Quick Start Guide: Office

Office work shouldn't hurt

Back pain, sore necks and other Musculoskeletal Disorders (MSD) are a major cause of workers' disability and costs to workers, business and society. Eliminating and reducing MSD hazards at the office is one part of creating a safe workplace. Small changes at work can make a big difference in preventing the development of MSD.

Most people use computers in their work and at home. They use desktop computers, laptops, touch pads, tablets and cell phones. They work with them in offices, but also in warehouses, restaurants, automobiles, construction sites and at home. For simplicity, we will call all of these situations "Office Work". The goal of "Office Ergonomics" is to improve health and effectiveness during office work.

This Guide contains workplace fixes to help keep backs, shoulders, necks, wrists and eyes happy & healthy during office work. It was written mainly for small businesses. Its goal is to provide basic information and encourage firms to get started on preventing MSD at work. It is a part of a larger resource: *The MSD Prevention Guideline for Ontario* (www.msdprevention.com). For non-office work, see the companion resource, Quick Start Guide: General.

JOHN'S SORE NECK WAS GETTING WORSE...

After talking with his boss who had reviewed the *Quick Start Guide: Office*, John realized that he was leaning forward in his chair in order to see better and his head was tilted backwards in a "pigeon neck" posture. The *Quick Start Guide* helped them both understand the underlying problems: the computer screen was positioned too far away when it should have been at arm's length from John's eyes. The screen also wasn't at eye height, which allows for a downward gaze and therefore a reduction in fatigue and discomfort in both the neck and eyes.

To make matters worse, when John's boss asked about the last time he had had his prescription updated, John realized that his bifocals were an old prescription. After readjusting the computer screen distance and height and getting an updated prescription suitable for computer work, John's neck felt better.

Note: *Employers have a legal responsibility to provide a safe workplace under the Ontario Occupational Health and Safety Act. This includes improving the workplace and putting in place measures to protect workers from all hazards, including those related to musculoskeletal disorders.*

MYTHS

MYTH: There is a "correct" posture for office work: sit up straight!

FACT: There are many good working positions for office work.

MYTH: Sitting at work is more of a problem than standing at work.

FACT: Many people have more difficulties standing. Total sitting time, at work **and** at home is the bigger problem.

MYTH: Buying Sit-to-Stand desks prevents MSD at the office.

FACT: These desks can help some workers in certain jobs if combined with proper training.

MYTH : All office workers need new desks and chairs.

FACT: Adjusting or modifying existing equipment and adding some simple fixes (e.g. adjusting chair height) can address many MSD office hazards.

MYTH: Workers should not have pain or discomfort if they have ergonomic desks and chairs.

FACT: Even with good adjustable furniture and equipment, doing a single task in a single position creates fatigue and discomfort. How work is organized—tasks, breaks and supervision—is also critical to preventing MSD.

MAKING A START

Starting is the most important part of reducing back pain, sore necks, tired eyes and other Musculoskeletal Disorders (MSD).

A workplace free of MSD hazards protects workers from injuries, lets injured workers return to their jobs more easily and allows people with varying abilities to continue working: male or female; old or young; tall or short. For workers who have had an injury or illness – including MSD – a health care professional could use the materials in this guide as a starting point and adapt the recommendations appropriately.

This *Quick Start Guide: Office* and the companion *Quick Start Guide: General* will give businesses a good start.

ACTIONS

- Jump straight in. Start using these posters in your workplace inspections and safety talks and then make changes to remove or reduce any hazards found.
- Follow the 10 steps on the facing page for a more systematic approach.

Some of the ideas presented in the mini-posters may seem simple, but you can substantially reduce MSD hazards by applying these ideas throughout your office (and home).

SET UP A STANDARD OFFICE WORKSTATION

There is no single "correct" working position that fits everybody's work tasks and body and allows comfort for extended periods of time.

- Workers should receive training from their employer on how to adjust their office equipment.
- Workers should get their eyesight checked and corrected if necessary. If vision is not corrected for screen-based tasks, the following steps may not be effective in preventing fatigue and discomfort.
- A chair with adjustability is an important component of an office setup. It lets workers fit their workstation to their body and work: Feet on floor (or foot support), sit back on the seat, no pressure behind the knees, backrest with slight lean backwards, support for the low back (lumbar) area.
- Modify or adjust the furniture to place the keyboard at about elbow level with the mouse close to the side of the keyboard. The goal is to have the forearms approximately horizontal, with the wrists straight and not bent back.
- Modify or adjust the furniture or equipment to position the top of the screen at or below eye level and about an arm's length away.
- Set the lighting, computer and display settings to give sharp, good-sized text, good contrast and no glare.
- All the parts of the workstation have to work together: After adjusting the individual parts of workstation, fine-tune the setup so the workstation fits your body and tasks.

These steps are a good start but for comfortable and effective office work with computers, workers should also be able to:

- Look away from the screen often and perform non-screen based tasks to help reduce discomfort in the eyes and body, e.g., walk to the printer. These introduce breaks and pauses into work. Stretching can help too.
- Change your activity or posture when you feel they need to, but remember, fatigue creeps up slowly on you, so *Move early—before you feel fatigue*—and move often.

MSD PREVENTION IN 10 STEPS

1 MANAGEMENT COMMITMENT & LEADERSHIP

2 WORKERS' PARTICIPATION

3-4 FIND PROBLEMS

- Add MSD related hazards to walkthrough inspections.
- Use workers' reports of effort, pain and discomfort to help identify tasks with MSD hazards. Use previous injury reports.
- For a worker who has reported pain or MSD, perform an incident investigation of their work tasks.
- Get to the root or underlying cause of the MSD hazard.

5 PLAN TO FIX PROBLEMS

- Talk to workers to identify solutions to reduce or eliminate MSD hazards.
- Prioritize workplace changes over less effective worker-focused solutions: e.g., adjustable furniture rather than "sitting up straight".
- Before making a permanent change, test the fix, e.g., get a chair or docking station on a trial basis from a distributor.
- Be prepared to try a few fixes to find the right one for your workplace.

6-7 FIX PROBLEMS

- Make the change, but expect an adjustment period and possible effects on other processes.
- Give changes a fair trial by allowing workers to learn and become proficient with them before deciding on their effectiveness.

8 CHECK EFFECTIVENESS OF CONTROLS

- Check whether the changes have removed the original hazards and improved the work.
- Determine if the changes have introduced new hazards.

9 DOCUMENT LESSONS LEARNED

These steps are expanded upon in the Basic and Comprehensive Step-by-Step Guidelines:

https://www.msdprevention.com

SHOW COMMITMENT TO A SAFE WORKPLACE BY GETTING TOGETHER WITH WORKERS TO ELIMINATE MSD HAZARDS AND IMPROVE HEALTH.

10 FOLLOW UP

- If the changes are not working, return to step number 5, PLAN TO FIX PROBLEMS.
- Consider asking for outside help if either the problem or solution are unclear. See "NEED MORE HELP".

WORKPLACE FIXES TO KEEP OFFICE WORKERS' BACKS, SHOULDERS, NECKS, WRISTS AND EYES HAPPY & HEALTHY

POSTERS

The mini-posters describe what we can do to reduce fatigue, discomfort, MSD and improve effectiveness during office (and home) work.

1 **OFFICE ERGONOMICS**
2 **WORKING POSITIONS**
3 **SUPPORT THE BODY**
4 **SUPPORT THE ARMS**
5 **SEE**
6 **REACH**
7 **WORK SHOULDN'T HURT**

The posters describes common hazards found in Office work that can lead to MSD. They also give ideas on how to fix the work. You may recognize some or all of the hazards shown. This tells you that your workspace would benefit from MSD prevention actions.

HOW TO USE THE POSTERS

- Use the posters as guides during walkthroughs and inspections. On the back of the poster, write observations and ideas about possible fixes for hazards.
- Use the posters as a script to aid workers, supervisors and others during training and safety talks. Use the discussion to brainstorm possible fixes.
- Use the posters in the lunchroom or on the Health & Safety board to alert workers to potential MSD hazards in their work and their relationship to pain and discomfort.
- Keep looking for improvements!

Authorship: This document has been written by the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD) in collaboration with multiple researchers and workplace stakeholders. (www.CRE-MSD.uwaterloo.ca)

WHAT DO THE COLOURS ON THE POSTERS MEAN?

GREEN – No action required if tasks are not held or repeated for long periods and no MSD symptoms are reported. Continue to monitor for MSD symptoms and check after workplace or process changes.

YELLOW – Investigations and improvement needed in the longer term. Investigation and improvement needed immediately if MSD symptoms are present.

ORANGE – Further assessment or improvement needed immediately.

NEED MORE HELP?

This guide was primarily written for small businesses and its goal is to provide basic information to encourage firms to get started on preventing MSD. Larger organizations may also find it useful for training or safety talks. It is part of a larger resource: *The MSD Prevention Guideline for Ontario (www.msdprevention.com)*. The website includes a wide range of resources to help organizations of all sizes prevent MSD.

For non-office work, a *Quick Start Guide: General* is available at: *https://www.msdprevention.com/Quick-Start-Guide.htm.*

The Ontario Ministry of Labour has partners in many sectors who can provide resources and can answer your questions: *www.labour.gov.on.ca/english/hs/websites.php*

The Canadian Centre for Occupational Health and Safety has pages dedicated to the prevention of MSD: *www.ccohs.ca/topics/hazards/ergonomic*

The Association of Canadian Ergonomists (ACE) is a bilingual, professional association of individuals and organizations with a common interest in advancing ergonomics and human factors knowledge and practice: *https://ergonomicscanada.ca/en*

Contact a Canadian Certified Professional Ergonomist: *https://ergonomicscanada.ca/en/our-profession/certification*

The Canadian Standards Association (CSA) recently published a new guide: *Office ergonomics - An application standard for workplace ergonomics*. It can be accessed through a public library system or purchased from CSA.

For questions, comments and suggestions, please contact: info@msdprevention.com

For more info visit:
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Work shouldn't hurt

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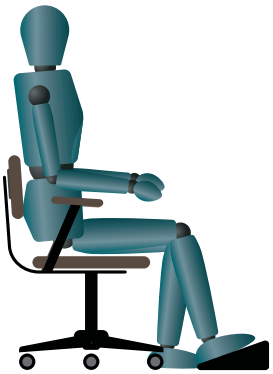

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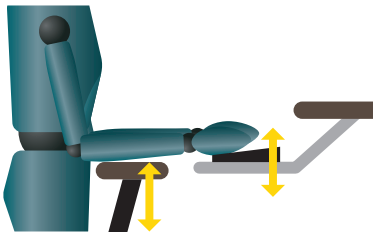

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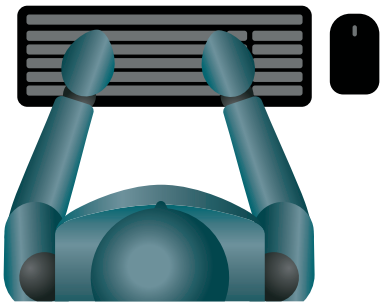

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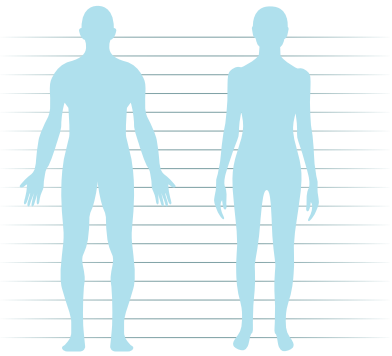

Office Ergonomics

1 WORKING POSITIONS
There is no single "correct" working position that fits everybody's work tasks and body and allows comfort for extended periods of time.

2 SUPPORT THE BODY
Support the back and legs in comfortable working postures with a chair, foot support or stool and reduce fatigue and discomfort.

3 SUPPORT THE ARMS
Support the arms and shoulders in comfortable working postures with chair armrests or the work surface and reduce fatigue and discomfort.

4 SEE
The body follows the eyes. The head and trunk can be pulled into awkward positions when workers strain to see their work. Get regular visions tests. Set up the workspace to allow clear, unobstructed vision of the screen and task.

5 REACH
Reduce long or awkward reaches for the keyboard, mouse or phone to decrease fatigue and discomfort. Away from the computer, reaching down and lifting below knee level and above shoulder height can overload the back and shoulders.

6 WORK SHOULDN'T HURT
Workers should talk with their supervisor, manager or business owner about pain at work and possible causes.

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Work shouldn't hurt

Key fixes for preventing MSD in office work

- Training on the adjustable features of the chair, workstation and equipment allows a worker to set them up to fit their body and the work they perform.
- Well-designed adjustable desks, chairs and equipment allow workers to move quickly and easily between different tasks and working positions.
- Remember that laptops, tablets and cellphones are used more and more for office work. Select the appropriate device and accessories for the work performed.
- When away from the computer workstation, keep items, especially heavier items between "knee and nose". Reaching or lifting objects below the knee puts high stresses on the spine so *Store it off the Floor*. Keep commonly used items below shoulder height as working and lifting with hands above shoulder height can easily fatigue the shoulders. See the Quick Start Guide: General for more details.
- For workers who have an injury or illness -including an MSD- a health care professional could use the materials in this Guide as a starting point and adapt the content appropriately.

1 WORKING POSITIONS

- There is no single "correct" working position that produces comfort for extended periods of time or that fits everybody's work tasks and body.
- Working positions include reclined sitting, leaning forward and standing, as well as sitting upright.
- As long as a worker can see, be supported, reach and work in comfort, a working posture is suitable, as long as the working position is changed regularly.

2 SUPPORT THE BODY

- Fatigue and discomfort can be reduced by supporting the back, thighs or feet with a chair, footrest or stool.

3 SUPPORT THE ARMS

- Fatigue and discomfort can be reduced by supporting the arms and shoulders in comfortable working postures with chair armrests or the work surface.

4 SEE

- The body follows the eyes. The head and trunk can be pulled into awkward positions when workers strain to see their work.
- Workers using visual displays should get their vision checked regularly. They should make sure they have the proper vision correction for office work (glasses or contact lenses).
- Setting the top of the screen at or below eye height allows a downward gaze angle and a comfortable neck posture. The screen should also be about an arm's length away.
- The screen should have sharp, good-sized text, good contrast and no glare.

5 REACH

- Keep the keyboard and mouse within a forearm's length of the front of the body and keep the mouse within shoulder width.
- Less used materials or equipment can be placed just outside this area e.g., phone.

INCLUDE BREAKS AND PAUSES AT WORK

- Even with good adjustable furniture and equipment, doing a single task in a single position creates fatigue and discomfort.
- Fatigue creeps up on the body and eyes. Vary work and working positions. Move early – before you feel fatigue – and move often.
- Stretching can help.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

What are we going to do today to make our workstations and workspace better?

Whatever changes you make, check that you are not creating any new problems.

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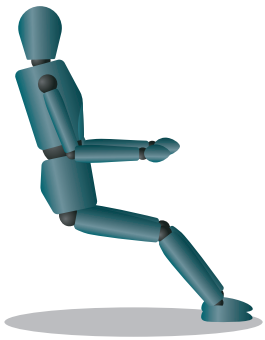
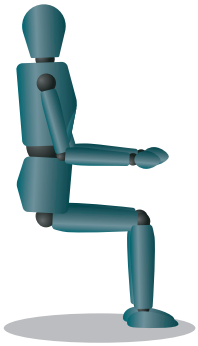
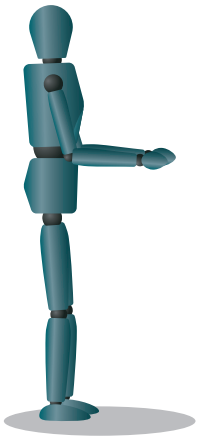
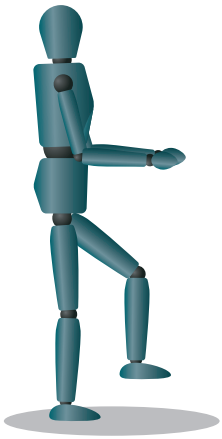
Reclined sitting in chair	Upright sitting in chair	Standing	Standing with one foot supported
			

Change it up: Move!

- There is no single "correct" working position that fits everybody's body, work tasks, and allows comfort for extended periods of time.
- Changing position and task regularly is critical for health and effectiveness.
- Working positions can include reclined sitting, leaning forward or standing, as well as sitting upright.

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Work shouldn't hurt

Change it up: Move!

- There is no single "correct" working position that fits everybody's work tasks and body and allows comfort for extended periods of time.
- Changing position regularly is critical to health and effectiveness.
- The working positions for a particular task depend on factors such as the concentration needed and whether long reaches are required.
  - **Sitting vs Standing:** Spending long periods of time continuously sitting OR standing is detrimental to health. Workers generally have more difficulties continuously standing than sitting at work.
  - **Sitting:** Best for tasks requiring high concentration, high precision or demanding visual requirements; little if any lifting or long reaches.
  - **Standing:** Best for tasks requiring a lot of movement and time spent away from the workstation or having long reaches or lifting, e.g., a postal clerk receiving parcels.
  - **Sit-Stand:** Best for tasks requiring high concentration, high precision or demanding visual requirements. A well-designed adjustable sit-stand desk allows change in working posture.
  - **Supported Standing:** Best when most tasks are suitable for standing but a worker would benefit from a short break from standing, e.g., a fold down stool for a supermarket cashier to "perch" on between customers.
  - **Sitting and Standing:** Best when workers need to be at eye level with a customer or client, when a variety of tasks are performed that require both sitting and standing positions, when a job involves movement to get to other equipment or when a worker lifts occasionally.
  - All the parts of the workstation have to work together: After adjusting the individual parts of the workstation separately, fine-tune the setup so the workstation fits your body and tasks.
- Every worker has a different body. For example, some workers may find sitting more stressful than standing. This will affect which working postures they find tolerable. This is especially true for workers recovering or returning to work from MSD or other injuries and illnesses.
- Office tasks are commonly combined with non-office tasks, e.g., occasionally working on a computer terminal at the side of an assembly line. This Guide can be used for the "office" related tasks and companion document, the *Quick Start Guide: General* could be used for non-office related tasks.

INCLUDE BREAKS AND PAUSES AT WORK

- Changing tasks and moving between, sitting and standing, reclined sitting, or walking create breaks and pauses during work and helps avoid the negative effects of prolonged office work.
- For Sit-Stand desks, try moving between sitting and standing about every 20 minutes as a start. Listen to your body. Workers may find that more or less time sitting or standing works best for them, e,g., they find that standing is more tiring or painful than sitting for them.
- Fatigue creeps up on the body and eyes. Vary work and working positions. Move early – before you feel fatigue – and move often.
- Stretching can help.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

What are we going to do today to make our workstations and workspace better?

Whatever changes you make, check that you are not creating any new problems.

For questions, comments and suggestions please contact:
info@msdprevention.com

1. BACK (LUMBAR) SUPPORT
2. FOREARM SUPPORT
3. THIGH SUPPORT
4. SPACE BEHIND KNEES
5. ELEVATED FOOT REST

Support: Reduce fatigue by supporting your body!

- An adjustable chair is a key piece of equipment that allows workers to move quickly and easily between different tasks and working positions.
- Different working postures need different types of support. Reduce fatigue by supporting the back, thighs and feet with a chair, the floor, a foot support, or a stool.
- Training on adjustable chair features, workstation and equipment allows a worker to set them up to fit their body and the work they perform.

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Work shouldn't hurt

Support: Reduce fatigue by supporting your body!

- Depending on the equipment available and the working postures chosen, support for the body may come from a chair, a stool, a foot support or the floor.
- Training on all the adjustable features of the chair, allows a worker to set it up to fit their body and the work they perform.
- The chair seat should provide comfortable thigh support and leave a space between the front of the seat and the back of the knee when the worker is sitting back in the chair.
- A foot-rest may be required for some workers and workstation arrangements if a worker's feet do not rest comfortably on the floor.
- The chair should have a lumbar support that is adjustable in height.
- All the parts of the workstation have to work together: After adjusting the individual parts of the chair separately, fine-tune the setup so it fits your body and tasks.

INCLUDE BREAKS AND PAUSES AT WORK

- *Change it Up*: Even with good furniture and equipment, doing a single task in a single position will create fatigue and discomfort.
- Changing tasks and moving between, sitting and standing, reclined sitting and walking helps avoid the negative effects of prolonged office work.
- Fatigue creeps up on the body and eyes. Vary work and working positions. Move early – before you feel fatigue – and move often.
- Stretching can help.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

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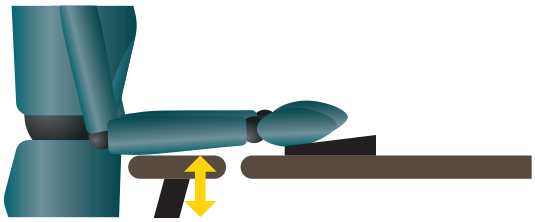
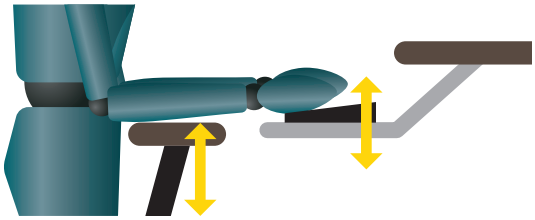
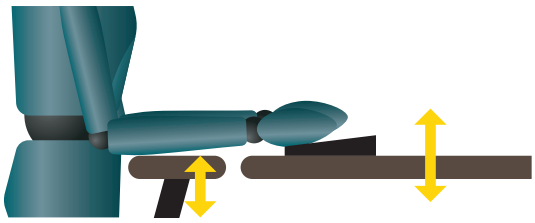


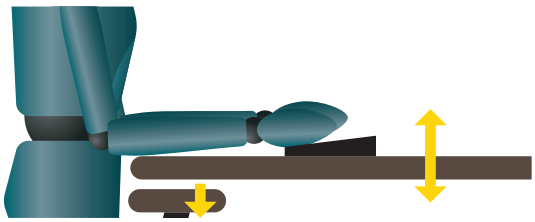
Fixed height desk with armrests on chair



Keyboard tray and arm rests on chair



Adjustable height table – Option A



Adjustable height table – Option B

Support: Reduce fatigue by supporting your arms!

- Arms need support during keying and mousing. This lets the shoulders stay relaxed and the wrist and hands work in comfortable postures.
- Different working postures need different types of support. Reduce fatigue by supporting the arms and shoulders by armrests, a keyboard tray, palm rests or the work surface.
- Well-designed adjustable desks, chairs and equipment allow workers to move quickly and easily between different tasks and working positions.
- Training on the adjustable features of the chair, workstation and equipment allows a worker to set it up to fit their body and the work they perform.

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Work shouldn't hurt

Support: Reduce fatigue by supporting your arms!

- Arms need support during keying and mousing to allow the shoulders to stay relaxed. The workstation should be set up so the shoulders are comfortable, the upper arm is relaxed and close to the side of the body and the wrist is in a comfortable position.
- Depending on the equipment available and the working postures chosen, support for the arms and shoulders may come from chair arm rests, a keyboard tray, palm rest or the work surface.
- Training on all of the adjustable features of the chair, workstation and equipment allows a worker to set it up to fit their body and the work they perform.
- Four common arm support situations:

1. **Fixed height desk with armrests on chair:** Adjust armrests for fit and comfort. Now adjust the chair height so the armrest height is the same as the desk surface. If this isn't possible, even with a foot-rest, a keyboard tray may help.
2. **Keyboard tray and arm rests on chair:** Adjust chair height and armrests for fit and comfort. Then adjust keyboard tray height to armrest height: Rest the meaty part of the hand – not the wrist. Alternatively, remove "wrist rest" and use the support of the armrests. Note: Avoid or change keyboard trays with no room for mouse.
3. **Adjustable height table – Option A:** After adjusting chair and armrests height for fit and comfort, adjust desktop height to arm rest height. Position keyboard and mouse close to edge of desk and use the support of the armrests, but don't rest the wrists on the table edge.
4. **Adjustable height table – Option B:** After adjusting the chair height for fit and comfort, adjust the desktop height to match elbow height. Push keyboard back about 30cm (12") from front edge of desk. Move chair close to table. Rest the whole forearm on the table but avoid pressure on the elbows. Note: If armrests get in the way, lower them or swing them out of the way.

- All the parts of the workstation have to work together: After adjusting the individual parts of the workstation separately, fine-tune the setup so the workstation fits your body and tasks.

INCLUDE BREAKS AND PAUSES AT WORK

- *Change it Up*: Even with good furniture and equipment, doing a single task in a single position will create fatigue and discomfort.
- Changing tasks and moving between, sitting and standing, reclined sitting and walking helps avoid the negative effects of prolonged office work.
- Fatigue creeps up on the body and eyes. Vary work and working positions. Move early – before you feel fatigue – and move often.
- Stretching can help.

MARY'S WRISTS AND SHOULDERS WERE HURTING...

Mary's wrists and shoulders were sore after a day's work. This *Quick Start Guide* helped her understand the underlying problems:

Her desk was higher than her elbows. This meant that to use her keyboard and mouse, she had to hold her arms up and her elbows out from the side of her body leading to very tense shoulders.

Raising her chair height and supporting her feet on a footrest brought her armrest up to desk height and allowed her arms and shoulders to be relaxed. Mary could now work much more comfortably.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

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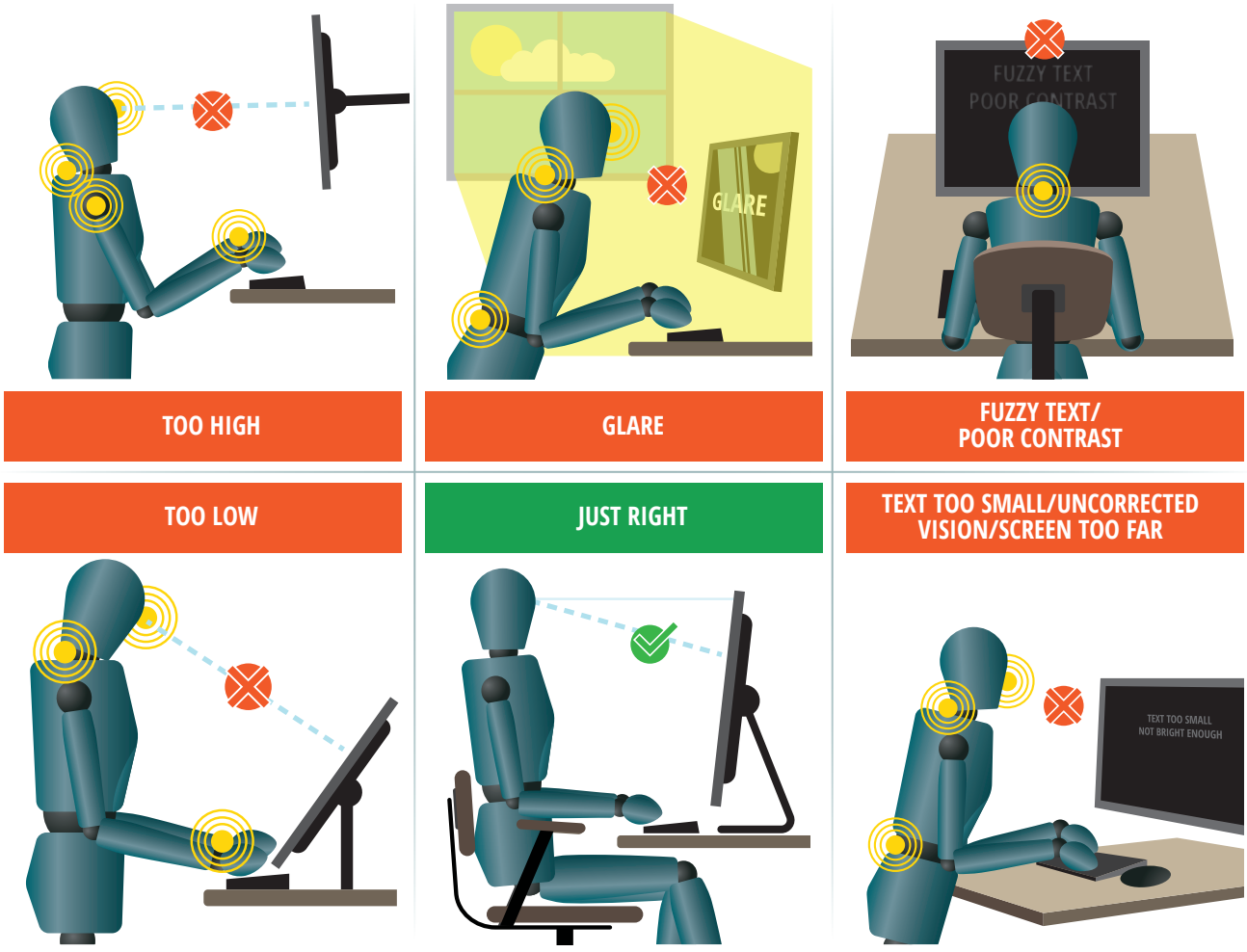
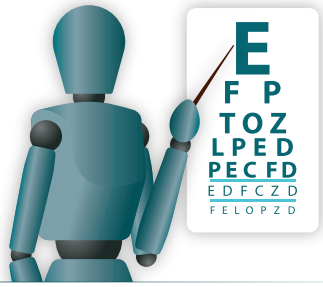


See: Your body follows your eyes

- The body follows the eyes. The head and trunk can be pulled into awkward positions when workers strain to see their work.
- Set the top of the screen at eye height or below and the screen about an arm's length away and allow a clear, unobstructed view of the screen and task.
- The screen should have sharp, good-sized text, good contrast and no glare.
- Workers using visual displays should get their vision checked regularly. They should make sure they have the proper vision correction for office work (glasses or contact lenses).



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Work shouldn't hurt

See: Your body follows your eyes

- The body follows the eyes and the head and trunk can be pulled into awkward positions when workers strain to see things. These positions cause fatigue and lead to eyestrain.
- All the parts of the workstation have to work together: After adjusting the individual parts of the workstation separately, fine-tune the setup so the workstation fits your body and tasks.

VISION

- Workers may not realize that they require corrective lenses or that their vision may not be sufficiently corrected for using display screens.
- Workers using visual displays should get their vision checked regularly. They should make sure they have the proper vision correction for office work (glasses or contact lenses).
- Even a good computer workstation, chair and display screen cannot compensate for uncorrected vision. A fatiguing head forward "pigeon-neck" position is common with poorly corrected vision or bifocals.

SCREEN POSITION

- Setting the top of the screen at eye height or lower allows a downward gaze angle. This helps reduce fatigue and discomfort in the neck and eyes.
- As a starting point, adjust the screen to be about arms length away from your eyes: If it is too far away workers may lean forward which can lead to a fatiguing "pigeon neck" posture. If it is too close, it tends to create eyestrain and discomfort.
- Place screen directly in front to minimize twisting of head and torso.
- Position the screen or workstation facing away from windows or light sources to eliminate glare.

SCREEN

- The screen should have sharp good-sized text, good contrast and brightness.
- Adjust the text on the screen so it can be read clearly at arm's length. Workers with bifocal or progressive lenses should not have to tilt their head back to see clearly. See "Vision" above.
- Adjust computer settings – found under "Accessibility" or "Ease of Access" – to make reading the screen easier.

MOBILE COMPUTING

- Adding an external screen, docking station, mouse or external keyboard to laptop computers reduces fatigue and discomfort for longer duration use.
- Users of tablet computers or cell phones for office work should select external keyboards, stands, supports or tablet holsters, pouches or pockets. These accessories, and limiting the time spent using the devices, can reduce fatigue and discomfort.

INCLUDE BREAKS AND PAUSES AT WORK

- Looking away from the screen often and performing non-screen based tasks regularly can help reduce fatigue and discomfort in the eyes and body.
- Fatigue creeps up on people. Vary tasks. Move early – before you feel fatigue – and move often.
- Stretching can help.

JOHN'S SORE NECK WAS GETTING WORSE...

After talking with his boss who had reviewed the *Quick Start Guide: Office*, John realized that he was leaning forward in his chair in order to see better and his head was tilted backwards, a "pigeon neck" posture. The *Quick Start Guide* helped them both understand the underlying problems: the computer screen was positioned too far away when it should have been at arm's length from John's eyes, nor was it at eye height, which allows for a downward gaze reducing fatigue and discomfort in both the neck and eyes.

To make matters worse, when John's boss asked about the last time he had had his prescription updated, John realized it had been a long time and in fact his bifocals were an old prescription. After readjusting the computer screen distance and height and getting an updated prescription suitable for computer work, John's neck felt better.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

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Reach: Keep it close

- Set up the workspace with frequently used equipment conveniently close to your body.
- Keep frequently used equipment within a forearms distance
- Long reaches to equipment can increase fatigue and discomfort.
- Avoid reaches outside shoulder width when using your mouse.
- When working away from the workstation, reaching down to floor level and lifting below knee height and above shoulder height can overload the back and shoulders.

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Work shouldn't hurt

Reach: Keep it close

- Frequently performed work should be performed closer to the body.
- The mouse and keyboard should be less than a forearm's length in front of the body.
- The keyboard and mouse should normally be at about elbow height and they should be used on a flat surface. The keyboard should not be tilted up. The goal is to have the forearms approximately horizontal, with the wrists straight and not bent back.
- If the number key-pad is not used heavily, a keyboard without a number key-pad allows the keyboard to be placed more centrally. This avoids workers having to reach for the mouse outside their shoulder width.
- If a worker uses a mouse with their right hand, they could consider using the mouse with their left hand where it could be positioned inside their shoulder width.
- Paper documents should be positioned close to the computer display to minimize awkward head positions. A document holder can be used to raise and hold the documents at screen height. A sloped document support allows for ease of viewing and handling.
- All the parts of the workstation have to work together: After adjusting the individual parts of the workstation separately, fine-tune the setup so the workstation fits your body and tasks.
- When working away from the workstation:
  - Lifting at the office: Reaching down to the floor and lifting objects below knee level puts high stresses on the spine. *Store it off the Floor*, reduces stress on the body.
  - Reaching and lifting with the hands above shoulder height can easily fatigue the shoulders. Keep commonly used items below shoulder height.

INCLUDE BREAKS AND PAUSES AT WORK

- Move between different tasks to help reduce fatigue and discomfort.
- Perform other tasks like walking to a printer, filing, or water bottle filling as a short break away from the workstation.
- Fatigue creeps up on people. Vary tasks and working positions. Move early – before you feel fatigue – and move often.
- Stretching can help.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, in an office building, home office, automobile or in the field.

What are we going to do today to make our workstations and workspace better?

Whatever changes you make, check that you are not creating any new problems.

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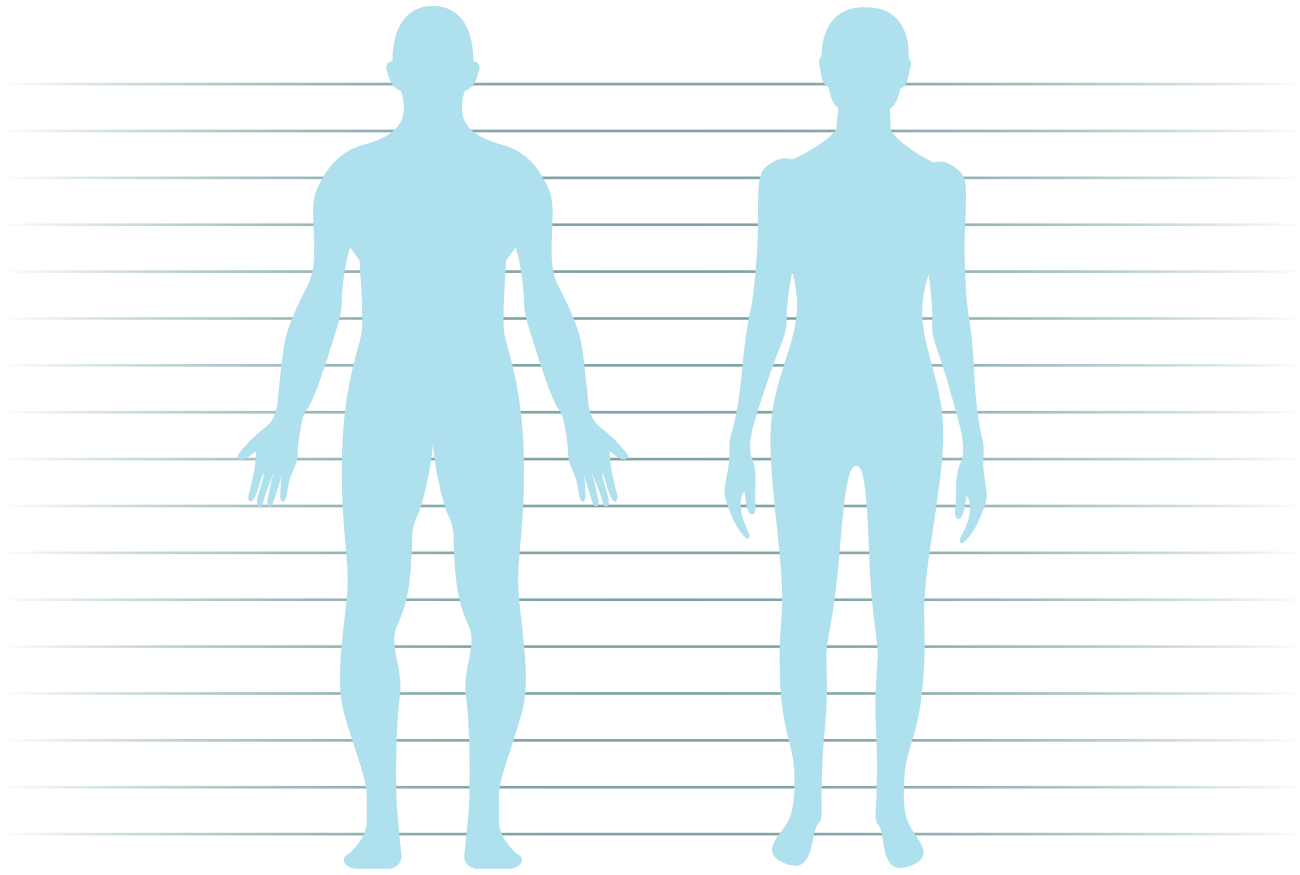

Work shouldn’t hurt

- We all suffer occasional pain and discomfort at work, but work shouldn’t hurt.
- Talk with your supervisor, manager or boss if you have pain at work.
- After attending to workers’ pain and discomfort, take action to control MSD hazards.
- Use this diagram to help map pain and discomfort patterns in your workplace.

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Work shouldn’t hurt

Work shouldn't hurt

WHAT TO DO IF WORKERS HAVE PAIN

- Workers should talk with their supervisor, manager or business owner about their pain at work and possible causes.
- Attend to worker's pain and discomfort.
- Pain that doesn't disappear before the start of work on the next day or continues over a weekend is a signal to speak up immediately.
- Use the discomfort diagrams with individuals or groups of workers to pinpoint areas in the body of concern.

DID YOU KNOW?

- We all suffer occasional pain and discomfort, but work shouldn't hurt.
- MSD hazards can lead to fatigue, discomfort, pain and even disability in muscle, tendons nerves and ligaments. These hazards can also make previous MSD problems worse.
- A job that overloads the body and doesn't allow it to recover and adapt, leads to discomfort, pain and disability after weeks, months or years.
- We all have different bodies. We shouldn't be surprised that some people develop pain and discomfort in a job with MSD hazards while another person may not.

JOHN'S SORE NECK WAS GETTING WORSE...

John talked with his boss and realized that he was leaning forward in his chair with his head tilted backwards – a "pigeon neck" posture. The *Quick Start Guide* helped them understand the underlying problems: his monitor was too far away and his bifocals were an old prescription. After readjusting the screen and getting new glasses, John's neck soon felt better.

IMPROVE WORK

- Ask yourself and others, *"Why do people feel fatigued or sore when doing office work?"* and keep asking "why" until you get a good answer!
- Once the underlying cause of the problem has been identified, employees and managers working together can control hazards and improve work best.
- Use these ideas for any office work, whether in an office building, home office, automobile or in the field.

What are we going to do today to make our workstations and workspace better?

Whatever changes you make, check that you are not creating any new problems.

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Sit-Stand Workstations CHANGE IT UP!

SITTING

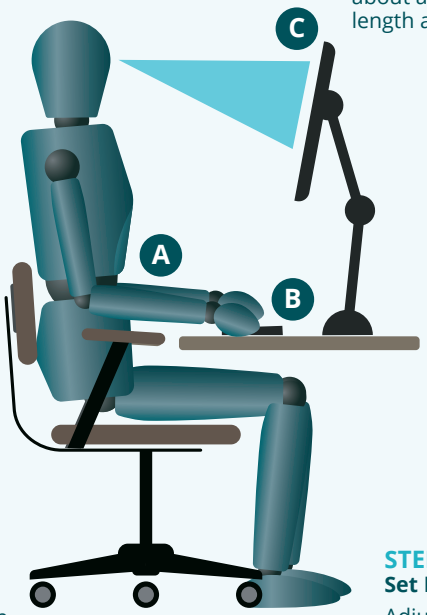
Introduce regular breaks and pauses into work. Stretching can help too.

STEP 1:
Set Chair Height

Knees and hips should be at 90° angles (thighs horizontal; lower legs vertical). Feet should be flat on the floor.

STEP 2:
Set Chair Settings

Adjust backrest and seatpan such that the low back is well supported and there is no contact between the seat pan and back of the knees.



STEP 3:
Set Desk Height

Adjust desk height to be at or slightly below elbow height.

STEP 4:
Set Your Desk

Have your forearms approximately horizontal, with your wrists straight and not bent back.

The keyboard should be at about elbow level with the mouse close to the side of the keyboard to prevent side reaching.

STEP 5:
Set Monitor Height

The top of the computer screen should be at or below eye level and about an arm's length away.

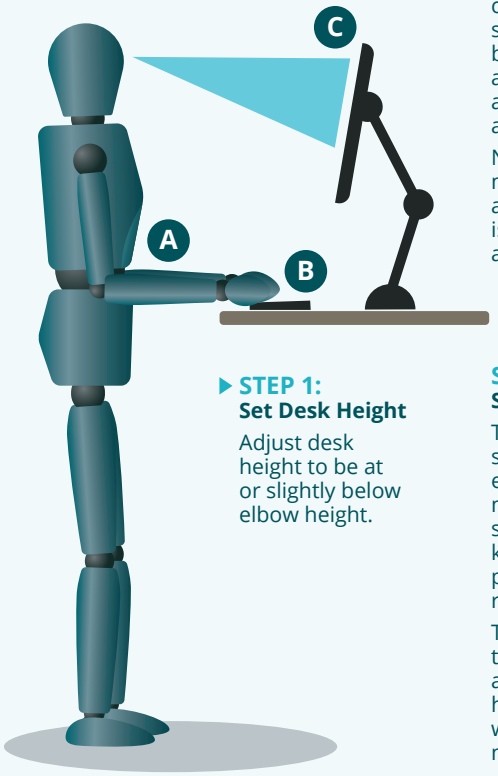
Move early, *before* you feel pain, and move often:

- Change from sit to stand every 30 minutes.
- Build your tolerance to standing starting with 5-15 min periods.
- Don't sit or stand for more than 30 min at a time and no more than 4 hours of standing in the work day.

When Switching Between Sitting and Standing:

- **A** Set your desk height (ensure forearms are horizontal).
- **B** Make sure your keyboard is about elbow level and your mouse is close to the keyboard.
- **C** Ensure your monitor screen is at eye level. The location of the monitor changes between sitting and standing and needs to be adjusted. Keyboard and mouse placement may change too.

STANDING



STEP 1:
Set Desk Height

Adjust desk height to be at or slightly below elbow height.

STEP 2:
Set Your Desk

The keyboard should be at about elbow level with the mouse close to the side of the keyboard to prevent side reaching.

The goal is to have the forearms approximately horizontal, with the wrists straight and not bent back.

STEP 3:
Set Monitor Height

The top of the computer screen should be at or below eye level and about an arm's length away.

Note: The monitor height above the desk is not the same as in sitting.

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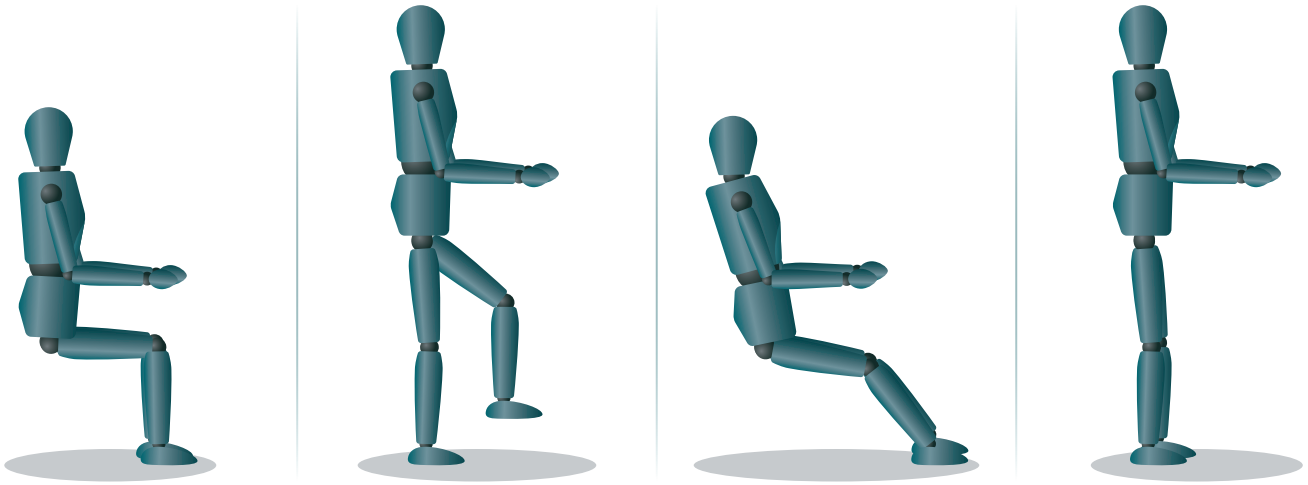
Work shouldn't hurt

Sit-Stand Workstations

TRANSITION EARLY & OFTEN!



DID YOU KNOW?

- Sit-Stand workstations when used correctly, can help relieve musculoskeletal discomfort, specifically low back pain.
- Switching from 8 hours of sitting to 8 hours of standing and vice versa will not prevent MSDs – try to change between sitting and standing at least every 30 minutes.
- Sit-Stand workstation usage training can strengthen the benefits of sit-stand workstations. Incorrect use can have negative effects, such as increased discomfort.
- When raising and lowering the Sit-Stand workstation remember to also adjust other office equipment such as your monitor location when transitioning. Monitor height above the desk and distance from your eyes in Sitting is not the same in Standing.
- For a standard 8 hour workday, aim for a 1:1 ratio (4 hours total sitting and 4 hours standing) with frequent transitions – change between sitting and standing at least every 30 minutes. Avoid long continuous periods of time in either sitting or standing.
- Increased Total Daily Sitting Time (i.e. combining time spent sitting at work & time spent sitting during leisure activities) increases the risk of cardiovascular disease. Sit-Stand workstations can help you reduce overall total sitting time.
- Sit-Stand workstations can offer opportunities to stand, thus decreasing time sitting at work, and help you reduce overall sitting time.

Sit-Stand workstations are one potential component of a holistic ergonomics program that involves engineering and administrative controls for work organization and workstation design.

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