

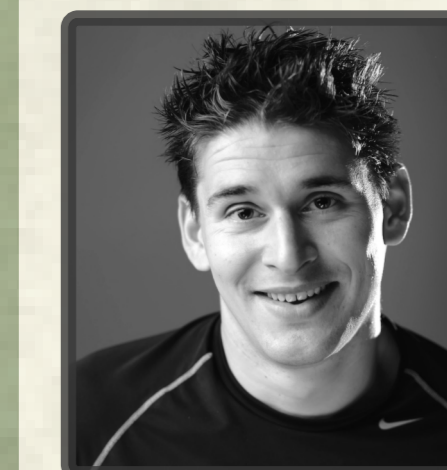
BIOHACKING THE HAZARDS OF SITTING

A presentation by Ben Greenfield

IT IS NO SECRET that sitting is the new smoking, and you've no doubt heard of the emerging science showing the dangers of sitting all day, along with the health benefits of increasing the amount of time you spend standing or walking on a daily basis. But this isn't just about burning more calories or fat loss. Research has proven that excessive sitting is also linked to all sorts of other health problems including breast cancer, prostate cancer, cardiovascular disease, diabetes, hypertension, and depression - even if you vigorously exercise after spending an 8-hour work day in your chair.

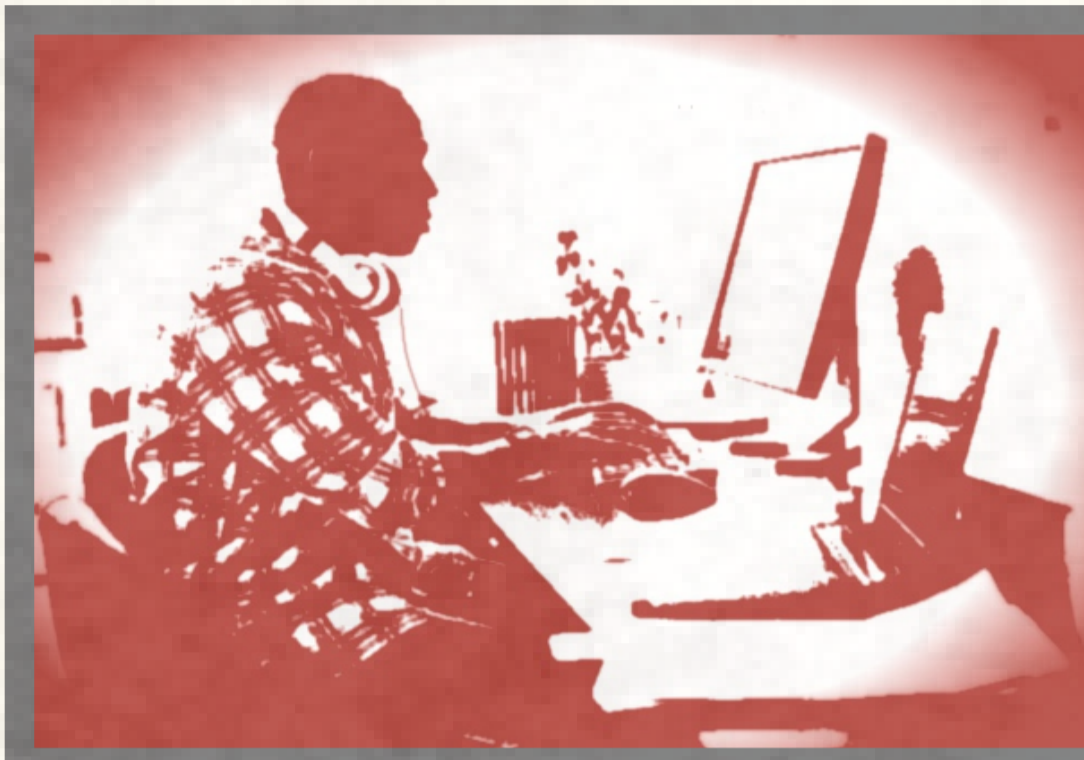
A review of 43 studies published in June of 2014 found that the amount of time you spend sitting increases your chance of colon, endometrial, and lung cancers, with the conclusion that for each hour you spend sitting, your life expectancy is reduced by about 21.8 minutes, regardless of exercise and diet ¹.

SO HOW CAN SITTING BE SO HARMFUL, AND WHAT CAN YOU DO ABOUT IT? YOU'RE ABOUT TO FIND OUT.

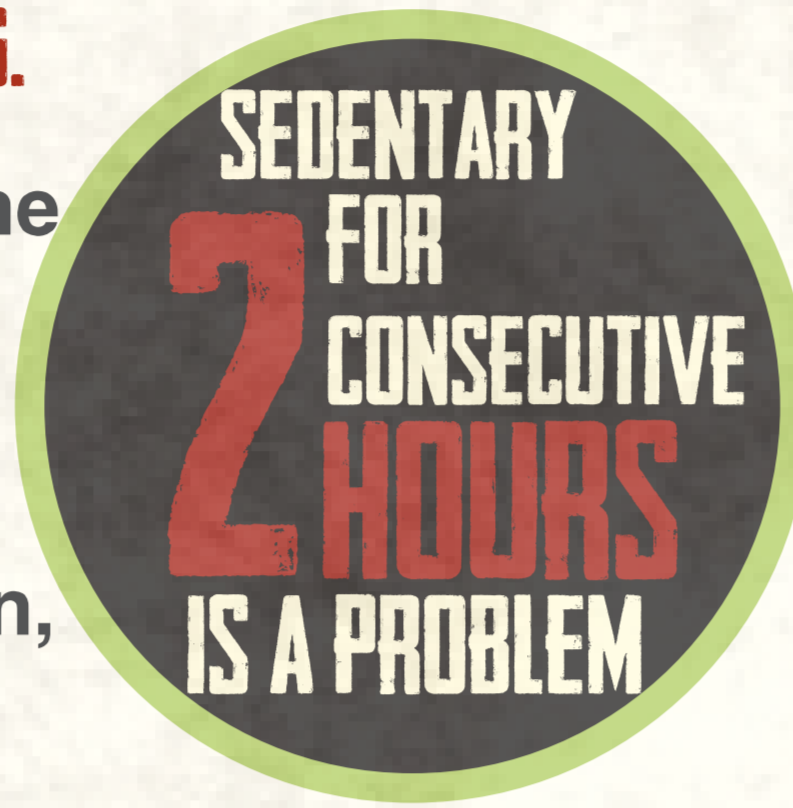


BEN GREENFIELD

is an ex-bodybuilder, Ironman triathlete, Spartan racer, coach, speaker and author of the New York Times Bestseller "Beyond Training: Mastering Endurance, Health and Life" available at BeyondTrainingBook.com. In 2008, Ben was voted as NSCA's Personal Trainer of the year and in 2013 was named by Greatist as one of the top 100 Most Influential People In Health And Fitness. Ben blogs and podcasts at BenGreenfieldFitness.com, and resides in Spokane, WA with his wife and twin boys.



YOUR JOB SHOULD CONTRIBUTE, NOT DETRACT FROM YOUR WELL-BEING. one of the quickest ways you can make your time at work more healthful is by spending as much time as you can standing at your desk or workspace. Recent studies have shown that many people spend as much as 12 hours a day sitting. If you add the amount of time you spend sleeping to your commute, desk work, meals, and relaxation, you very well may be spending as much as 20 hours a day sedentary, even if you exercise regularly.



Sitting for prolonged periods of time has been firmly linked to raised blood glucose levels and damages enzyme processes that break down fats necessary for fuelling muscles. Studies show that the average heart rate while standing at your desk is up to 10 beats per minutes higher than those who sit. This can potentially cause you to burn calories at an increased pace, up to 50 more per hour.



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BIOHACKING HARDWARE



FOOTWEAR

When you stand, make sure that you have good balanced support underneath you. The best foundations you can lay for your ergonomic health are minimalist shoes, barefoot shoes, or no shoes at all. If you're going to be at your desk for any significant amount of time, switch out of your pumps into something that is going to give you proper support and balance.

LEANING STOOL

Don't submit to the traditional back-breaking desk chair! If you need to rest from standing but still want to gain the health benefits from staying out of a chair, invest in a leaning stool (also called a Kickstand Stool). Leaning, rather than sitting, can create equilibrium between your back and abdominal muscles that sitting simply can't match. As is the rule with standing, don't slouch when using this, as the ergonomic benefits then go to waste.

EXERCISE BALL

Want to save your back while strengthening your abs? Spend \$20 on an exercise ball to take the strain off your back and feet and engage your abdominals to stabilize and balance yourself while working at your desk. Again, poor posture negates many of these benefits, so condition yourself to maintain your good form throughout the workday.

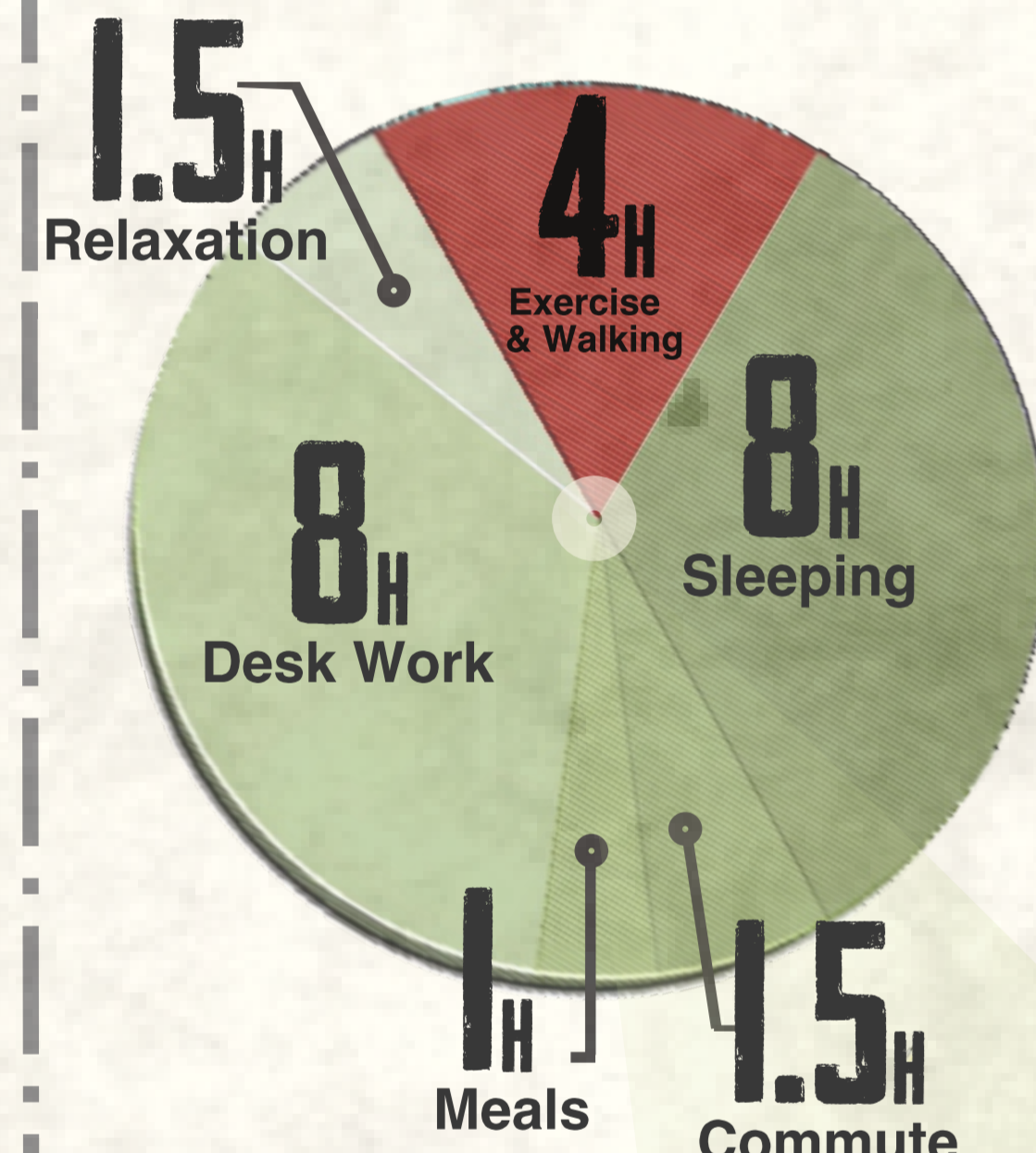
UP-DESKS AND DESK TREADMILLS

Believe it or not your boss doesn't want you to die a slow and painful death. More likely he or she actually wants you healthy and productive. Many companies are beginning to see the value of standing desks and tread-desks and might even spring for one (or many) for your office. If there aren't already tread-desks at your office, ask!

COMPRESSION + INVERSION

Use compression gear to keep the blood from pooling in your feet and use an inversion table or yoga inversion poses to "drain legs" after a day of working, flying, driving, etc.

TIME SPENT SEDENTARY DURING THE AVERAGE WORK DAY



INCORPORATING MOVEMENT: HOW TO BIOHACK EFFECTIVELY (AND NOT LOOK LIKE A CRAZY PERSON)

Let's be honest, doing inverted sit-ups by the water fountain just might damage your shot at getting that promotion, and it will certainly cut into your productivity. These are some simple ways to incorporate motion even into your daily routine even in the most buttoned down office space.

STAND DURING PHONE CALLS

Commit to standing whenever you answer the phone. There is no reason to stay tied to your desk when answering a mobile phone. Get up. Pace your office. Take your phone to the stairwell. Do Standing Calf Raises. Find a way to capitalize on the little moments that allow you to break away from your computer or television. At least stand by your desk to make all that you can out of your time on the phone. The same goes for commercial breaks on television or screen loads when you're gaming. It's an opportunity—take it!

MAKE TIME TO WALK DURING YOUR LUNCH BREAK

There are few things as soul-crushing than sitting under fluorescent lights in front of a computer screen for 8 hours uninterrupted. Don't eat at your desk. Get outside, stretch your legs and move during your lunch break. Cardio will release endorphins to help you power through the afternoon slump.

MAINTAIN GOOD POSTURE WHILE STANDING

Make the most of your standing time. Don't minimize your ergonomic effectiveness with bad posture. Keeping a neutral spine and engaged core is key for unlocking the full potential of standing at work. If you slouch when you stand, you are defeating the entire purpose of staying out of your chair.

GET YOUR EYES CHECKED

Poor vision is one of the top contributors to bad posture. Difficulty in viewing your screen can cause you to crane your neck, sit too close to the screen, and ultimately damage your vision more. Make sure that your eyes are in great shape and your body will follow.

BUY A BALL TO INCORPORATE INTO YOUR STRETCHING SESSIONS

A lacrosse ball or massage ball kept in your desk drawer becomes a great asset for targeting tight areas (Adductors, Hamstrings...you name it). Of course you should always research proper form and technique before trying a new stretching element, so take advantage of the countless resources available online to fine tune your use of this simple yet versatile tool.

STANDING IS NOT THE END-ALL SOLUTION;

instead, your goal should be to avoid staying locked into one position for too long. Being static is not a huge improvement on being sedentary. A continual position, regardless of which position that is, can cause your muscles and tendons to tighten and become rigid. Rotating through a variety of positions throughout your day is a great way to keep your blood oxygen moving and to avoid the inevitable slouching that comes with tight tendons and ligaments. Try working through a cycle of standing, lunging, sitting, and leaning throughout your day—some people even include a deep squat. Create a "mental playlist" of different positions and hit shuffle. There are always new posture opportunities to explore.

Be aware of your own physical limitations. Don't overdo it on your first day of using these strategies—instead, build up to longer times spent out of your chair. Starting everything all at once is a good way to make yourself sore or convince yourself that biohacking the hazards of sitting just isn't for you. The benefits of alternative workspace positions and routines are very real.

MOVING IS IMPORTANT

- Go through your major muscle groups methodically and make sure each zone gets properly stretched. Educate yourself on stretching techniques and strategies before going for the all-out yoga master moves. You can easily find simple office oriented stretches that are popular and easy to do.



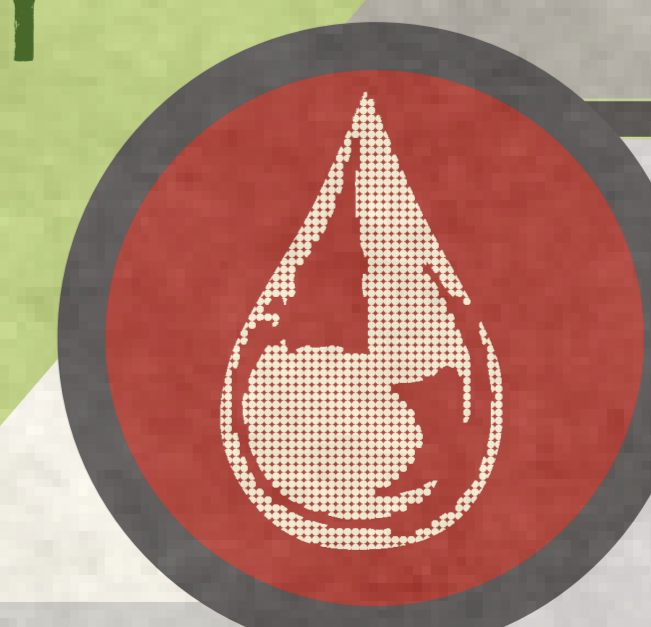
- Your office chair can actually be a very helpful aid for stretching. Beginning your routine with little stretches while seated can help the tighter muscles in your neck and shoulders wake up before full body stretches. Once you have gotten up to stretch your legs, arms, and back, your chair (or desk) can be a helpful prop once again.



- Stretching the anterior hip area addresses short, tight hip flexors that are the result of sitting day after day. Opening up your hip flexors can help alleviate and prevent lower back pain, and improve your overall mobility.



CHECK OUT SOME OF THESE GREAT BIOHACKING TECHNOLOGIES FOR IMPROVING YOUR DAILY ROUTINE



¹ http://nci.oxfordjournals.org/content/106/7/dju098.full?_ga=1.42982689.527235840.1397574100