

## Visual display units (VDU)



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Characteristics of the equipment

3



Adjusting a monitor

4



Adjust the keyboard

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Adjust the mouse

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Workplace design

The **RIGHT USE AND DESIGN** of the workplace helps to improve our comfort at work

## What is a visual display unit (VDU)?

It is a set of equipment comprised of a **screen** (VGA, LCD, CRT, plasma, etc.), **a keyboard and a mouse**.

## Am I a VDU user?

VDU users are people who spend over **4 hours a day** or **20 hours a week** of actual working time using this equipment.

## Health effects

The main health **effects** that can be associated with continuous use of this equipment are **eye fatigue** and **musculoskeletal disorders (MSD)**.

## Are we at risk?

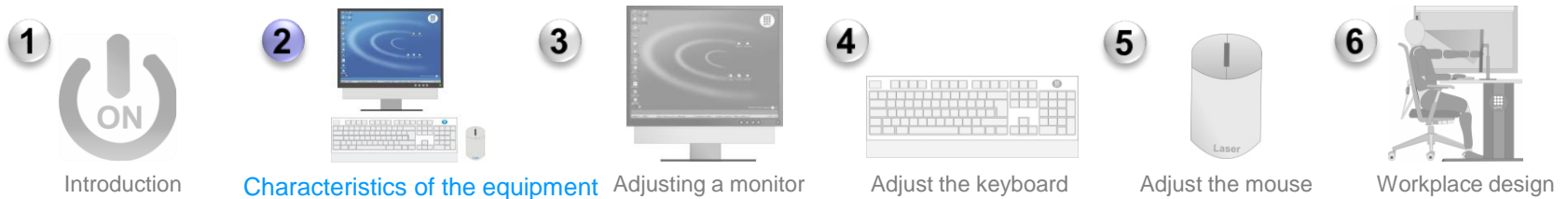
**Problems associated** with the use of this equipment could appear **mainly** due to:

- **Bad design** of the workplace (unsuitable distribution of the equipment) or
- **Unsuitable working habits** (adoption of awkward positions and working with tensed muscles).



Visual display unit (VDU)

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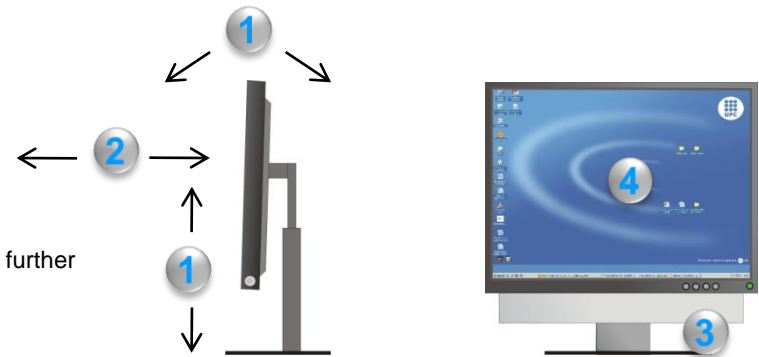


### Characteristics of the work equipment that help us to ADAPT THE WORKPLACE

#### Characteristics of the work equipment

##### MONITOR

- 1 **Height and tilt** can be adjusted.
- 2 The **low weight** of current monitors means that they can be moved closer or further away without too much effort.
- 3 The **brightness and contrast** can be adjusted easily.
- 4 The screen does **not flicker and is anti-glare**.



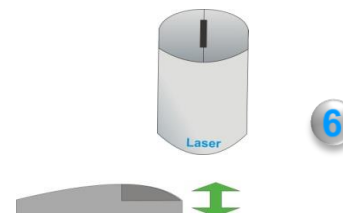
##### KEYBOARD

- 5 The **height** can be adjusted.



##### MOUSE

- 6 The mouse **can be adapted** to fit the hand.



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2 Characteristics of the equipment [Adjusting a monitor \(1/2\)](#)

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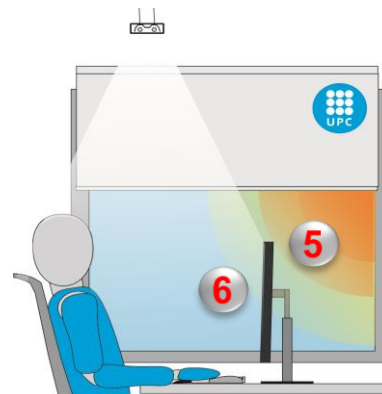
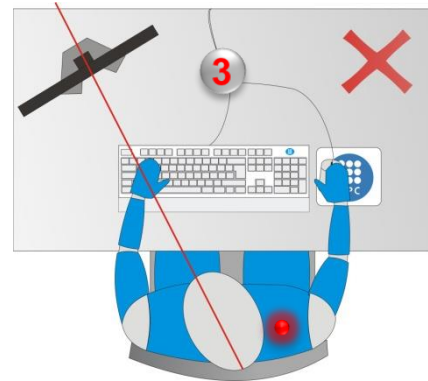
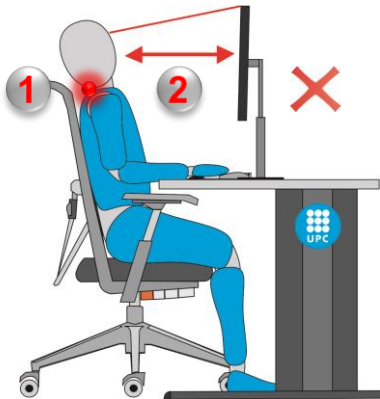
5 Adjust the mouse

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### AVOID...



1

**Wrong monitor height.** The top of the screen is **above** or **below** eye level (this position forces you to extend or flex your neck).

2

**Wrong distance between eyes and monitor.** This is particularly important **when the screen is too close to the eyes** (less than 50 cm).

3

**Monitor positioned on one side.** When the monitor is positioned on one side, you have to turn your neck to look at it.

4

**Image on the screen is small (text, numbers, graphics or images).** In this situation, we unconsciously bend our heads forward to get closer to the screen.

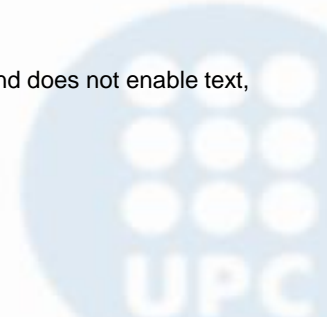
5

**Glare.** Interior or exterior light that falls on the screen is reflected into our eyes.

6

**Contrast.** The level of contrast is unsuitable and does not enable text, graphics or images to be viewed comfortably.

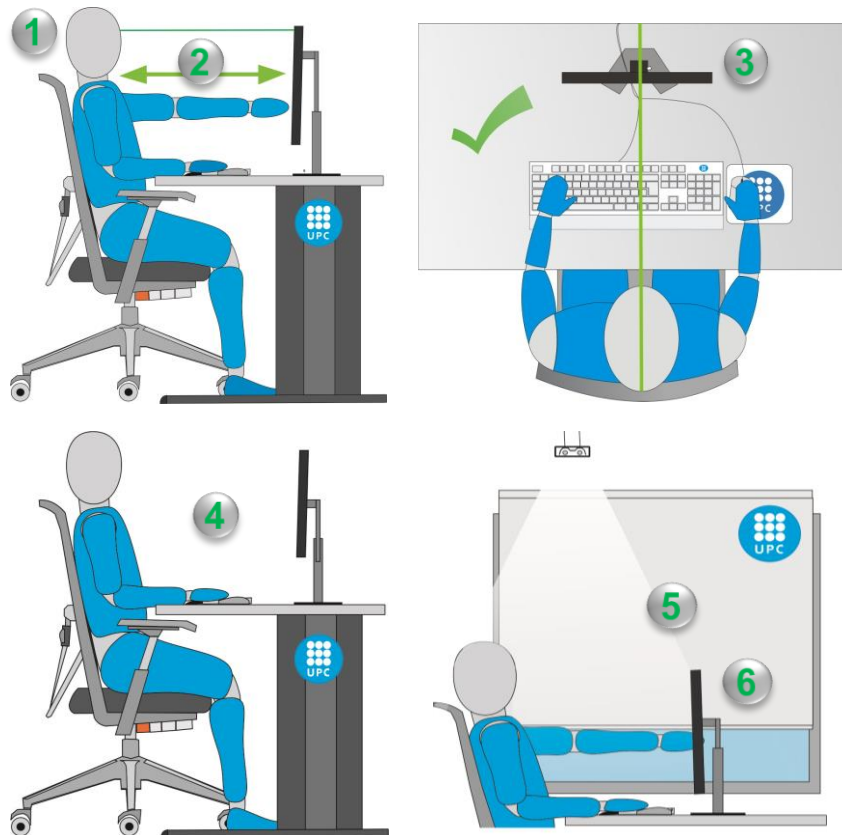
Joints at risk



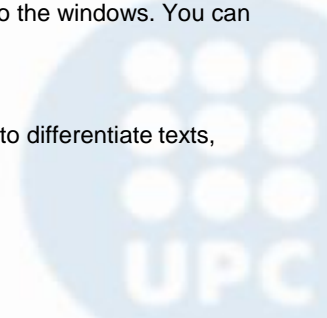
## Visual display units (VDU)



Adopt **NEUTRAL POSTURES** when you are working and **SUITABLE DISTANCES** between eye and screen. Follow these **RECOMMENDATIONS**:



- 1 **Monitor height.** The **top edge of the monitor** should be at **eye level** to ensure that your neck is in a neutral position. If you use progressive lenses, the screen should be as low as possible.
- 2 **Distance between eyes and monitor.** A distance of **between 60 and 80 cm** is recommended (eyes get tired faster over short distances than over long distances).
- 3 **Position of the monitor.** The monitor should be positioned **in front of the person** so that he/she does not have to turn her neck.
- 4 **Size of text, images or graphics.** These should be the right size to be **viewed easily**, without having to get closer to the screen (i.e. with your body in a neutral posture). Increase the size of the text or the images. If this is not possible, move the monitor closer to you.
- 5 **Glare.** Reduce the direct incidence of the sun using curtains and blinds. The monitor should be perpendicular to the windows. You can tilt the screen to reduce reflection of light.
- 6 **Contrasts.** Adjust the contrast on the monitor to differentiate texts, graphs and images.



## Visual display units (VDU)



1 Introduction



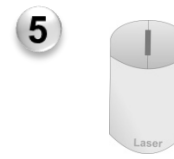
2 Characteristics of the equipment



3 Adjusting a monitor



4 Adjust the keyboard (1/2)

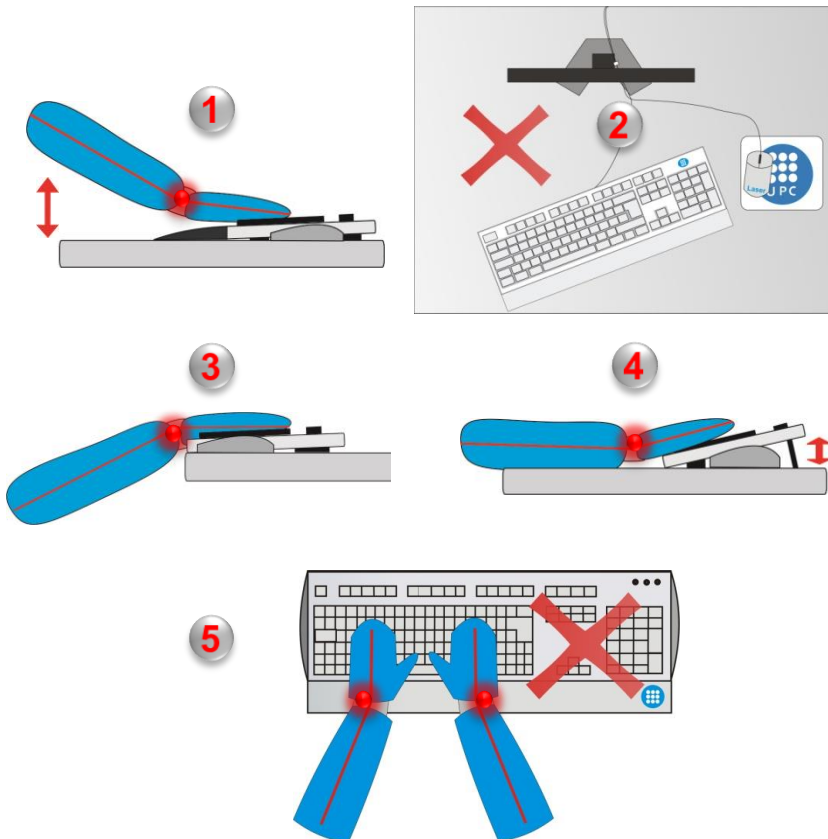


5 Adjust the mouse



6 Workplace design

### Avoid AWKWARD POSITIONS OF THE WRIST



1 **No support for wrists and part of forearms.** This situation leads to shoulders being tensed continuously.

2 **Uneven support.** The keyboard is not parallel to the edge of the table, which means that the support for the arms is uneven, and one arm is overexerted more than the other.

3 **Keyboard at the edge of the table.** In this situation, there is not enough space to support wrists and forearms.

4 **Extension of the wrists.** The keyboard is tilted too much, due to the use of the legs at the back of it. This situation leads to extension of the wrists.

5 **Lateral deviation of the wrists.** Forearms, wrists and hands are not aligned.

**Joints at risk**



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1 Introduction



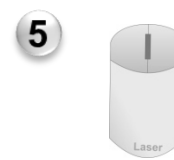
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4 Adjust the keyboard (2/2)

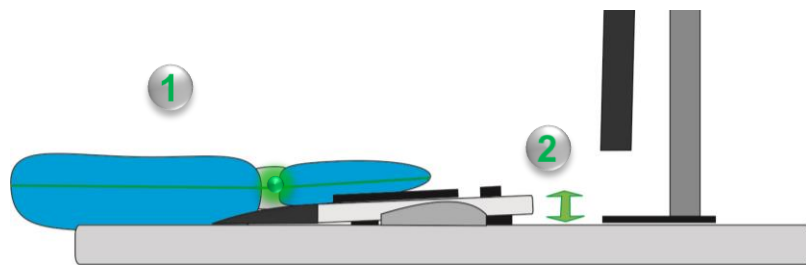


5 Adjust the mouse



6 Workplace design

Keep your joints in **NEUTRAL POSITIONS**. Follow these **RECOMMENDATIONS**:



- 1 **Support your forearms, wrists and hands.** This will help you to **reduce tension** in your shoulders. When you are working, your shoulders should be relaxed.  
Leave enough space **in front of the keyboard** (minimum 10 cm) to support your wrists and part of your forearms.

- 2 **Keyboard tilt.** It is better **not to use the legs at the back of the keyboard** to reduce wrist extensions (you should ensure that your **posture is neutral**).

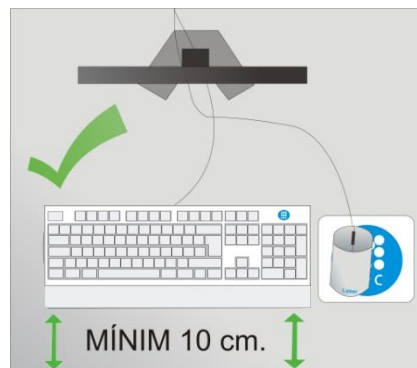
- 3 **Forearms, wrists and hands aligned.** To ensure that you adopt neutral postures at work, you should always keep your forearms, wrists and hands aligned.

- 4 **Keyboard parallel to the edge of the table.** This ensures that both arms are supported equally.

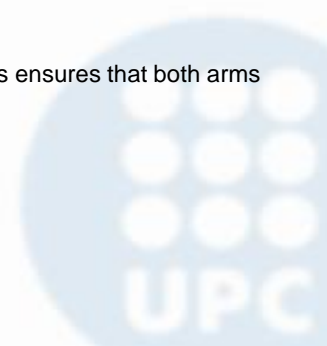
- **Joints in neutral positions**



3



4



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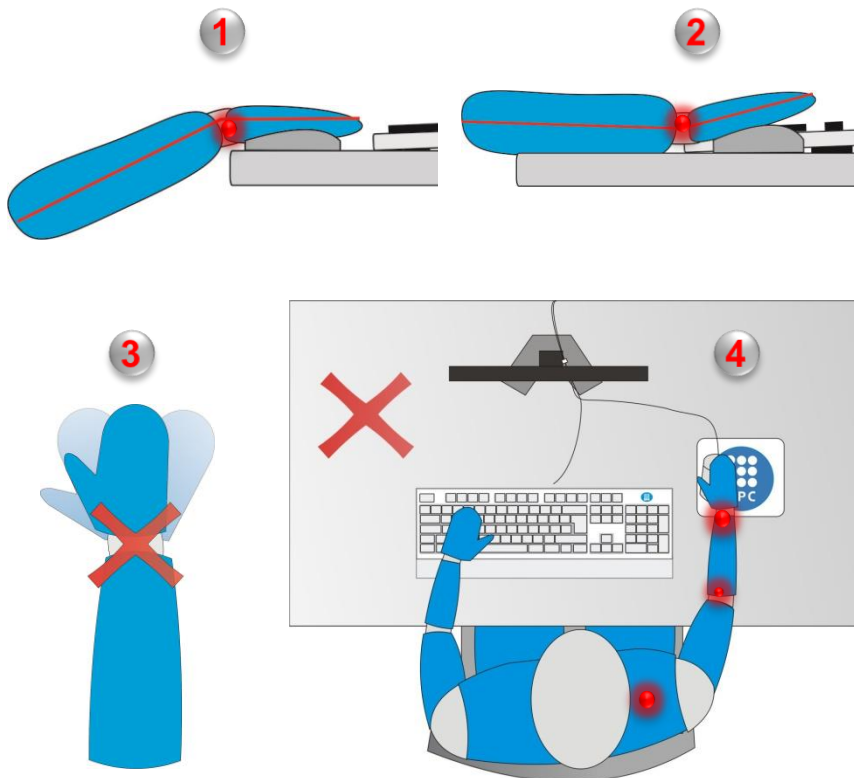


Adjust the mouse (1/4)
- 6**



Workplace design

If you work continuously with the mouse,  
**AVOID...**



- 1** No support for the arm. This leads to tension in the arm and neck.
- 2** Extension of the wrist. Mice that are too high force you to extend your wrist (awkward postures).
- 3** Lateral deviation of the wrist. Lateral movement of the wrist to move the mouse from right to left.
- 4** Mouse too far away. This forces you to adopt awkward positions. This situation normally occurs when the cable is too short or due to unsuitable work habits.
- Mouse is too small. This forces you to clasp your hand.
- Lack of space to move the mouse.

 **Joints at risk**

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1 Introduction



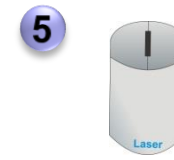
2 Characteristics of the equipment



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4 Adjust the keyboard

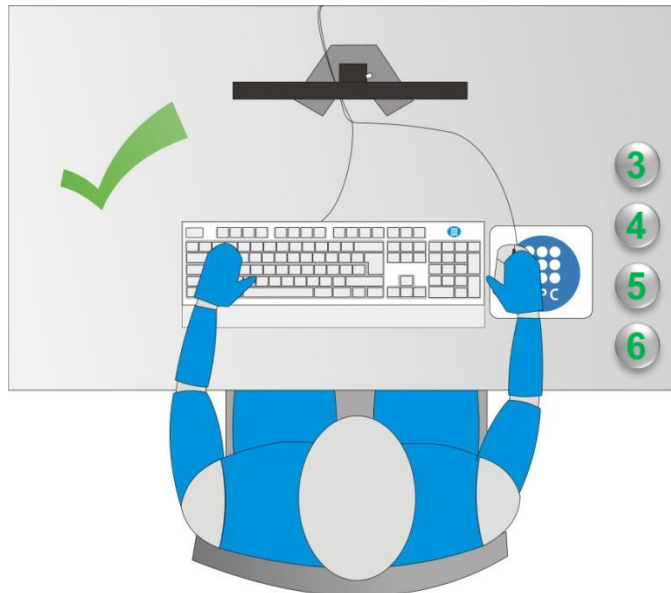
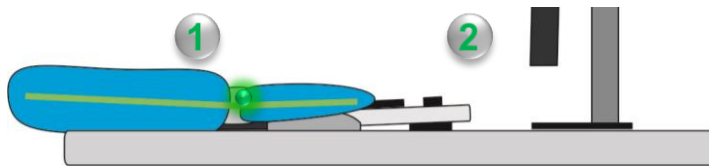


5 Adjust the mouse (2/4)



6 Workplace design

Remember to keep your joints in **NEUTRAL POSITIONS** (forearm, wrist and hand aligned)



- 1 Support your forearm, wrist and hand. To reduce tension and increase comfort, **you should leave a space in front of the mouse to support the forearm, wrist and hand.**
- 2 Neutral position of the wrist. A mouse should be **as low as possible** to ensure that you adopt a neutral posture and avoid extending your wrist.
- 3 Forearm, wrist and hand aligned. You should move your forearm, wrist and hand together without making lateral deviations with your wrist.
- 4 Mouse at the same level as the keyboard. The mouse should be placed at the same level as the keyboard and as close to it as possible. The cable should be long enough to move it easily without having to pull it or make an unnecessary effort.
- 5 Mouse fits the hand. The mouse should be big enough to support the hand properly.
- 6 Space to move the mouse. Remove anything that gets in the way of the mouse being moved easily.



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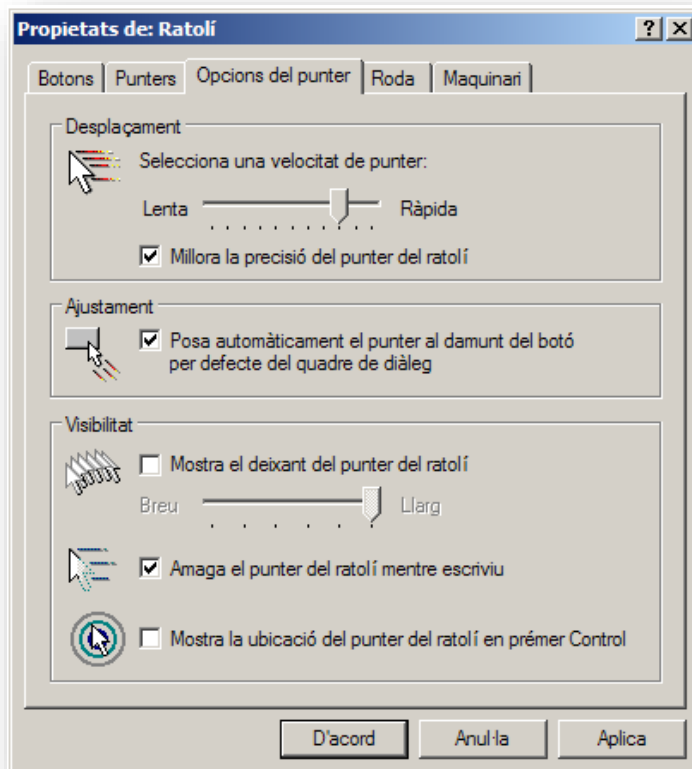
Adjust the mouse (3/4)

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Workplace design

You could also consider...



The mouse is moved using your thumb and ring finger. Your index and middle fingers should be placed gently over the buttons.

**To reduce the range of movement**, go to **“Mouse settings”**, adjust the pointer speed and compensate for the loss of precision by selecting the boxes shown in the image on the left.

**Start > Control panel > Mouse > Pointer options**



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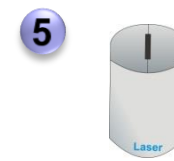
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5 Adjust the mouse (4/4)



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Use keyboard shortcuts as an **ALTERNATIVE TO USING THE MOUSE**

The use of keyboard shortcuts can help to reduce the use of the mouse

### All applications

<b>Control + C</b>	Copy the selected element
<b>Control + V</b>	Paste the element that has been copied or cut
<b>Control + G</b>	Save
<b>Control + X</b>	Cut the selected element
<b>Control + A</b>	Open
<b>Control + P</b>	Print
<b>Control + Z</b>	Undo the last action
<b>Control + E</b>	Select all elements on the screen
<b>Control + Esc</b>	Display the start menu

### Word

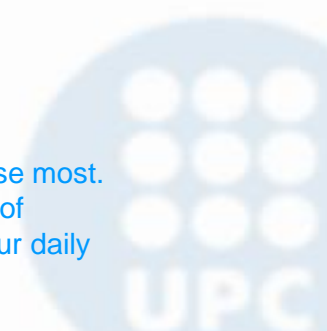
<b>Control + N</b>	Put the selected word in bold
<b>Control + K</b>	Put the selected word in italics
<b>Control + S</b>	<u>Underline</u> selected text
<b>Control + T</b>	Centre selected text
<b>Control + J</b>	Align selected text
<b>Control + D</b>	Align selected text to the right
<b>Control + M</b>	Open the menu for font formatting

### Windows Explorer or Mozilla Firefox

<b>F2</b>	Change name
<b>F3</b>	Search
<b>Control + X,C,V</b>	Cut, copy, paste
<b>Uppercase + Del</b>	Delete without putting in the recycle bin
<b>F4</b>	Last webpages visited
<b>F5</b>	Update
<b>Control + G</b>	Go to
<b>Control + A</b>	Select all
<b>Control + +</b>	Increase the size of the image displayed
<b>Control + -</b>	Decrease the size of the image displayed



Try to remember the shortcuts that you use most. They can help you to reduce the number of unnecessary movements you make in your daily work and to improve your efficiency.



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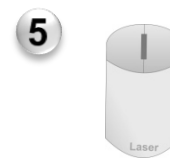
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### REMEMBER...

