fitness predicts cognitive performance one year later*, discovered that physical fitness is closely connected to cognitive fitness, and that physical activity fosters "superior selective attention, inhibition of inappropriate or interfering responses, flexible thinking, and maintenance of information in working memory."

Indeed, the link between physical activity and brainpower is deeply rooted in our species' development. Research published last year in *Comprehensive Physiology*, explains how active learners are more able to allocate greater attention to their surrounding environment and are able to process information more quickly. The authors of the study *The Influence of Exercise on Cognitive Abilities* indicate: "Physical

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activity has played one of the most vital roles during biological adaptation and survival of the species through thousands of years, in a process in which the modern brain was developed." The motor operations required to look for food and protect ourselves evolved along with the part of the brain mainly responsible for memory processing—the hippocampus—which is highly influenced by physical activity.

At *Boy Smarts* workshops, while discussing some boys' heightened needs for physical activity, parents and teachers often lament that school-aged children spend as much as 6 to 8 hours per day sitting in front of an electronic screen. For better and worse, they are hyper-connected in today's wired world—and their attachment to technology is making them more sedentary. Just last week *Media Smarts* released its latest findings about the kids' attachment to their cell phones, with 25% of Grade 4 and 52% Grade 7 students having their own cell phones. The study also found, unsurprisingly, that sleep cycles are also affected, with almost 40% of students ensuring that they don't miss a text or call by sleeping with their cell phones.

Although it's easy to blame technology for making kids more sluggish, we should also recognize that the traditional practice of sitting in classrooms may also be a factor. For several years now I have been alerting school staffs to a 2007 study published in *Science* reporting that among 2,500 elementary classrooms in 1,000 schools, fifth graders spent more than 90% of their time sitting and working without movement. A more recent 2010 study published in the *British Journal of Sports Medicine* also reported that roughly 70% of class time, including physical education class, is completely sedentary. Given that our brains evolved under conditions of almost constant motion, it only makes sense that classroom learning should incorporate movement. At the very least, we should encourage standing desks, active sitting chairs/stools, and fidget-friendly classrooms.

To the best of my knowledge, there are no educational benefits to sitting at desks most of the day. It might help with school staff organizing, but there is no evidence to support that sitting at a desk benefits student learning. In fact, it is associated with a host of problems.



Beware of the chair

Last fall media headlines blared, *Sitting is sending us to the grave early*, and prompted many readers to consider how sitting may be just as harmful as smoking. The dramatic claim was backed up by the latest 12-year study of 17,000 Canadian adults indicating that among those of us who sit for 6 or more hours per day 40% are more likely to die within 15 years compared to those who sit less than 3 hours per day.

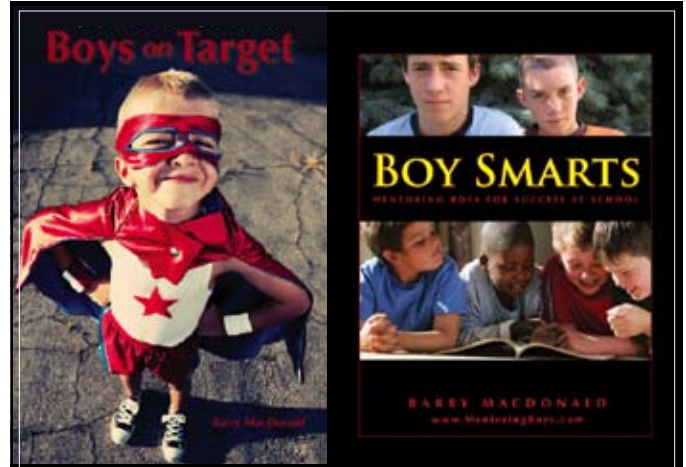
Experts indicate that when we are sitting, the bigger muscles in the lower half of the body stop working. This inactivity sends a signal to the brain to slow down electrical activity and metabolism. These changes also trigger an increase in blood sugar levels, and a 90% decrease in the amount of stored fat that's used as fuel. Consistently, researchers suggest that there is no reason to sit for most of the activities we habitually sit for. Instead we can arrange to stand at our workplaces and in our classrooms, or at least take frequent movement breaks. Instead of expecting boys to sit quietly for extended periods of time, we ought to help them to manage their need for physical expression and movement.

Move it to learn it

Recently, I was invited to be the keynote speaker on the topic of boys and movement at a national primary care physician's conference held in Vancouver. There I had the pleasure of also hearing and speaking with Dr. Adel Diamond (she heads up the Division of Developmental Cognitive Neuroscience in the Department of Psychiatry at UBC). Speaking about *Executive Functions*, she alerted physicians to the misuse of ADHD medication to regulate thinking and emotions. She stressed the importance of physical activity and its relationship to learning.

As we collectively challenge the expectation that children sit still in schools, appreciating how physical movement helps children to process and store information, it is my hope that children like Ben will find relief. Our bodies were not made to sit in chairs all day. Even those children who are currently sitting passively, hunched over a computer screen or textbook, will be enlivened by the physical movement that improves blood flow and gets more oxygen to the brain. Just as some cubicles of the old office environments are being reconfigured as flexible 21st century workplaces, the 21st century classroom can be a vibrant place where spontaneity, movement, and collaboration happen naturally. •••

Barry MacDonald
MentoringBoys.com



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The challenges associated with being male vary in each community. I welcome the opportunity to work with your parents and teachers to strengthen how we collectively support boys. For details contact info@mentoringboys.com.



Soon this newsletter will ONLY be distributed on social media.



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The intention of MentoringBoys.com is to encourage a positive focus on boys' strengths and their varied needs in our homes, schools and communities.

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Upcoming events:

NELSON

FEBRUARY 6 (7PM-8:30PM)

L.V. ROGERS SECONDARY

TALK: PARENTING BOYS!

FOR DETAILS EMAIL: HSC@SD8.BC.CA

KELOWNA

FEBRUARY 20 (7PM-8:30PM)

KELOWNA COMMUNITY THEATRE

TALK: PARENTING BOYS!

TICKETS AT: WWW.SD23.BC.CA

ST. ALBERT

MARCH 8 (9AM-1PM)

LEO NICKERSON ELEMENTARY

WORKSHOP: BOY SMARTS ACTION TALK -
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REGISTER AT: MENTORINGBOYS.COM

CALGARY

MARCH 15 (9AM-1PM)

ALL BOYS PROGRAM SCHOOL

WORKSHOP: BOY SMARTS ACTION TALK -
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