

The Danger of Prolonged Sitting

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Introduction



We live in a time where sitting takes up the majority of our day, but could sitting too long be slowly crippling our bodies?

The modern lifestyle in nowadays requires working machines, which do much of the people's work, eliminating the need for manual labour. Working in the office by using those machines force people to sit there for eight or more hours a day.

The Internal Medicine shows that the average person spends more than half of his/her waking hours in an inactive state. Those persons are commuting to and from work, sitting at a computer, watching TV, etc).



Overview



Besides the obvious benefits of the modern technology, such as consolidating our efforts, getting more done in less time, and connecting us to others at lightning speeds, it has many disadvantages, as well.

The sedentary position for prolonged periods of time can cause problems such as **poor posture**, **chronic back pain**, and deadly diseases such as **heart disease**, **obesity** and **diabetes**.

Even with a daily exercise regimen, researchers are now convinced that sitting for a major part of the day may be deadly in the long run, and are even making comparisons like, “***sitting is the new smoking.***”

How sitting too long affects the body

Head

Blood clots that form after sitting too rigidly can travel to the brains, causing strokes.

Neck

Fluid retained in the legs during the day moves to the neck at night & contributes to obstructive sleep apnea.

Lungs

In individuals who experience heart failure, fluid first backs up in the lungs.

Heart

A sedentary lifestyle contributes to cardiovascular disease.

Arms

Physical activity reduces the risk of hypertension, or high blood pressure.

Legs

Fluid collects in the legs during sitting. Walking helps pump it out before it causes problems.

Stomach

Sitting too much contributes to obesity and colon cancer.



Adverse effects of prolonged sitting

On average, a contemporary working class adult spends eight to nine hours each day sitting, which is so much inactivity that even a 30- or 60-minute daily workout cannot counteract its effects.

These effects are among others:

- *Organ Damage*
- *Brain Damage*
- *Posture Problems*
- *Muscle Degeneration*
- *Leg Disorders*



Heart



- Prolonged sitting increases the possibilities of heart issues twice compared to those who work frequently on their feet. PS has been linked to cardiovascular events like heart attack and heart disease death.
- When you sit, blood flows slower and muscles burn less fat, which makes it easier for dangerous fat to clog your heart.
- People who sit for 10 or more hours a day may have a significantly greater risk of developing heart disease than those who sit for five hours or less.

Pancreas



- Your body's ability to respond to insulin is affected by just one day of excess sitting, which leads your pancreas to produce increased amounts of insulin, and this may lead to **diabetes**.
- Insulin helps carry glucose to cells for energy, but cells in a chronically inactive body do not respond as readily to this insulin release. The result? More insulin production and a higher risk of developing diabetes and other diseases.
- Research published in *Diabetologia* found that those who sat for the longest periods of time were twice as likely to have diabetes or heart disease, compared to those who sat the least. Sitting for more than eight hours a day has also been associated with a 90 percent increased risk of Type 2 diabetes.

Cancer



- Sitting for too long is associated with a higher risk of being diagnosed with, or dying of, breast, colon, colorectal, endometrial and ovarian cancers.
- Excess insulin production encourages cell growth
- Regular movement eliminates sluggish blood flow to the organs and boosts antioxidants in your body that eliminate potentially cancer-causing free radicals.
- Findings presented at the 2015 Inaugural Active Working Summit found that prolonged sitting also increases:
 - Lung cancer by 54 percent
 - Uterine cancer by 66 percent
 - Colon cancer by 30 percent
- Another reason for this increased cancer risk is thought to be linked to weight gain

HOW SITTING AFFECTS THE BODY

AS SOON AS YOU SIT



Electrical activity in the leg muscles shuts off



Calorie-burning rate plunges to about one per minute, a third of what it would have been if you walked



Enzymes that help break down fat drop



After 2 hours: Good cholesterol drops 20%



After 24 hours: Insulin effect drop 24% and risk of diabetes rises



Brain Performance Decline

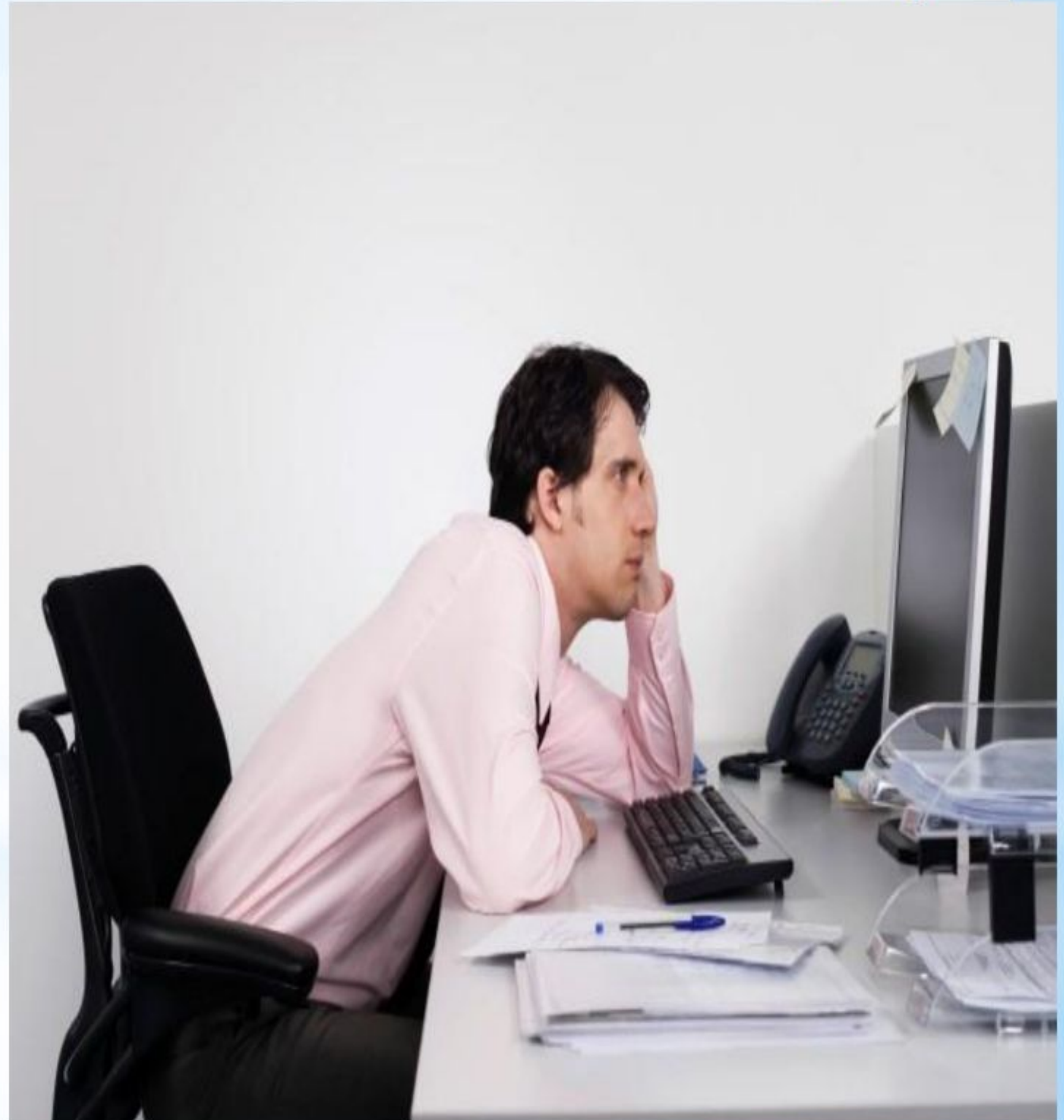
- When sedentary for long periods of time, everything slows down, even our brain function!
- When we move, fresh blood and oxygen are pumped to our brain at a faster rate, helping improve the release of productivity- and mood-enhancing chemicals.
- By sitting for long periods of time, the flow of oxygen and blood to our brains is slowing, inhibiting the ability to think clearly
- Reduced mental clarity and brain fog



Brain Performance Decline (2)



- At your desk you are tasked with solving all sorts of problems, organizing tasks, and applying critical thinking skills, however your brain can become foggy from sitting for long periods of time.
- Moving muscles pump fresh blood and oxygen to the brain, which triggers the release of brain and mood enhancing chemicals.





Foggy brain

Strained neck

Sore shoulders and back

Heart disease

Overproductive pancreas

Colon cancer

Disc damage

Weak abs

Tight hips

Soft glutes

Dangers of Sitting
All Day, Every Day

Postural Problems

- **Strained neck and shoulders** resulting from muscle overuse from sitting at a desk or computer for too long
- **Inflexible spine:** sitting for long periods of the day, the disks become out of balance and are starved of crucial nutrients
- **Disc damage:** PS deprives our discs of crucial nutrients, blood and oxygen and make us more at risk for herniated lumbar disks. When sitting, your spine is under a lot of pressure, and the weight isn't evenly distributed



Obesity & Muscle Degeneration

- You burn 30% more calories when you're standing than when you're sitting, therefore when you're sitting, the circulation of a fat-absorbing enzyme also shuts down, contributing to a larger waistline.

- **Weak abdominal muscles:**

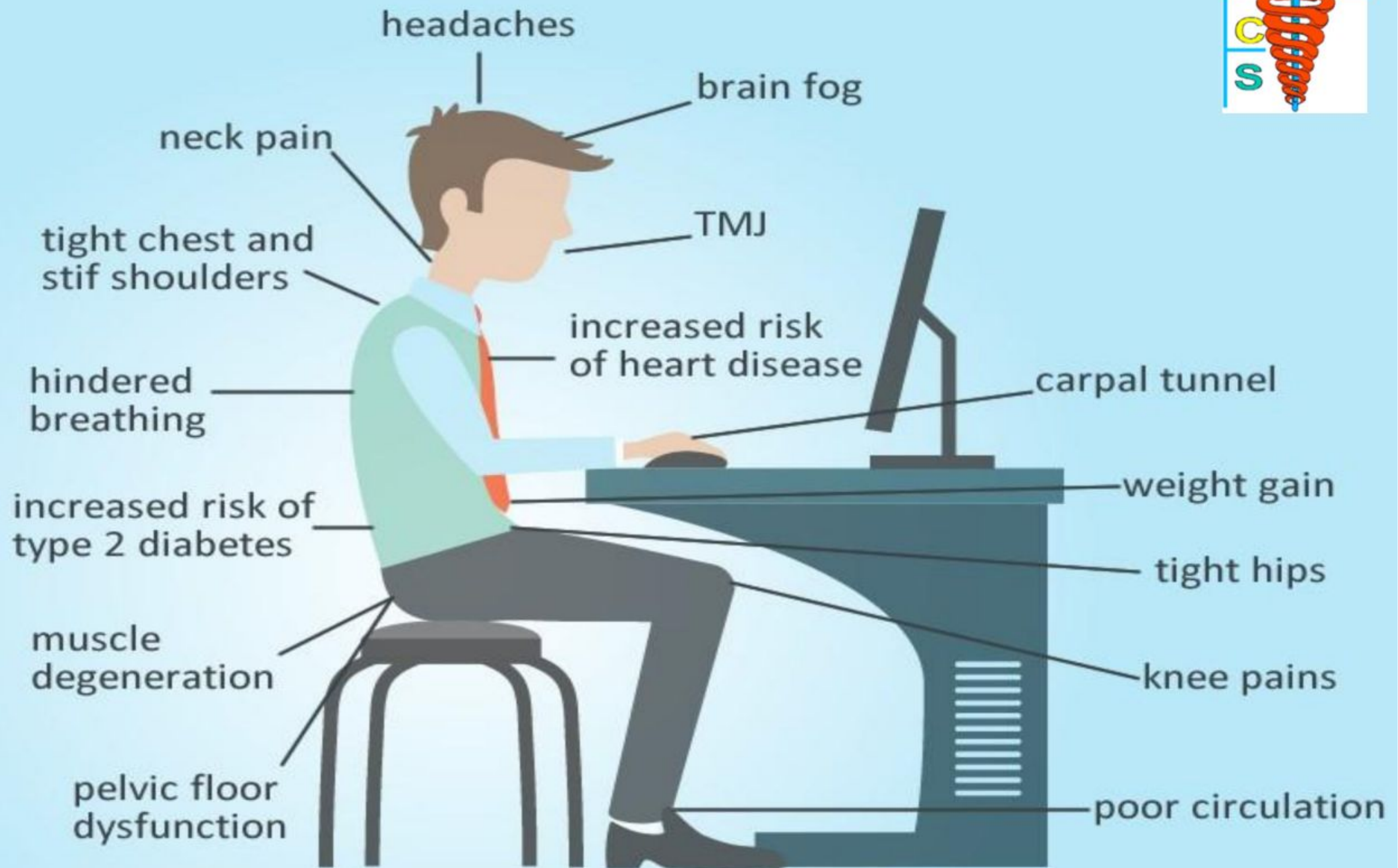
When we stand straight and walk around, our abdominal muscles help keep us upright. But when we are sitting, our posture is often situated in such a way that our stomachs bulge and our abdominal muscles are loose.



- **Limp legs:**

When sitting, your legs are doing nothing - and they get used to it too. Weak, limp legs can result. Also, after prolonged periods of disuse, the gluteal muscles become soft and flabby

WHAT SITTING DOES TO YOUR BODY



Too Much Sitting Is Killing You (Even If You Exercise)

Even if you're one of those people who without fail gets in a full hour long workout everyday, that burst of exercise isn't enough to counteract the 8 to 9 hours an average working adult spends sitting down each day.



What to do/Prevention



The impact of movement — even leisurely movement can be profound

- Take a break from sitting at least every 1 hour.
- Give yourself reminders to sit less. At home, consider a TV commercial your signal to get out of your chair briefly.
- Stand often while talking on the phone or watching television.
- Get up regularly to stretch at least once every 1 hour. Walk around your office for a few minutes to keep the blood flowing allowing your brain and muscles to function optimally.
- Organize the layout of your office space in such a way that you have to stand up to reach oft-used files, the telephone, or your printer, rather than having everything within easy reach.

What to do/Prevention (2)



- Walk across the hall to talk to a coworker instead of sending an email
- Take the stairs instead of the elevator
- Park your car further away from the entrance
- Take a longer, roundabout way to your desk
- Standing meetings advocated rather than sitting in a conference room.

Thank You!

