

# TECH STRESS

## THE CAVEMAN AT THE COMPUTER

**Our genes today are those of our hunter-gatherer forebears—we're evolutionarily mismatched. Our tech has evolved faster than our genes can keep up with, which puts us at risk for Tech Stress.**

We began our research in 1996. The Human Genome Project was completed in 2003, cracking the code on human genetics. Given what we know today about our genes, it's clear that **we need to evolve a healthier workstyle.**

Although our environment is changing at warp speed, our genetics have scarcely changed over the past half million years. Computers and similar technologies became an integral aspect of our workstyle fewer than forty years ago. The first smartphone—the iPhone—was just introduced in 2004.

Yet according to the Human Genome Project, we're still genetically wired like our ancestors: **we're better suited for hunting and gathering than typing and clicking.** Today we sit for hours at keyboards and spend hours on the phone, texting, pecking away, and moving just the muscles of our fingers instead of walking, climbing, reaching, digging, pounding, lifting, pushing, pulling, running, or swimming.

**Today most of us spend more time with our phone and our computer than we do with our life partner or our best friend.** We take our electronics with us everywhere, use them anytime, and typically can't engage in work, play, shopping, or communication without them.

We're primed and ready to adopt the next-new-thing to do more, faster, and better than last year's tech—and we put up with all kinds of aches and pains without giving them a second thought. Using the latest gadgets, many of us become stoic sufferers, sore and tired. **Four of the top health complaints people take to their family doctors—fatigue, tension headaches, back pain, and repetitive strain—can be caused by long hours on the phone or at the computer.**

Even our eye muscles are out of shape! Instead of scanning the horizon for dangerous animals or searching for food, we stare at a screen for hours on end. Our bodies are built to move, so the modern workstyle is vastly out of sync with our genes. As a result, many of us pay the price with anxiety, depression, insomnia, or chronic pain. In parts of the world where tech is prevalent, children now develop nearsightedness at a young age and often need to wear glasses. For context, nearsightedness is a condition that typically develops after age forty. **We're not designed to be glued to screens morning, noon, and night, nor are we designed to text while we eat. We need to adapt—to develop new skills so we can survive the limits of our technology, our workplace, and lifestyle.**

## THE MISSING MANUAL FOR THE HUMAN FRAME

While every computer comes with volumes of detailed instructions on how to use its hardware and software, almost nothing is mentioned about how to develop a healthy, productive, and creative work environment. *Tech Stress* offers strategies to:

- Break up with your phone (at least for a few hours).
- Prevent tech-related headaches and neck pain.
- Ease out of a tech-obsessed lifestyle and into a newer, healthier one.
- Take better, more frequent breaks (and convince your boss why breaks benefit everyone).
- Get better, deeper, more restorative sleep.

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## HOW TO CREATE A DYNAMIC WORKSTYLE

Chronic sitting is the opposite of the evolutionary pattern of our ancestors, who alternated periods of rest with frequent movement while hunting or gathering. Maintaining static posture at a desk for hours on end without getting up and moving around can result in fatigue, muscle tension, back strain, and poor circulation, putting us at risk of injury. Today, the average Westerner spends more than nine hours a day sitting.

### The Effects

A surprising number of risky health problems result from too much sitting: it's been linked to increased risk for osteoporosis, cancer, type 2 diabetes, and a range of other major health issues like back pain, heart disease, and immune dysfunction.

## BIG-PICTURE STRATEGIES FOR DYNAMIC LIVING:

### Alternate periods of activity and rest

- Performing alternative tasks or different types of activities and movement is one way to interrupt the couch potato syndrome. Our research has confirmed what others have observed: that it's important to be physically active, at least periodically, throughout the day. Alternating activity and rest recreates the pattern of our ancestors' daily lives. When we alternate sedentary tasks with physical activity and follow work with relaxation, we function much more efficiently. In short, move your body more.

### Vary the tasks you do at work and at home

- Alternating time at the computer with opportunities to move or be active is central to your ability to pace yourself. When you change to a different type of task or movement, you use a different set of muscles, which interrupts muscle fiber contractions and allows them to rest. Try interrupting your typing by getting up and filling the paper in the printer, or make a telephone call while standing. Periodically allow your shoulders, arms, wrists, and hands to relax.

### Exercise every day

- Studies show that you get more benefit from exercising ten to twenty minutes three times a day than from exercising for thirty to sixty minutes once a day. The implication is that doing physical activities for even a few minutes can make a big difference. Researchers have found that standing up three times an hour and then walking for just two minutes can reduce blood sugar and insulin spikes by 25 percent.

### Regenerating at some point daily

- When performing mechanical tasks, muscle fiber units within the larger muscles tighten in a cascading sequence. The first units within the muscle to contract are typically the last to relax. When we don't relax all of the muscles fully, the part of the muscle that was first contracted may remain contracted. The key is to relax all the muscle fibers. Two strategies for achieving this include (1) alternating tasks when we're working, and (2) setting time aside each day to fully relax.

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## SITTING ALL DAY IS AN EVOLUTIONARY TRAP.

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## HOW TO CREATE A DYNAMIC WORKSTYLE

1. Alternate periods of activity and rest
2. Vary the tasks you do at work and at home
3. Exercise every day
4. Regenerate at some point daily

## WHAT YOU CAN DO

**Here are a few pragmatic strategies you can incorporate into your workstyle:**

- **Set up your office so you can stay active:** Make some of your phone calls standing up. Put the printer in another room or away from your desk, requiring you to get up to retrieve printouts. Place files you need frequently away from your desk so that you have to stand up to get them. Install a sit-stand desk and alternate standing and sitting some of the day.
- **Take microbreaks:** Pause as you work to take microbreaks (brief breaks of fewer than thirty seconds). For frequent microbreaks, you don't even need to get up—just drop your hands in your lap or shake them out, move your shoulders, and then resume work. Any type of shaking or wiggling movement is good for your circulation and kind of fun.
- **Pace yourself:** Leave your desk periodically. Walk around. Get up for a cup of tea. Pick up the mail. Run your own errands to keep your circulation up. If you're going between floors, take the stairs whenever possible. At lunch, develop the habit of a brisk walk (even ten minutes can make a difference).
- **At meetings, literally think on your feet:** hold meetings standing up.

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## THE POWER OF MICRO- AND MINIBREAKS

*Most of us find ourselves working indoors, often sitting at a computer for hours at a time. Yet we're genetically programmed to be physically active and outside in the sunlight most of the day, like our nomadic hunter and gatherer ancestors. One way to combat the effects of a sedentary workday is to take frequent short breaks. Breaks come in different sizes and are useful in different ways, and you can build a variety of breaks into your workday. Here are two break programs:*

### Brief, one-second microbreaks

A microbreak means taking brief periods of time that last just a few seconds to relax the tension in your wrists, shoulders, and neck. For example, when typing, simply letting your wrists drop to your lap for a second or so will allow your circulation to return and help regenerate muscles. The goal is to develop a habit that becomes automatic and part of your routine. You can:

- *Relax for a second or more.*
- *Take a few deep breaths.*
- *Pause to take a sip of water.*
- *Rest your hands in your lap.*
- *Let your arms drop to your sides.*
- *Drop your arms and shake your hands.*
- *Do a quick shoulder or neck roll.*
- *Stretch.*

### One-minute stretch breaks

The typical mini stretch break lasts from thirty to sixty seconds to a few minutes. Ideally you want to take them several times an hour.

- **Stretch breaks.** Reach high over your head. Drop your hands in your lap or to your sides. Inhale and exhale deeply, and check in with your body. Look away from the monitor, do a neck roll or shoulder roll, and blink several times. Straighten your back and stretch your entire backbone by lifting your head and neck gently, as if there were an invisible string attached to the crown of your head.
- **Wiggle breaks.** Wiggling exercises are especially good for muscle tension or wrist pain. Shake your hands and wiggle. Wiggle all over, as much as possible. It improves circulation and feels good.
- **Zen moments.** Create moments of peacefulness throughout the day by assuming a meditative mindset.
- **Sensory awareness breaks.** Sitting with both feet flat on the floor, close your eyes and listen to the sounds outside your body, including the sounds of the building, the fan on the computer, or the sounds in the street. Breathe in and out over ten seconds (breathe in for four or five seconds and breathe out for five or six seconds), making the exhale slightly longer than the inhale. Feel your jaw, mouth, and tongue muscles relax. Feel the back and bottom of the chair as your body breathes all around you. See someone in your mind's eye who is kind and reassuring, who makes you feel safe and loved, and who can bring a smile to your face inwardly or outwardly. Wiggle your fingers and toes after the mini sensory awareness break while opening your eyes.