Handbook on
Working with Computers

Introduction

With the rapid advancement of information technology, use of computers is already part of many people's daily life. Those engaged in electronic information and computer-related profession have to use computers for long periods. Their regular and repetitive actions in operating their computers may cause repetitive strain injuries and visual fatigue. This may result in eye health risk & reduced work efficiency.

This handbook offers advice on some commonly encountered safety and health problems in relation to computer work.

DO YOU KNOW ?
Differences in habits with digital screens between now and 2 years ago

Base   All Respondents (n=4034)
Question a: If you had to compare
the way you used digital devices 2 yeas ago
to your actual habits, would you say that....

■ Total Yes (yes a lot)
■ Yes, a lot a more

Time spent on digital devices
now than 2 years ago
59% **89%**

Looking at digital
devices for a longer period
of time now than 2 years ago
44% **82%**

Reading text more often
on digital devices
now than 2 years ago
40% **76%**

Switching more often from
one digital device to
another now than 2 years
39% **76%**

Looking at digital devices at
close distances more
often now than 2 years ago
32% **67%**

Level of discomfort experienced for each symptoms

Symptom	High/Medium level of discomfort	Total Experienced the symptom
Tired eyes	51%	74%
Neck and shoulder pain	54%	70%
Back pain	51%	66%
Headache	39%	55%
Itching eyes	29%	50%
Dry eyes	31%	46%
Far blurred vision	32%	46%
Difficulties to fall asleep	35%	46%
Teary eyes	25%	44%
Irritated eyes	25%	41%
Close up blurred vision	26%	40%
Red eyes	21%	37%
Painful eyes	21%	35%
Burning eyes	20%	34%
Screen glare	19%	34%
Dizziness	16%	30%

Total Experienced the symptom

High/Medium level of discomfort

Solution tried to relieve symptoms

Solution	Yes, and it worked	Total Yes	% of success of the solution among those who tried it
Taking break	68%	86%	79%
Changing your posture	47%	78%	60%
Looking away times to time from the digital devices	47%	70%	67%
Adapting the environment lighting	37%	62%	60%
Modifying your work station	36%	62%	58%
Changing the lighting of the digital devices	37%	60%	62%
Using digital devices for a shorter period of time	41%	58%	71%
Using less frequently digital device	37%	53%	70%
Wearing dedicated eyewear	26%	40%	65%
Changing your food habits or taking food supplements	18%	36%	50%

Total Yes (yes and it worked, yes but it didn't work)

Yes, and it worked

A Guide to work with Computers
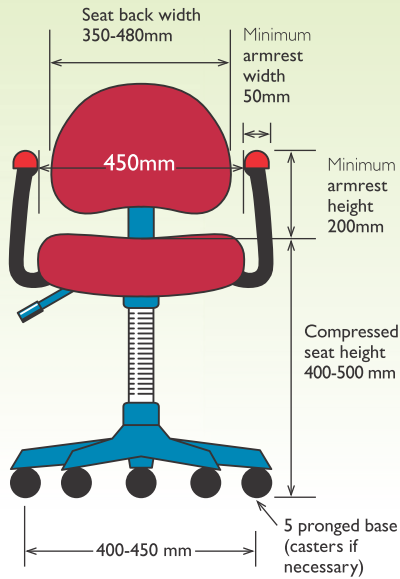
Recommended computer workstation design and working posture
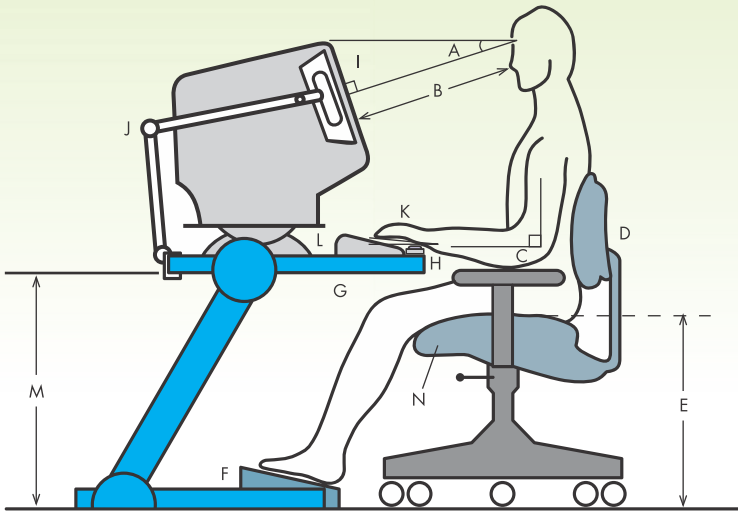
A   Comfortable viewing angle, e.g. 15° - 20°

B   Comfortable viewing distance,
    e.g. 350 - 600mm for text of normal font size

C   Forearm and arm at about right angle

D   Adjustable back rest

E   Adjustable seat height

F   Firm foot rest if required

G   Adequate knee clearance

H   Wrist rest if required

I   Screen at right angle to line of sight

J   Adjustable document holder

K   Wrist kept straight or at most slightly inclined

L   Screen support adjustable for rotation and tilting

M   Adjustable table height preferable

N   Rounded or scrolled edge seat pad

Seat back width
350-480mm

Minimum armrest width 50mm

450mm

Minimum armrest height 200mm

Compressed seat height 400-500 mm

5 pronged base (casters if necessary)

400-450 mm

A working chair should have

- A stable base
- Adjustable seat height
- A slightly concave seat pan
- Swivel seat with round front edge
- Adjustable backrest, both in height & tilt
- Adjustable armrest

Environment

Excessive lighting levels have a masking effect & make it difficult for the user to see the display on the screen

Recommended lighting arrangement for a computer workstation

Overhead lights
(low glare shapes or louvers)

Indirect light

Indirect light

Windows

Task lamp

Screen

Direct light

Blinds

Line of sight parallel to windows
and between light fittings
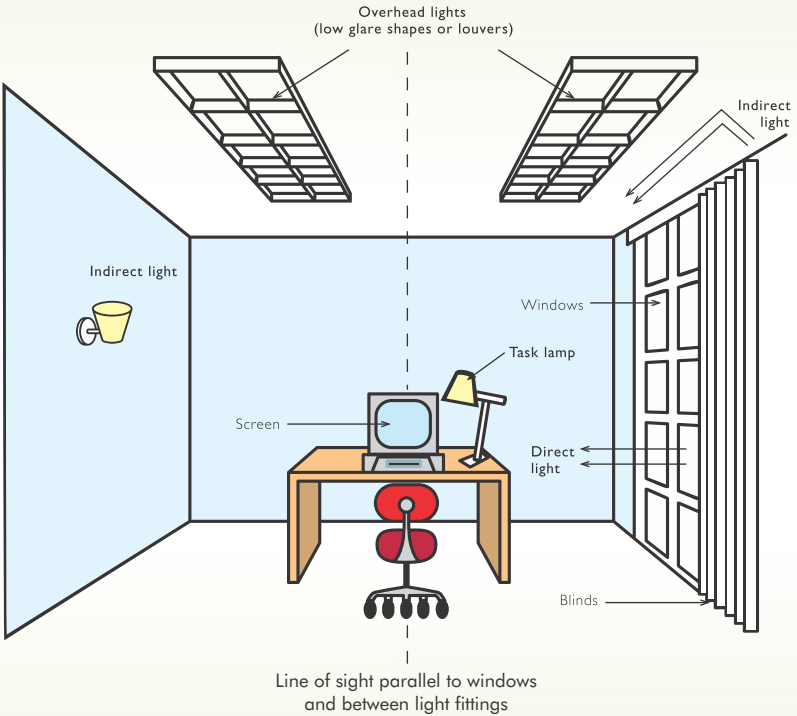
One of the main causes of eye complaint made by a computer user is glare

Use of Anti-glare screen
is recommended

Do's & Don'ts

Document Holder
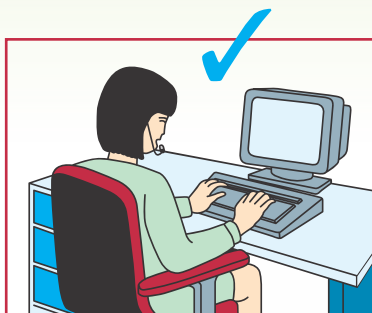
Making phone calls during working
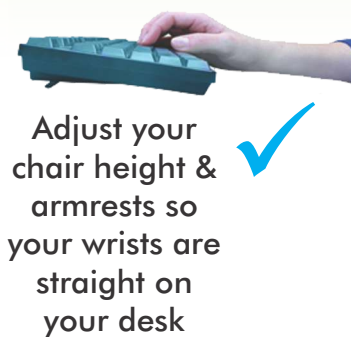
Keep your wrist straight
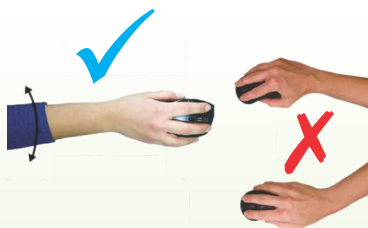
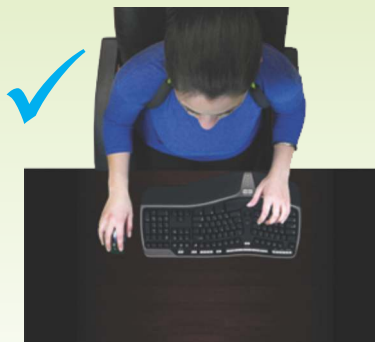Move the mouse with you arm not your wrist

Correct posture while using mouse
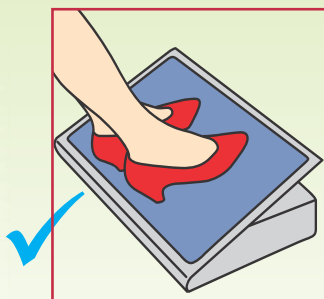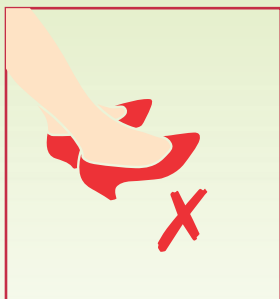
Legs while sitting on chair

Centre infront of you

Adjust your chair height & armrests so your wrists are straight on your desk

Misaligned shoulders & elbows

Arms misaligned
Keep everything
within easy
reach

Shoulders
arms & wrists
aligned

Laptop ergonomics

Reduced blink rate may cause

Redness, Irritation, Itching & Dryness

If the above symptoms persist
Consult your Ophthalmologist

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Sources :
Adapted from 1. www.labour.gov.hk 2. www.visioninfo.com
3. www.posturemedic.ca