IT Ergonomics at the Workplace in Denmark, Sweden and Germany

A healthier way of working
Foreword

We want to use this report and survey to focus on IT ergonomics at European workplaces. Today it is difficult to find a job that does not involve a computer. Therefore most people do not have the possibility to opt out of screen work. At MMD we believe that it is never acceptable to experience pain because of your work in front of a desktop monitor, and we know that many injuries can be prevented through an investment in monitors with the right ergonomic features.

We have asked users working at a desk and desktop monitor how they feel, what ergonomic equipment their employer provides them with, and whether they themselves prioritise ergonomics in their daily working lives. We are able to conclude that there is definitely room for improvement at the workplaces, improvements which will benefit both employees and employers.

In modern society, the number of people engaged in sedentary work is on the increase, and if you want to avoid chronic injuries among your workforce, you should address the problems before they arise and focus on preventative ergonomics. At MMD, our particular expertise lies within ergonomic desktop monitors, but the survey shows that attitudes also need to change at a more general level.

According to the survey, it is time you break with the idea that you have to be a heavy IT user to be entitled to demand ergonomic equipment. All kinds of employees experience injury and pain, and preventative measures should be implemented by you irrespective of gender, the number of working hours and business sector.

The report emphasises the it is important that you take a forward-looking approach and are broad-minded in relation to health and ergonomics at work. Many workplaces have fitness schemes and health insurance, while their employees sit at monitors and desks which are not height-adjustable. In our view, it is necessary to aim for an open dialogue on injury and treatment; to be able to encourage your colleagues to sit in an ergonomically correct position; and that employers listen to their employees’ ergonomic wishes when new equipment and office furniture needs to be purchased.

At a time when Europe is still feeling the consequences of the economic slowdown, and when workplaces in both the public and private sectors are compelled to optimise a declining labour force, there is even less room for work-related injury and diminished efficiency. An early investment in the right ergonomic equipment is soon reflected in the bottom line.

Thomas Schade
Vice President MMD EMEA
Content

Conclusions and summary of the survey ................................................................. 4

Ergonomics at workplaces in Denmark, Sweden and Germany .......................... 6

Analysis results for Denmark .............................................................................. 7
  The more time spent in front of the monitor, the more pain ................................ 7
  The majority ignore work-related pain .............................................................. 8
  Younger users are not consulted on IT equipment ............................................ 9
  More than half of Danes agree that the ergonomics of their work computer are important ......................................................... 9

Analysis results for Sweden .............................................................................. 11
  Heavy users and women suffer from pain and discomfort ............................... 11
  Swedes ignore pain and rarely seek medical treatment ..................................... 12
  Heavy users are consulted on their new desktop monitor ............................... 12
  Swedes: desktop monitors at work should be ergonomic ............................... 13

Analysis results for Germany .......................................................................... 14
  Heavy users and women suffer most from pain ............................................... 14
  Many Germans ignore work-related pain ....................................................... 15
  Men and heavy users most likely to get new equipment ................................ 15
  More Germans than Swedes and Danes think that desktop monitor ergonomic are very important ....................................................... 16
Conclusions and summary of the survey

The data on which this report is based stems from three questionnaire surveys which were conducted by YouGov in Denmark, Sweden and Germany. Altogether, 3,057 interviews were held: 1,009 in Denmark, 1,009 in Sweden and 1,038 in Germany. To ensure that the survey was representative, the data has been weighted so that, within each country, it matches the target group. The data material can therefore be regarded as being very reliable in relation to generalising on the basis of the survey’s results.

The target group for the survey is persons aged 18-64 years who spend more than one hour a day working in front of a computer. In the report, heavy users are defined as persons who work at a computer for four hours or more each day. The report looks at five key areas in connection with ergonomics, work-related injury and equipment at workplaces and in work environments:

Ergonomic equipment at the workplaces
- In all three countries, approx. 80% of those questioned have height-adjustable desk chairs, while far fewer have sit-stand desks or height-adjustable desktop monitors.
- Of all those surveyed, 49% of Danes, 48% of Swedes and 43% of Germans have a height-adjustable monitor at their workplace.
- 49% of Danes have a height-adjustable monitor, while 64% work at a sit-stand desk.
- In Sweden, 48% have a height-adjustable monitor, while 45% work at a sit-stand desk.
- In Germany, more people have height-adjustable monitors (43%) than those with sit-stand desks (27%).
- In Denmark and Sweden, it is largely younger employees and students who do not have height-adjustable monitors, while in Germany this is true of people aged 50+.

Work-related pain generally ignored
- Overall, the surveys show that often people do not take action to treat the pain or discomfort. In particular, problems with eye strain are ignored.
- It is largely people aged 18-34 years who do not take action to treat the pain or discomfort they feel at the end of a working day.

Pains commensurate with time in front of the computer
- For all three countries, it is particularly heavy users and women who have experienced one or more types of pain or discomfort after working at a computer.
- In Denmark, it is largely public employees who say that they have experienced one or more of the five types of pain after a workday with a computer.

Investments in IT at workplaces
- On average, approx. 40% of workers in all three countries have received new IT equipment in the past two years.
- Investments are most often made in IT equipment for people who spend a lot of their time behind a computer, but in general only 30% of all respondents are involved in the purchasing process.
- About a third of respondents say that they would like to have a bigger say when new IT equipment is purchased.

Who finds desktop monitor ergonomics important?
- Overall, 60% of respondents in the three countries say that desktop monitors’ ergonomics are important. This is the view of 66% of respondents in Germany, of 59% of respondents in Sweden and of 56% of respondents in Denmark.
- Desktop monitor ergonomics are particularly important for women and heavy users.
- Those working in front of a height-adjustable desktop monitor broadly agree that ergonomics are important.
Ergonomics at workplaces in Denmark, Sweden and Germany

The available equipment and the focus on ergonomics at workplaces in Denmark, Sweden and Germany are compared below.

- Height-adjustable monitors are much more widespread in Denmark and Sweden than in Germany.
- More Germans than Danes and Swedes are trained in how to use their height-adjustable monitors.

Figure 1: Comparison between Denmark, Sweden and Germany to questions about workplace ergonomics

Note to figure 1: The responses are shown as the proportion who answered in the affirmative to the question. In the first question, the proportion who have a desktop monitor is shown, while for the remaining questions it is the proportion answering ‘yes’ which is shown.
Analysis results for Denmark

In general, the survey shows that 78% of Danes who spend more than one hour working at their computer each day have one or more desktop desktop monitors. Of these, 64% have height-adjustable monitors, which corresponds to 49% of the survey’s target group having height-adjustable monitors.

The survey shows that people who use a computer a lot at their workplace tend to have better ergonomic conditions than those who do not spend that much time in front of a computer. Age and employment also have a bearing on how a Danish workplace is equipped:

- 70% of the so-called heavy users have height-adjustable monitors, 75% have sit-stand desks and 88% have a height-adjustable desk chair. This is significantly more than those who do not spend as many hours working at a computer.
- Only 51% of people aged 18-34 years have a sit-stand desk, while 76% have adjustable desk chairs.
- Students generally have worse ergonomic conditions than other occupational groups, especially when compared with salaried employees.

The more time spent with IT work, the more pain

Altogether, 68% of respondents in the survey say that they have experienced pain or physical discomfort at the end of a working day. The most common symptom is eye strain (38%) followed by neck pain (35%) and shoulder pain (31%). About 25% say they have had back pain or low back pain.

The in-depth statistical analysis shows that three factors can explain who has felt discomfort at the end of a working day:

- 72% of people who work a lot in front of a computer have experienced discomfort at the end of a working day.
- Public employees in particular have experienced pain or discomfort at the end of a working day.
- There is a higher proportion of women (77%) than men (60%) who state that they have experienced one of the five types of discomfort.

Note to figure: The table shows the proportion who answered that they have experienced neck pain, back pain, shoulder pain, low back pain or eye strain at the end of a working day.
The majority ignore work-related pain

The figure below shows that most people do not take action if they experience pain at the end of a working day. This is particularly true in relation to how people react to eye strain, with respondents saying they seldom address the problem. In addition, about a quarter of people who have experienced neck, back, shoulder or low back pain indicate that they have sought treatment without a referral.

About 7% answer that they have taken the problem to their employer. The trend seen here is that the employer, in by far the majority of cases, does something about the problem.

It is particularly younger users of desktop monitors who do not take action if they experience physical discomfort at the end of a working day, and students are less likely to address the problem compared to salaried employees.

Figure 3: What did you do after noticing the pain?

Younger users are not consulted on IT equipment

The survey shows that 46% of Danes have been provided with a new computer within the past two years, and that 38% have got a new desktop monitor within the same period.

It is particularly heavy users who have been equipped with a new computer (31%), and it is also they who have got a new monitor within the past year (25%). At the same time, the survey shows that only 13% of students have got a new desktop monitor at their workstations within the past year.

In general, the survey shows that 30% are consulted while 31% are not consulted, even though they would like a say in IT purchases:

- 33% of heavy users are involved in the purchasing process while only 22% of those who use a computer to a lesser extent are involved.
- Only 23% of people aged 18-34 years are consulted on the purchase of new IT equipment.
- More men (35%) than women (24%) are consulted as part of the purchasing process.
More than half of Danes agree that the ergonomics of their work computer are important

The survey shows that it is particularly heavy users as well as public employees and women who think desktop monitor ergonomics are important:

- 58% of heavy users consider the monitor’s ergonomics as being important, while 49% of those who spend 1-4 hours working at the monitor consider ergonomics to be important.

- In the public sector, 61% consider desktop monitor ergonomics to be important compared to 53% of people in the private sector.

- 61% of women and 51% of men say that desktop monitor ergonomics are very important.

At the same time, an additional analysis shows that 65% of people who have a height-adjustable monitor consider the monitor’s ergonomics to be important.

Figure 4: My desktop monitor is ergonomic and is e.g. height-adjustable

<table>
<thead>
<tr>
<th>How many hours a day do you spend working at a computer?</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 4 hours</td>
<td>61%</td>
<td>53%</td>
</tr>
<tr>
<td>more than 4 hours</td>
<td>61%</td>
<td>53%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which sector do you work in?</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very important</td>
<td>Quite important</td>
</tr>
<tr>
<td>Female</td>
<td>61%</td>
<td>28%</td>
</tr>
<tr>
<td>Male</td>
<td>51%</td>
<td>31%</td>
</tr>
</tbody>
</table>

The solution from Philips monitors

There is a range of Philips monitors for office use designed with ergonomic features to help relieve work-related pains, avoid eye strain, an aching neck or back that all too often plague busy computer-bound professionals. In the case of the Danish job market, only 49% are equipped with a height-adjustable monitor. For optimal comfort and working conditions the Philips desktop monitors in our P-line and B-line are able to be lowered between 100-150mm so that the top edge is at, or below, eye level when sitting as usual. Otherwise users may experience strained neck joints and muscles, and we know that healthy employees give you a healthy business.
Analysis results for Sweden

This section of the report deals with the survey questionnaire from Sweden separately. The survey shows that 75% of Swedes have one or more desktop monitors at their workplace. Among people aged 18-34 years, this proportion is lower (69%), while it is also lower for students, of whom only 45% have a desktop monitor at their workstations.

The survey also shows that 66% of all people with external desktop monitors have height-adjustable monitors. This corresponds to 49% of Swedes who spend more than one hour a day working at the computer having a height-adjustable desktop monitor.

Overall, the survey shows that older employees in particular have adjustable desks and chairs at their workplace. On the other hand, people aged 18-34 years often lack adjustable desks and chairs.

Heavy users and women suffer from pain and discomfort

The Swedish survey shows that 71% of respondents have experienced one of the five types of pain or discomfort at the end of a working day. With regard to the individual types of pain, the analysis shows the following:

- 46% have experienced eye strain, 31% have experienced neck pain while 30% have experienced shoulder pain.
- At the same time, 27% state they have had back pain and 22% that they have had low back pain.

The analyses show that there are two factors which influence whether Swedes have experienced discomfort at the end of a working day:

- 73% of those who spend many hours at a computer have experienced neck pain, back pain, shoulder pain, low back pain or eye strain at the end of a working day. The corresponding figure for those who spend less time in front of a computer is 66%.
- More women (76%) than men (66%) have experienced such pain or discomfort.

Figure 5: Have you experienced discomfort at the end of a working day?

<table>
<thead>
<tr>
<th>How many hours a day do you spend working at a computer?</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 4 hours</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>66%</td>
</tr>
<tr>
<td>More than 4 hours</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>76%</td>
</tr>
</tbody>
</table>

Note to figure: The table shows the proportion who answered that they have experienced neck pain, back pain, shoulder pain, low back pain or eye strain at the end of a working day.
Swedes ignore pain and rarely seek medical treatment

The survey, which is presented below, shows that the majority of Swedes do not take any action when they experience pain or discomfort. In particular, they do not address the problem of eye strain (66%). In relation to neck pain, back pain, shoulder pain or low back pain, about a quarter of respondents say that they visited a physiotherapist or similar without a doctor’s referral.

Approx. 7% have taken their problems to their employer and, as in Denmark, employers tend to take steps to address the problem. Moreover, the survey shows that in Sweden in particular, it is the youngest group – i.e. persons aged 18-34 years – who take no steps if they experience pain in their neck, back, shoulders or lower back or if they feel discomfort in the form of eye strain.

Figure 6: What did you do after noticing the pain?

Heavy users are consulted on their desktop monitor

The analysis shows that 48% of Swedes have got a new desktop monitor within the past two years. In particular, people who are heavy users and employees in the private sector have been provided with a new monitor within the past year. As in Denmark, fewer investments are being made in new equipment for students. Consequently, only 22% of students have got a new desktop monitor at their workstations within the past year.

Overall, 33% are consulted when new IT equipment is purchased, while 30% are not involved but would like a say. The analysis shows the following:

- Heavy users are most often involved in the decision to buy new equipment.
- Men (39%) are consulted to a greater extent than women (25%).
- Employees in the private sector (42%) are consulted more often than public employees (19%).
- Only 19% of students were involved in the purchasing process, which is lower than the corresponding proportion for other groups.
Swedes: desktop monitors at work should be ergonomic

The analysis shows that two factors in particular are significant for whether users consider their desktop monitor’s ergonomics as being important:

- Desktop monitor ergonomics are most important for heavy users.
- More women (63%) than men (55%) respond that the monitor’s ergonomics are very important or extremely important to them.

Overall, 59% of all respondents say that it is very important or extremely important that their monitor is ergonomic. Of those with a height-adjustable monitor, this figure is 72%. This indicates that being able to use a height-adjustable monitor persuades the users of its importance.

Figure 7: My desktop monitor is ergonomic and is e.g. height-adjustable

The solution from Philips monitors

In Sweden, 46% of the respondents have experienced eye strain after a workday in front of their computer. Our Philips monitors are optimized for bringing users the best work environments and this includes a new technology called the Philips LightFrame. This means that the display is surrounded by diodes which emit blue light at a specific wavelength proven to reduce eye fatigue, improve concentration and boost well-being. This effect is further enhanced by the LightFrame’s white LED technology, delivering the highest colour reproduction and consistent brightness at every point on the screen.
Analysis results for Germany

The results of the questionnaire survey in Germany show that 81% work at one or more desktop monitors. For those spending less than 4 hours a day at a computer, 70% have a desktop monitor. For all those with desktop monitors, 55% have a height-adjustable monitor, and here the analyses reveal several interesting results:

- It is particularly those who spend a lot of time working at a computer who have height-adjustable monitors (60%).
- Height-adjustable monitors are most widespread in the public sector where 63% of employees use them. In the private sector, the figure is 52%.
- More men (59%) than women (51%) use a height-adjustable monitor.
- Fewer people aged 50+ (49%) have height-adjustable monitors.

Similar results apply in relation to the ergonomic layout of the workplace in other areas. Thus it is generally heavy users, public sector employees, men and younger persons who have the ergonomically best equipped workplaces.

Heavy users and women suffer most from pain

The German survey shows that 81% of all respondents have experienced one or more different kinds of discomfort at the end of a working day. This is higher than the corresponding figures for Denmark and Sweden.

- The most frequent symptoms are eye strain (48%), back pain (48%) and neck pain (43%).
- In addition, 31% state that they have had shoulder pain after work, while 26% have experienced low back pain.

The results of the analysis show that:

- 82% of heavy users have experienced discomfort at the end of a working day.
- There is a higher proportion of women (85%) than men (77%) who state that they have experienced one of the five types of discomfort.

Note to figure: The table shows the proportion who answered that they have experienced neck pain, back pain, shoulder pain, low back pain or eye strain at the end of a working day.
Many Germans ignore work-related pain

Like the corresponding surveys for Denmark and Sweden, most Germans respond that they do not take action to address the problem if they feel pain or discomfort at the end of a working day. However, unlike the Danish and Swedish surveys, a large number of respondents in the German sub survey indicate that they have visited their GP and have been given a referral on account of their pains and discomfort.

The survey shows that it is largely younger people (18-34 years) who do not take action if they experience pain or discomfort at the end of a working day.

Figure 9: What did you do after noticing the pain?

- Neck pain
- Back pain
- Shoulder pain
- Low back pain
- Eye strain

- Did not take action
- Went to a physiotherapist, chiropractor, masseur etc. without a doctor’s referral
- Went to my GP
- Went to my employer

Men and heavy users most likely to get new IT equipment

The survey shows that 40% have got a new computer and 39% have got a new monitor within the past two years. Compared to Denmark, investments are not made as frequently in new IT equipment.

More investments in new computers are made for heavy users (22%) and men (22%) than for women (15%). This is also true for new monitors where 21% of heavy users and 20% of men have got new monitors.

“ErgoSensor is the world’s first intelligent technology that advises users on how to sit in an ergonomically correct position at their computer screen.”
More Germans than Swedes and Danes think that desktop monitor ergonomics are very important.

Overall, 66% say that they think it is very important that their desktop monitor is ergonomic. The in-depth analyses show the following differences:

- More heavy users (69%) than others (59%) consider desktop monitor ergonomics as being important.
- More women than men think it is important to have an ergonomic desktop monitor.
- Compared to younger users, older people tend to think that desktop monitor ergonomics are important.

**Figure 10: My desktop monitor is ergonomic and is e.g. height-adjustable**

<table>
<thead>
<tr>
<th>How many hours a day do you spend working at a computer?</th>
<th>Less than 4 hours</th>
<th>More than 4 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>59%</td>
<td>24%</td>
</tr>
<tr>
<td>Private</td>
<td>69%</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which sector do you work in?</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>73%</td>
<td>17%</td>
</tr>
<tr>
<td>Private</td>
<td>63%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>70%</td>
<td>20%</td>
</tr>
<tr>
<td>Male</td>
<td>63%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>18-34 yrs</th>
<th>35-49 yrs</th>
<th>50+ yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-34 yrs</td>
<td>62%</td>
<td>24%</td>
<td>14%</td>
</tr>
<tr>
<td>35-49 yrs</td>
<td>67%</td>
<td>23%</td>
<td>10%</td>
</tr>
<tr>
<td>50+ yrs</td>
<td>70%</td>
<td>16%</td>
<td>14%</td>
</tr>
</tbody>
</table>

The solution from Philips monitors

While this study shows that only 30% of Germans at their workplaces have been given an introduction on how to sit in an ergonomically correct position; Philips monitors offer products developed for them. ErgoSensor is a technology developed by Philips and incorporated in several of our office monitors. It guides the user on how to work most ergonomically correct in front of the monitor. The ErgoSensor will display a customized alert on the screen if the user sits too close or too far from the monitor. The alerts also give advice on the correct angle of your head and when to take a break and get away from the computer.