There's no running away from it: The more you sit, the poorer your health and the earlier you may die, no matter how fit you are.
THE NEW SMOKING

BY SELENE YEAGER
PHOTOGRAPHS BY Nick Ferrari
You've no doubt heard the news by now: A car-commuting, desk-bound, TV-watching lifestyle can be harmful to your health. All the time we spend parked behind a steering wheel, slumped over a keyboard, or kicked back in front of the tube is linked to increased risks of heart disease, diabetes, cancer, and even depression—to the point where experts have labeled this modern-day health epidemic the "sitting disease."

But wait, you're a runner. You needn't worry about the harms of sedentary living because you're active, right? Well, not so fast. A growing body of research shows that people who spend many hours of the day glued to a seat die at an earlier age than those who sit less—even if those sitters exercise.

"Up until very recently, if you exercised for 60 minutes or more a day, you were considered physically active, case closed," says Travis Saunders, a Ph.D. student and certified exercise physiologist at the Healthy Active Living and Obesity Research Group at Children's Hospital of Eastern Ontario. "Now a consistent body of emerging research suggests it is entirely possible to meet current physical activity guidelines while still being incredibly sedentary, and that sitting increases your risk of death and disease, even if you are getting plenty of physical activity. It's a bit like smoking. Smoking is bad for you even if you get lots of exercise. So is sitting too much."

Unfortunately, outside of regularly scheduled exercise sessions, active people sit just as much as their couch-potato peers. In a 2012 study published in the *International Journal of Behavioral Nutrition and Physical Activity*, researchers reported that people spent an average of 64 hours a week sitting, 28 hours standing, and 11 hours milling about (nonexercise walking), whether or not they exercised the recommended 150 minutes a week. That's more than nine hours a day of sitting, no matter how active they otherwise were. "We were very surprised that even the highest level of exercise did not matter squat for reducing the time spent sitting," says study author Marc Hamilton, Ph.D., professor and director of the inactivity physiology department at Pennsylvania Biomedical Research Center. In fact, regular exercisers may make less of an effort to move outside their designated workout time. Research presented at the 2013 annual meeting of the American College of Sports Medicine from Illinois State University reports that people are about 30 percent less active overall on days when they exercise versus days they don't hit the road or the gym. Maybe they think they've worked out enough for one day. But experts say most people simply aren't running or walking or even just standing enough to counteract all the harm that can result from sitting eight or nine or 10 hours a day.

Unless you have a job that keeps you moving, most of your nonrunning time is likely spent sitting. And that would make you an "active couch potato"—a term coined by Australian researcher Genevieve Healy, Ph.D., of the University of Queensland to describe exercisers who sit most of their day. If they aren't careful, she says, active couch potatoes face the same health risks as their completely inactive counterparts.

"Your body is designed to move," Hamilton says. "Sitting for an extended period of time causes your body to shut down at the metabolic level." When your muscles, especially certain leg muscles, are immobile, your circulation slows. So you use
Heart disease and diabetes aren't the only health hazards active couch potatoes face. The American Institute for Cancer Research now links prolonged sitting with increased risk of both breast and colon cancers. "Sitting time is emerging as a strong candidate for being a cancer risk factor in its own right," says Neville Owen, Ph.D., head of the Behavioral Epidemiology Laboratory at Australia's Baker IDI Heart and Diabetes Institute. "Emerging evidence suggests that the longer you sit, the higher your risk. It also seems that exercising won't compensate for too much sitting." According to Alberta Health Services’ Cancer Care in Canada, inactivity is linked to 49,000 cases of breast cancer, 43,000 cases of colon cancer, 37,200 cases of lung cancer, and 30,600 cases of prostate cancer a year.

As if that weren't enough to put you in a sad state, a 2013 survey of nearly 30,000 women found that those who sat nine or more hours a day were more likely to be depressed than those who sat fewer than six hours a day because prolonged sitting reduces circulation, causing fewer feel-good hormones to reach your brain.

Scared straight out of your chair? Good. Because the remedy is as simple as standing up and taking activity breaks. Stuart McGill, Ph.D., director of the Spine Biomechanics Laboratory at the University of Waterloo says that interrupting your sedentary time as often as possible and making frequent posture changes is important. "Even breaks as short as one minute can improve your health," he says. Developing healthier habits will also improve your running performance, says Nikki Reiter, biomechanist with The Run S.M.A.R.T. Project (see “Avoid the Chair,” page 64). The combination of going for a run and then parking your butt for the rest of the day (or vice versa) could be a recipe for injury. "The static sitting position can cause certain muscles to become tight or overstretched, neither of which is good for your running," she says. Even if you went for a really intense or long run, regular activity throughout the day will help your recovery. So stand up now: It's good for your body and mind.
Avoid the Chair
It can hurt your health and your running

[3] Certain leg muscles contain enzymes that keep blood fats in check. They go idle when you sit for too long, and that increases your risk of heart disease.

[4] Sedentary behavior has been linked to various forms of cancer: breast, colon, lung, and prostate.

[5] Just 20 minutes of slouching in a chair increases laxity in your spinal ligaments—a bad thing for runners, says Stuart McGill, Ph.D., a professor of spine biomechanics at the University of Waterloo in Ontario. "Sitting stretches out your spine and essentially puts your muscles to sleep," he says.

[6] Glute muscles (particularly the gluteus medius) get lengthened when you sit too long, and that interferes with their ability to fire quickly or stabilize the pelvis when you run. Other muscles and tendons step up to pick up the slack, says Reiter, which can lead to all sorts of runner woes, including hamstring strains, iliotibial-band syndrome, knee pain, and excessive pronation.

[7] When you're parked in a chair, your hip flexors tighten up, which decreases the range of motion in your hips and robs your ability to extend your hips, drive your knees, and produce power, Reiter says.

BAD CHAIR

[1] Prolonged sitting reduces circulation to the brain, hurting creativity and mood.

[2] Hunching over a desk weakens back muscles and tightens chest muscles. When you run, your arms may move back and forth across the chest, which may spur lower-body rotation that can lead to iliotibial-band syndrome and shin and foot pain, biomechanist Nikki Reiter says.

WARNING
Sitting Can Be Hazardous to Your Health

BETTER STABILITY BALL

While sitting on a stability ball isn't enough of a core workout to score you six-pack abs, it promotes movement—and any extra movement you can squeeze into your day is good, says Douglas Lentz, M.S., C.S.C.S., a certified strength and conditioning specialist and the director of fitness and wellness for Summit Health in Chambersburg, Pennsylvania. "You'll engage more muscles than you would in a traditional office chair because you'll move around more on a ball," he says. "You'll also likely stand up more often because you're not too comfortable and melting into a chair."

BEST ADJUSTABLE DESK

The ideal scenario is an adjustable workstation that allows you to work on your feet as well as your seat (see "Flex Your Desk," opposite page). Why not just stand? Because being on your feet all day isn't necessarily good for you either, says Alan Hedge, Ph.D., C.P.E., director of the Human Factors and Ergonomics Laboratory at Cornell University. "Prolonged standing places an additional load on your heart and circulatory system, puts a strain on your legs and feet," he says. "It's best to alternate between the two."
FLEX YOUR DESK

With a little ingenuity, you can create a sitting/standing workstation

The simplest way to transform a traditional desk is to place boxes or hooks under your monitor and keyboard. A high-seat stool allows you to sit. For the best ergonomics, your keyboard should be at or slightly below elbow height, with your monitor at eye level. If you plan on standing for long periods of time, ergonomics expert Alan Hedge, Ph.D., recommends placing a footrest under your desk—propping one foot up will help you change positions and allow you to give each foot a break throughout the day. A padded mat can also reduce stress on your legs and feet. Forget about standing all day in high heels or unsupportive shoes. "You need anti-fatigue footwear," Hedge says. (Running shoes, anyone?) If you're committed to a bigger investment, here are a few high-tech solutions.

Move your computer
Ergotron's WorkFit sits atop your desk and holds your keyboard and monitor so you can manually slide them up and down ($479, ergotron.com).

Move your desk
ErgoDepot sells several adjustable desks, which allow your entire work surface (computer, phone, coffee mug) to move up and down with you with the touch of a button (beginning at $359, ergodepot.com).

Move your feet
Under-the-desk stair-steppers, cycles, or elliptical machines allow you to move as you type. Since these devices are portable, you can easily push them aside when you want a break (most cost less than $100, amazon.com). Treadmill workstations are more of a commitment (see "A Step Too Far?" page 57). The desk is affixed to a treadmill ($1,500, ergodepot).

STRETCH IT OUT

Sit all day? Work these exercises into your routine to help you feel—and run—your best

This exercise wakes up muscles in your glutes, hamstrings, and lower back to prep them for a workout

BEFORE YOU RUN

ACTIVATION X-LUNGE
Stand with feet together and arms raised straight in front of you at shoulder height, palms facing down. Imagine you are standing on a clock, facing 12. Step out with your right foot to the 2 o'clock position and lower down into a lunge, keeping your right knee aligned over the toes of the right foot. As you lunge, rotate your torso toward the right. Push off with the right foot; return to start, and repeat to the left, stepping out to the 10 o'clock position. That's one rep; do 10.

REACH AND EXTEND
Stand up from your chair, kick off unsupportive shoes, and extend your arms overhead. Reach your palms toward the ceiling while bending backward and breathing deeply for several breaths.

GIANT STEP STRETCH
Take a giant step back with your right foot and lower into a lunge position. Bend your left knee and tuck your pelvis. Raise your right arm out to the side and then extend it overhead. Lean slightly to the left from the waist. Hold 10 seconds. Repeat two or three times on each side.

These stretches reduce stress on your spine and open tight hips—do them a few times a day

Photographs by REED YOUNG
ON YOUR FEET!
Simple ways to spend more time upright

Set reminders
Use gadgets for good:
Put alarms on your
computer or phone to
prompt you to stand up
every 20 minutes while
at work. Give yourself a
daily goal, like getting in
5,000 (nonrunning)
steps and download an
app like Garmin Fit to
track your activity level
thoughout the day.

Walk and talk
Skip the stodgy
conference room and
walk the halls with a
coworker when you need
to brainstorm ideas or
discuss a project.

Chat them up
Take phone calls while
standing up. If you have
the space, pace around
and stretch.

Exercise limits
Cut back on TV and
Web-surfing time. Watch
the tube from your
treadmill. Or do planks
or foam roll during
 commercials.

NOT YOUR AVERAGE CHAIR

Sometimes you just have to sit, and when you must, there are some dynamic
designs that promote more movement than the traditional office chair. Be wary of
any seat that's too soft, says ergonomics expert Alan Hedge, Ph.D., as you might
be tempted to sit all day. —MEGAN HETZEL

Ball Chair This
hybrid between a
standard chair and
a stability ball has
a rounded,
unstable surface as
a seat, which
engages core
muscles. Since it's
attached to a base
with wheels, it's
easier to maneuver
around a work-
spase, and the ball
won't roll away
when you're not
using it ($80,
guam.com).

[2] HAG Capisco
Chair Designed for
sit-to-stand
workstations, this
adjustable-height
chair's molded
plastic seat allows
your legs to hang
comfortably down
(like in a saddle),
which allows for a
more natural hip
angle and encourages
better circulation in your
legs. The seat also
bends and flexes in
all directions, so it
encourages more
movement even
while you're sitting
($675, ergodepot).

[3] Varier Move
Stool Also meant
for adjustable
workstations, this
stool features a
convex base, which
allows the stool to
rotate in all
directions,
encouraging you to
shift spontaneously
as you work
($475, ergodepot.
com).

[4] Locus Seat
Designed by
Martin Keen
(founder of Keen
Footwear), this
unique half-standing,
half-sitting stool puts you in a
"perching" position. Your body
is upright, which
relieves pressure
off your back and
helps keep your
hips open, but you
get a bit of a rest
from the seat that
supports your rear
($690, store.
focaluprightfurn
iture.com).

In Good
Company

Three out of four full-time desk-
jobers wish they didn't have to sit
all day, says a survey from Just
Stand.org. And employers are
responding: An increasing number of
companies, including Rodale (owner of
Runner's World), are allowing
employees to swap out traditional
desks and chairs for workspaces that
get them up on their feet. David Kahl,
president of Ergo Depot, an online hub
for ergonomic furniture, has outfitted
offices at Nike, MTV, Disney, Intel, and
Harvard University with active
workspaces, including adjustable
desks and treadmill workstations.
"We've averaged about 60 percent
growth per year over the last three
years," Kahl says of the retailer he
started in 2005. "I think there's a shift
happening where people really want to
make a change and do things in a
healthier way." These four active-
minded companies lead the charge.

GOOGLE The tech giant has been
offering adjustable and standing
desks since 2005 (36 percent of
workers chose them). It even has a
dedicated space in its Mountain View,
California, office dubbed Living Lab,
where employees test innovative
workspaces. "It definitely feels like
we're working in the office of the
future," says Chrissy Persico, a
consumer media manager at the
company. "At my previous job, I felt
tied to my desk. But at Google,
there's a lot of movement. People get
up and find new places to work; they
sit in communal areas or book time at
the treadmill desks. It's a huge part of
our culture."
A STEP TOO FAR?
At a treadmill desk, a runner tries to mix business with “pleasure” by Mark Remy

→ I’m working on a treadmill! That’s the first thought you have when you step onto the belt of a treadmill workstation, press START, and dive into whatever task is before you. (Writing about treadmill workstations, for instance.)

And here’s the second thought you have, once the novelty wears off, which for me took about 90 seconds: I’m working on a treadmill.

Then come the gawkers. If you use a treadmill desk in a public office space, as I did here at Runner’s World, people pause, ogle, inquire, joke. Even the runners. You can’t blame them—after all, here’s someone working on a treadmill—though it’s hard to focus when you feel like a sideshow attraction.

After a few days of working on one, this is the most honest assessment I can offer. From the get-go, the incline of my enthusiasm level was stuck at zero. But, hey, tedium is a small price to pay for keeping death at bay, right? Because surely you know by now that sitting all day will kill you. Really, if research is to be believed, if you sit too much you might as well have a pack-a-day habit.

This is why I’ve been using an adjustable stand-up desk for about two years now. When I feel like sitting, I lower the keyboard tray and monitor; when I want to stand, I raise it. Easy as pie. This arrangement has made a real difference in how I feel and maybe even in how I run—my muscles feel less tight, and I’ve noticed fewer knots in my neck and shoulders at the end of the day.

You’d think, then, that taking the next logical step—onto a treadmill workstation—would make me feel even better. Right? Well it certainly didn’t hurt. But I didn’t feel that walking while I worked helped me, say, recover quicker from a run or warm up any better before one. It didn’t do much for my creative juices either: Strolling outdoors might help me clear my head. Running outdoors almost always does. But on a treadmill? Not so much. And I couldn’t see it much affecting my weight. On the one hand, the treadmill told me I was burning about 400 extra calories per workday; on the other hand, after work, another beer was that much easier to justify.

So what does working on a treadmill feel like? Mostly it feels...strange. You notice a disconnect between the lower half of your body and the upper half. Above the waist, you’re typing. Below, you’re taking a stroll. It’s odd. You start to feel like a mythological creature with the legs of a pedestrian and the torso of a white-collar worker.

None of which is to say that my time on the treadmill desk was a total drag. It wasn’t. The FitWork Walkstation I used was a fine machine, with a stable deck and whisper-quiet motor. It was a snap to use. (Though I was bummed to discover that the top speed was two miles per hour. So much for my “conference call fartlek” plan.)

Of course, if you have the means and the motivation to try a treadmill desk, by all means, do so. True, it didn’t transform my running. But your mileage, as the saying goes, may vary.