Why and how height adjustable desks should be used
A typical desk job is the everyday norm for most of us, and it means being inactive most of the day. However, neither our bodies nor our physiques are made for this inactivity. Studies show that sedentary behavior leads to lifestyle related diseases.

Using a sit-stand desk can reduce sedentary behavior significantly, decrease the risk of lifestyle related diseases and increase our daily well-being.

This small brochure highlights why and how a height adjustable desk should be used. Also, it gives you recommendations how to get started and bring movement into your workday.

**Stand up and enjoy the reading.**

LINAK DESKLINE®
Sedentary behavior – We are inactive most of the day

Sedentary sitting means “too much sitting” – meaning too little physical exercise

We spend up to 12 hrs. a day sitting down

FYI
Sitting or lying down while being awake, is classified as ‘sedentary’ behavior. You can be sedentary at work, school, home, when traveling or during leisure time. Sedentary behavior requires little energy expenditure.
How we spend the hours

The majority of hours awake are spent sedentary (around 60-70 percent).

<table>
<thead>
<tr>
<th>60-70%</th>
<th>20-30%</th>
<th>&lt;5-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>Light</td>
<td>Moderate - Active</td>
</tr>
</tbody>
</table>

Height adjustable desks are an indispensable resource for achieving reductions in sedentary behavior.
Regular exercise is not enough

Even 30 to 60 minutes of jogging a day will not undo the amount of hours sitting.

Recent research shows that sedentary behavior is independent of physical activity. Meaning it is not enough to exercise regularly — you also need to spend less time sitting.
Consequences of inactivity

- **30%** of ischaemic heart diseases are caused by physical inactivity

- **27%** of diabetes cases are caused by physical inactivity

- Fatigue appears in the back and neck muscles by slowing blood supply

- Breaking up your sitting with a short walk can lower your blood sugar level by about **30%**

- Physical inactivity is the 4th leading risk factor for global mortality

- **95%** of all back pains start through inactivity, while only **5%** of all back pains begins with strenuous movement
Sitting – what happens when we sit too much

By getting up and out of your chair throughout the day, you engage postural muscles that “switch on” genes that are essential to good health. **When you sit all day, your health goes into decline.**

According to scientists, when we sit the “enzymes that are responsible for “burning fat just shut down.” This can lead to retention of fat, lower good cholesterol and spark the overall reduction in the metabolic rate.

In the standing position the natural curvature of the spine permits the body to achieve a loading balance. **Prolonged sitting** causes a steady compression on the spinal discs that can **contribute to their premature degeneration.**

Prolonged sitting reduces body movement making muscles more likely to pull, cramp or strain. It has been associated with a **high incidence of back complaints**, discomfort in the lower extremities and increased muscle loading of the neck and shoulder muscles.

Additionally, lower demands on the circulatory system while sitting results in a slow down of heart activity and blood flow which **accelerates fatigue.**

A study of more than 73,000 women reported that the risk of dying from **heart disease** was nearly 3x higher among people who sit the most compared to those who sit the least.
5 steps to a healthier lifestyle

Get started!
- Obtain motivational tools to get you standing at your desk
- Rearrange the meeting room, stow away chairs
- Team up with colleagues for a joint effort
- Set realistic goals and reward great effort
We need a break from sitting down – and it starts today!

**When you Sit:** VS **When you Stand:**

- the risk of cardiovascular diseases increases by **40%** over time
- the enzymes that help break down fat drop by **90%**
- uninterrupted for more than **6 hours** you counteract the effect of 60 min exercise

- and actively move around, you can reduce the risk of cancer **up to 25%**
- you burn up to **50 kcal more** per hour compared to sitting
- your muscle activity is almost **2.5 x higher** than during sitting

**Moving is living**
Movement is preferred, so shift between sit and stand postures.
Stand up for your health

On average we are inactive 60-70% every day.

We need a break from sitting down – and it starts today!

Standing 15 minutes per hour will...

....reduce obesity
....increase weight loss
....improve mental health
....and burn 20,000 more calories a year
....which corresponds to 6 full marathons a year
....and make you healthier and happier
Proven that productivity increases

Productivity at your desk increases **10-20%** when standing.

- Users of sit-stand workstations claim to be more alert, task-driven and positive
- Research shows a direct link between healthy employees and improved performance
- Meetings are kept short and efficient
- Better posture and reduced risk of back pain
- Higher energy levels, especially in the afternoons

Employees who use height adjustable desks are **71%** more focused, **66%** more productive and **33%** less stressed. Other research proves that using height adjustable desks leads to improved work productivity, quality, efficiency and a greater sense of collaboration among groups of employees.
Using height adjustable desks on a regular basis will reduce the number of sick days. Applying physical workplace activity programs have proven to **reduce sick days by up to 32 percent.**

Case from a German medical company, **Dräger**

Dräger Medical conducted staff surveys 3 months after introducing the desks and again after 6 years. Results from the 3-month survey revealed **65% of staff felt their well-being had improved at work as a result of the standing desks**, while 3% said it had significantly improved. Similar results were observed after 6 years with **70% reporting improved well-being at work despite a significant increase in computer usage. Sickness absences of staff who reported using the standing desks regularly decreased significantly.**
Do not replace prolonged sitting with prolonged standing

Misconceptions about the use of height adjustable desks have resulted in confusion. It is not intended to sit nor stand up all day.

**Effects of Prolonged Sitting:**
- Discomfort in lower extremities
- Static muscle fatigue
- Increased spinal muscular activity and intradiscal pressure
- Increased muscle loading in the neck and shoulder muscles
- Decrease in muscle activity resulting in pain and/or spasms

**Effects of Prolonged Standing:**
- Sore feet
- Swelling of the legs
- Varicose veins
- Static muscle fatigue
- Low back pain
- Stiffness in the neck and shoulders

People are made to move – moving is living
Shift between sit and stand

It is recommended that desk users should progress towards:

- **2 h/day** of standing
- It should be divided into parts, sections of **15 min.** per hour

**Why should you shift between postures?**

When we change between sit and stand during the day we adjust the amount of load on the body and give specific body parts a chance to rest. Standing helps switch on the enzymes that are responsible for good health, increases blood flow to relieve fatigued muscles and permits the body to achieve a loading balance. Just the act of **going from sit to stand is great for your health. It forces your body to work** against gravity and keeps those skeletal muscles strong. Standing also helps in the **regulation of blood pressure**.
How to get started

Important tips when using a height adjustable desk:

1. If you, for medical reasons, are in doubt whether you can **stand for 5-15 minutes every hour**, you should consult your physician.

2. Standing up while working is a habit to which your body needs to adjust. **Start by standing 5 minutes at a time**.

3. It is important to **vary between sitting and standing**. Standing up all day is not healthy either – it is the variation that matters.

4. **Over time, stand 15 minutes every hour, accumulating to 2 hours a day**.

5. Make it part of your daily work to shift position.
6 ergonomic tips to get started

- Avoid strain on your neck and head
- Make sure your desk supports the weight of your arms
- Take short breaks and walk away from the desk
- Have enough workspace on your desk
- Avoid prolonged sitting - stand up whenever you can
- Wear shoes that do not hurt your back
Designed to shape behavior

We know it! We sit too much and move too little. However, changing bad habits or creating new habits is hard. Everybody may need a little help and guidance to stand up during a workday.

More specifically, the adjustment of the desk needs to be:

- **Intuitive**
- **Motivational support**
- **Digital integration**

**DPG Desk Panel**
DPG Desk Panel models are easy to operate. Just tilt the panel up or down. Available with optional features such as reminder functions and digital integration via Bluetooth® wireless technology.

**Desk Control™ Apps**
Connect your advanced DPG Desk Panel with the Desk Control apps via Bluetooth® wireless technology.
References

**Calorie burner: How much better is standing up than sitting?**, Magazine, BBC

**Comfort at your Standing Desk**, Ann Hall, LinkedIn Pulse

**Do you have ‘sitting disease’?**, Jennifer K. Nelson and Katherine Zeratzsky, MayoClinic, mayoclinic.org

**Dr. Elizabeth Joy**, University of Utah’s Health Sciences Center (Bush 2010), University of Utah

**Ergo-plus.com**

**Executive Order on the Conditions at Permanent Places of Work**, Morten Bergulf, Ove Hygum Arbejdstilsynet, Denmark

**Get Off Your Duff! Sitting Is the ‘New Smoking’**, Lorie Johnson, CBN News

**Getting employees to use their sit to stand desk**, Ann Hall, LinkedIn Pulse

**How Much Coworker Socializing Is Good For Your Career?**, Jacquelyn Smith, Forbes Leadership

**How to Power Nap at Work**, Sylvia Marten, Spine-Health

**Infographic: Sitting so much should scare you**, Ergotron


**Musculoskeletal Disorders and Workplace**
Factors, National Institute for Occupational Safety and Health National Center for Biotechnology Information, The Council for Health and Disease Prevention, American Heart Association, Center for Disease Control and Prevention

**NationalJournal.com**

**New Paper: Prevalence and Correlates of Sitting in Europeans**, Travis Saunders, Sedentary Behaviour Research Network

**Physical Inactivity and Cardiovascular Disease**, Department of Health, New York State

**Sedentary behaviour – one definition to rule them all**, Travis Saunders, Sedentary Behaviour Research Network

**Sitting all day – what’s the research behind the risks?**
A research review of the risks associated with sedentary / sitting behavior, Taylor, K., Green, N., Wellnomics White Paper

**Sit-stand Workstations**, Büro Forum für bessere Büros, www.buero-forum.de

**Stand and deliver**, Jonathan Swan, Executive Style

**Stand up and loose weight**, Hanna Tómasdóttir, LINAK

**Top 10 Trends Influencing Workplace Design**, HOK - Thought Leadership

**The experience of musculoskeletal discomfort amongst bank tellers who just sit, just stand or sit and stand at work**, Leon Staker, Andrea Roelofs, Curtin University of Technology: Perth, Western Australia

**Workspace Design Trends To Increase Your Productivity**, Vivian Giang, Fast Company

**10 Trends in Office Design**, CCIM Institute