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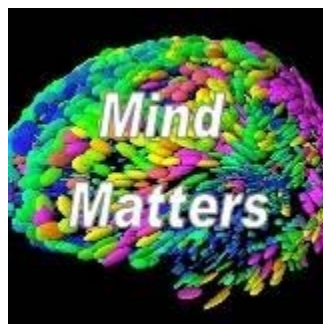
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Mind Matters: Get Moving

Irene S. Levine
United States
25 July 2008

Like many high achievers, science trainees (and their mentors) walk a tightrope, deftly balancing too much work, too few resources, and too few hours in the day. This sets the stage for chronic stress, which may cause a number of health problems, including muscle aches, digestive problems, and heart disease. Excessive stress on the job also has psychological costs; in the long term, it may lead to anxiety and depression, and on a day-to-day basis, it negatively affects thinking, emotions, and judgment, impairing an individual's ability to work at his or her personal best. According to the nonprofit [American Institute of Stress](#), the health and lost productivity costs due to stress, across all sectors, exceed \$300 billion annually.

One way to release some of that stress is to put on your athletic shoes. A [research report](#) from the University of Waterloo confirms that physical activity has a buffering effect on stress levels that can positively influence your physical and emotional well-being. "Regular exercise is one of the best ways I know of reducing stress," says Darren Saunders, a [Cancer Institute New South Wales Fellow](#) at the [University of British Columbia \(UBC\)](#) in Vancouver, Canada. "It can be

really hard after a long, stressful day to get up and do some kind of physical activity, but I find I actually feel more tired and more stressed if I'm not doing any. Apart from relieving stress, exercise really helps me focus and think clearly by taking my mind off my work for an hour or so," he adds.

Saunders isn't alone. Scientists who build regular exercise into their daily routines report that it makes them feel better, gives them more energy, boosts their productivity at work, clears their minds, and helps them cope and communicate better. Excuses--even reasons--for not exercising are easy to come by. It can be hard to find time, and it can be tough to make a sedentary supervisor into a believer in "time off" for exercise. Yet many scientists find ways to make it happen.

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Whether you work in an academic institution, a government setting, or a private company, your bosses may realize already that exercise programs often benefit everyone in the workplace. The opulent new [recreation facility at Ohio State University](#), built at a cost of about \$140 million, includes aquatic facilities, a climbing center, personal training, massage for hire, and a wellness suite. Adam Rich, an assistant professor of biological sciences at [The College at Brockport](#), State University of New York, gets to the fitness center on his campus at 7 a.m. each morning to lift weights for 40 minutes. He swims two evenings a week and often squeezes exercise into the middle of his day when he can't keep to his regular swim schedule because of family responsibilities. "But I find that waiting until afternoon is always a risk since work tasks take over," he says. Rich reaps enough benefits to keep up the momentum. "Stress is definitely reduced," he says. "I can think more clearly, and I am calmer speaking with colleagues and students."

Saunders also takes advantage of his institution's facilities. "I was lucky to work in an institute that had a staff gym onsite." In winter, "a good way of breaking up a long day was to fit in a quick session in the gym in between incubations. We also organized a regular game of soft touch football or soccer among staff/students during lunch hour one day a week," he says.

Find out more about the exercise options (if any) offered by your university or employer and try to make exercise a normal part of your workday routine. If you need to take some time off during the day, discuss it with your supervisor. One hopes that she'll recognize that the advantages are likely to outweigh the lost time.

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SOME TIPS TO ELIMINATE ALL THE EXCUSES THAT GET IN YOUR WAY!

No place to do it? Find out whether facilities are available on your campus or whether there are clubs you can join in the neighborhood.

Tyrannical supervisor? Present the rationale to your PI that exercise reduces stress and thus improves performance. (Forward this article to him or her if you're having a tough time!)

No motivation? Choose an activity that makes you smile. Perhaps you don't like lifting weights. Would yoga, Pilates, or dance be more fun? Perhaps you don't like to do it alone. Find an exercise buddy and motivate one other.

No time? Slight changes in the way you organize your day can provide time for new things. Try to find a time for exercise that you can work into your day on a regular basis, though it doesn't have to always be the same time. If you stress about wasting time while exercising, think of it as an investment in increasing your efficiency.

Balancing other constraints. If you are already stressed by your home obligations by the time you get to the office, a morning workout may be what you need. If you fall into a slump after lunch, afternoon may be a good time to jump-start your body and your mind with a time out for exercise.

Running out of excuses? You have the most supportive supervisor in the world, but you simply can't convince yourself? Just do it for a month. You'll get hooked by the endorphin rush and feel healthier, happier, and more productive at home and at work.

PLAN B

If you're working at a less enlightened establishment, you have two, nonexclusive options: change the culture and adapt.

Many early-career scientists have ambitious supervisors who run tight ships, and everyone is expected to be on deck all day. One principal investigator (PI) in my institution is annoyed when someone leaves the premises for lunch. If your supervisor has a similar attitude, you need to make the case that a brief respite to recharge your batteries will benefit both you and the laboratory. "I've found that if I exercise regularly, I'm clearer-headed, more creative and productive, and make fewer stupid errors," you might say. "If I can take a few extra minutes at lunch to squeeze in a run, an aerobics class, or a weight-lifting routine, I guarantee you that my

work will improve. And I'll make up any lost time by working at home"--reading journal articles and such--"after the children go to bed." Maybe your supervisor just hasn't thought of it that way.

If you can't convince your supervisor, you may have to work around him. One approach is to get exercise from your commute.

Cyclers

Erik Barton, an assistant professor of biological sciences at [Purdue University](#) in West Lafayette, Indiana, regularly bikes to work. "As far as stress goes, yes, I think it helps reduce it," Barton says. "Most of the reduction is simply because I feel good about doing something I know is good for my body, and the ride home in the evening does help me dissipate any work-related issues from my mind so I can be more attentive to my family."

There may be some other added benefits. As a doctoral student at [McGill University](#) in Montreal, Canada, Patrick Cafferty (who has since moved on to a postdoc in zoology at UBC) founded, coached, and competed on a [varsity cycling team](#). "Through that avenue, I met both students and faculty in [other] departments whom I never would have otherwise had the opportunity to meet," Cafferty says. Whenever he needs to troubleshoot a protocol, he routinely turns to his cycling team for help. In addition, Cafferty says, "I developed lifelong friendships with my teammates, and to this day, I have a lengthy list of people to call after a tough day in the lab. ... The social benefit gained through the sport has kept stress in my life to a minimum."



Walkers and runners

While he was a postdoc in chemistry and earth and ocean sciences at UBC, Rob Keyzers tried to run home from work two or three times a week. "I lived in Point Grey and formulated a 7.5-kilometer-or-so run through the endowment land forests to get home, which took about 45 minutes," Keyzers says. "This was a great way to relieve stress, but it also provided a good opportunity for downtime to focus on work, think of experiments, and plan research as well as writing papers and research proposals," he says.

If you aren't a runner, just 30 minutes of brisk walking each day can be effective in lowering blood pressure, [Andrew Scott](#) reported at the annual meeting of the [American College of Sports Medicine](#) held in Indianapolis, Indiana, this past May. If you are crunched for time, you can derive the same health benefits from breaking up the half-hour into three 10-minute sessions.

DIFFERENT STROKES

"It's not easy after a long day in the lab to make the time or to get up the motivation to leave the comfort of the sofa and a *Family Guy* DVD to head to the gym," says Brenton Short, a postdoc at the Biomedical Research Centre at UBC. "Inertia suggests that a body at rest will stay at rest, and unless you push yourself, it won't happen." Short boosts himself off the sofa and heads to the gym three or four nights a week for "a punishing lifting regime."

In a tight labor market with accelerating demands, workplace stress is unavoidable. That's all the more reason to stay active, whatever path you choose.

Recommended resources

- [Stress Management: Techniques for preventing and easing stress](#). A special health report from the Harvard Medical School, 2008
- [Exercise: A Program You Can Live With](#). A special health report from Harvard Health Publications

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