

# Achieving Peak Performance Through Physical Fitness and Sleep Habits

*By Shane Lakins with contributions from Fit to Lead team members Ryan Stoness, Faizan Imtiaz, and Jessica Roberts at Smith School of Business*

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## The Author

Shane Lakins is a coach with the Fit to Lead Programs at Smith School of Business. He is an expert in fitness and wellness coaching, inspiring individuals to reach their health and wellness potential. He has coached high-performance athletes as Canada's cross-country head coach at several world championships and his experience as an owner of a multidisciplinary rehabilitation centre and a presenter on wellness topics give him a unique ability to communicate and work with all levels of participants in the area of human performance.

Good physical fitness not only improves energy levels, increases the ability to concentrate, and helps to provide sharper focus, but it can also contribute to a longer and happier life. The Fit to Lead program at Smith School of Business has identified three key areas related to physical fitness that will help you work towards your peak performance: move more often; fitness for anyone, anywhere, at anytime; and good sleep habits.

## Move More Often

### *Research*

Two things all human beings strive for regardless of culture or background are longevity and happiness. Simply put, we all want to live longer and happier lives. Cross-cultural research has shown that these two goals may not be as difficult to achieve as once thought.

The Blue Zone study (Buettner, 2012) looked at specific communities across the globe with a higher percentage of individuals living longer than average life spans. It found a number of commonalities between these communities and the first among them was that the people who lived there *moved naturally*. People in these communities were found to be adding regular daily movement into their lives in a variety of ways, from gathering daily for social conversations to working to produce food for a family gathering.

While movement is good for you, lack of movement has the opposite effect. The health risks of sitting for eight hours a day are equal to not getting the recommended 150 minutes of physical activity (Gilson, Burton, Van Uffelen, & Brown, 2011).

Despite these alarming findings, sedentary behaviour is on the rise. An average adult watches approximately 35 hours of TV each week. Each day, adults spend on average 20 minutes watching online videos, four minutes watching mobile videos, and four hours on the Internet. If we include sleeping time, adults spend approximately 75 percent of their day sedentary.

### *Relevance*

Increased sedentary behaviour reduces productivity in the workplace by increasing absenteeism due to sick days and injuries. Moreover, even when employees are present, they lack concentration and focus as a result of their

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*Studies show that our genetic make-up dictates only 25 percent of how long we live. Lifestyle choices are the dominant factors*

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sedentary behaviour (Gilson, Burton, Van Uffelen, & Brown, 2011). Therefore, incorporating more movement into your life is not only beneficial for your overall health and wellness, but it is also imperative for performing at your peak each day.

### **Strategies**

A few simple strategies will help you move more often:

- Get up and walk for one minute every half hour or four minutes every hour. You can do this with a partner in the office to help you remember to do it and give each other encouragement. You can also use this time to deliver messages or files to colleagues to avoid loss of time.
- Hold walking meetings instead of sitting in a room.
- Incorporate static stretching in the office at least once daily in order to improve musculoskeletal health.
- Take phone calls standing up and walking.
- Walk or ride a bike to work, if possible.
- Take the stairs instead of the elevator or escalator.
- Find an active hobby that does not include screen time. This doesn't have to be a high-intensity activity.
- Do chores around the house that get you moving, such as vacuuming, sweeping, mopping, or gardening.

### **Fitness Anyone, Anywhere, at Anytime**

#### **Research**

The idea that staying fit has to involve strict routines at a gym for extended periods of time is misleading. There is a huge difference between training to be a high-performance athlete and training to maximize energy, focus, and concentration. Fitness doesn't have to be all consuming. Fitness is for anyone, anywhere and at anytime:

- *Anyone:* One of the best indicators for lifelong health and wellness is childhood fitness. Children who are physically fit and active are more likely to be able to maintain a healthy lifestyle when they reach adulthood and beyond (Haywood & Getchell, 2008). Likewise, a healthy active lifestyle is associated with maintaining cognitive functioning and less muscular degeneration in older adults (Barnes, Yaffe, Satariano, & Tager, 2003). Fitness should be an integral component of everyone's life regardless of age, gender, or ability.

- *Anywhere:* The adage that you need to go to the gym in order to get a good workout is simply no longer the case. You can easily get a complete workout without leaving the comfort of your home. As a matter of fact, research has shown that home-based exercise programs can actually be superior in exercise participation, adherence, and results, compared to other regimens (Perri, Martin, Leermakers, Sears, & Notelovitz, 1997). There are hundreds of exercises that do not require any equipment or resources, including push-ups, body squats, mountain climbers, burpees, plank, ice skaters, and jump squats. Minimal resources such as exercise bands

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*Physical activity does not undo the risks associated with increased sedentary behaviour*

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can also be used to get a great workout at home and while you travel. Other resources such as foam rollers and stability balls can also come in a variety of sizes that are conducive for travel.

- *Anytime*: One of the best ways to get an efficient workout is through high-intensity interval training. The Tabata protocol is an example of a high-intensity interval training regimen that is extremely efficient yet effective at producing fitness results. A scientific study showed elite athletes doing four minutes of the Tabata workout increased their anaerobic capacity by 28 percent, while also seeing significant gains in their aerobic capacity (Tabata et al., 1996).

#### **Relevance**

Not only is lack of fitness associated with numerous health risks, including cardiovascular diseases, stroke, diabetes, colon and breast cancer, depression, hypertension, and metabolic syndrome (Pronk & Kottke, 2009), it is also one of the leading predictors of poor workplace productivity (Blackford, Jancey, Howat, Ledger & Lee, 2013).

Programs aimed at increasing employee fitness can make a difference. They have been linked to increased work attendance and greater work satisfaction, while also decreasing healthcare utilization and employee stress (Conn, Hafdahl, Cooper, Brown, & Lusk, 2009).

#### **Strategies**

The Tabata protocol can involve both cardio and strength training, depending on the exercises you choose, and can be as long or as short as you want. A set consists of 20 seconds of intense exercise with a 10-second recovery period in four minute rounds. After every four minute round, there is a one-minute rest period. Here is an example of a 20-minute workout in the Tabata style, where each activity should be done for 20 seconds with a 10-second rest between activities (in total, eight exercises will be done in pairs):

- Tabata One (lower body): squats, high knees, static lunge (right leg), high knees, static lunge (left leg), skier jumps, sumo squats, skier jumps.
- Tabata Two (upper body): push-ups, plank rotation twist, side plank with hip dips (right side), plank rotation twist, side plank with hip dips (left side), mountain climbers, superman, mountain climbers.
- Tabata Three (abs and core): crunches, plank, bicycle crunches, plank with knee tucks, reverse abs, planks with crisscross, leg lifts, up-down plank.
- Tabata Four: Choose your favourite exercises to finish your workout.

#### **Good Sleep Habits**

##### **Research**

According to the National Sleep Foundation, almost 70 percent of us get fewer than eight hours sleep a night. We continue to live by a remarkably durable myth: sleeping one hour less will give us one more hour of

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productivity. In reality, the research suggests that even small amounts of sleep deprivation take a significant toll on our health, mood, cognitive capacity, and productivity. Many of the effects we suffer are invisible. Insufficient sleep, for example, impairs our ability to consolidate and stabilize learning that occurs during waking hours. In other words, it wreaks havoc on our memory.

Ability to maintain peak cognitive performance depends on the total amount of sleep you get over several days. If you get eight hours each night, your cognitive level will be stable. But if you have a sleep disorder or get fewer than eight hours over a few days, you build up a sleep deficit and that's hard for the brain to function. Eventually, reaction time is longer, judgment is impaired, and problem-solving abilities diminish.

#### **Relevance**

As one of the world's leading authorities on human sleep cycles and the biology of sleep and wakefulness, American researcher Dr. Charles Czeisler understands the physiological bases of the sleep imperative better than almost anyone. He says sleep deficit is a performance killer. His message to corporate leaders is simple: If you want to raise performance, both your own and your organization's, pay attention to this fundamental biological issue. Sleep deprivation causes efficiency at work to suffer substantially, contributes to presenteeism and absenteeism, and increases risk for occupational accidents.

#### **Strategies**

It is often difficult to change the exact amount of sleep that you get. You can utilize tactics, however, to change the quality of sleep you get and improve your rest and recovery:

- **Pre-sleep routine:** Progressive muscle relaxation and deep breathing techniques have been scientifically proven to reduce physiological arousal (Benson & Klipper, 1976). You may not be able to force yourself to go to sleep, but you can force yourself to become a little bit more relaxed, which in turn drastically increases your chances of falling asleep
- **Environment:** Making your bedroom a haven for sleep is one of the best and most effective ways to improve your sleep. A dark room that is cool in overall temperature, and free of technology and light, can significantly improve your ability to fall and stay asleep (Kay et al., 2012).
- **External factors:** Along with a pre-sleep routine and the environment, external factors such as nutrition and physical activity can also impact your sleep:
  - Eating a healthy diet and getting regular physical exercise can both contribute towards improvements in quality and quantity of sleep.
  - Stay away from big meals at night. Try to make dinnertime earlier in the evening, and avoid heavy, rich foods within two hours of bed. Fatty foods take a lot of work for your stomach to digest and may keep you awake. Be cautious

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*Caffeine can cause sleep problems up to 10 to 12 hours after it's consumed*

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- when it comes to spicy or acidic foods in the evening, as they can cause stomach trouble and heartburn.
- Avoid alcohol before bed. Many people think that a nightcap before bed will help them sleep, but it's counterintuitive. While it may make you fall asleep faster, alcohol reduces your sleep quality, waking you up later in the night. To avoid this effect, stay away from alcohol in the hours before bed.
- Cut down on caffeine. You might be surprised to know that caffeine can cause sleep problems up to 10 to 12 hours after it's consumed. Consider eliminating caffeine after lunch or cutting back your overall intake.
- Avoid drinking too many liquids in the evening. Drinking lots of water, juice, tea, or other fluids may result in frequent bathroom trips throughout the night.
- Quit smoking. Smoking causes sleep troubles in numerous ways. Nicotine is a stimulant, which disrupts sleep. Plus, smokers experience nicotine withdrawal as the night progresses, making it hard to sleep.

*Further Reading*

Buettner, D. (2012). *The Blue Zones: 9 Lessons for Living Longer from the People Who've Lived the Longest*. National Geographic Books.

Benson, H., & Klipper, M. Z. (1976). *The relaxation response*. New York: Avon.

*The Fit to Lead Program at Smith School of Business provides strategies and insights on how to better manage energy, improve focus, and manage and utilize stress to help achieve healthy, balanced, and productive lifestyles. The Fit to Lead team provides services to the MBA and Executive Education programs at Smith School of Business and works with individual or group clients to develop custom solutions for their personal or organizational needs. For more information, contact Ryan Stoness, Manager of the Fit to Lead program at [rstoness@queensu.ca](mailto:rstoness@queensu.ca).*

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