



文職系

Sedentary Workers Safety and Health Bulletin

安全健康通訊

使用顯示屏幕設備之職安健錦囊

Health and Safety Tips for Operation of Display Screen Equipment

介紹 Introduction

由於長時間使用顯示屏幕設備來工作，使用者可能會感到不適和有其他健康問題，例如上肢疼痛及不適、眼睛過勞、疲勞和承受精神壓力。這些問題雖然很多都是短暫的，並可能在下班後消失，但也可以和應該避免。如對這類短暫的毛病不加理會，這些症狀便可能惡化而演變成慢性疾病，需要長期治療，而治療費用對僱主及僱員，最終以至整體的醫療服務來說，都是昂貴的開支。今期通訊將為大家介紹與顯示屏幕設備有關的健康及安全要點。

As a result of prolonged DSE work, users could suffer discomfort and other short-term health problems like upper limb pains and discomfort, eyestrain, fatigue and stress. Whilst many of these problems are temporary and may go away after work, they can and should be avoided. If the temporary ailments are ignored, such symptoms can deteriorate into chronic health problems requiring long-term treatment which is expensive to both employers and employees, and ultimately to the health care service at large. This bulletin will introduce some health and safety tips for operation of display screen equipment.



辦公室工作間的組件

Facilities of Display Screen Equipment (DSE) Workstation

辦公室工作間備有以下的組件配合。只有適當的組件配合，才可舒適的操作電腦工作，保障僱員的職業安全及健康。

The workstation for operation of display screen equipment consists of the following facilities. Only with suitable types of facilities, DSE operation can be comfortably achieved and therefore protect the occupational safety and health of employee.

- 顯示屏幕設備
The DSE
- 有關的家具，如椅子、書桌及工作平面
The related furniture (e.g. chair, desk, work surface)
- 周邊設備如打印機及文件夾
The items peripheral to DSE (e.g. printer, document holder)
- 周圍的工作環境如照明、溫度、濕度、噪音及通風
The immediate working environment around the DSE (e.g. lighting, temperature, humidity, noise and ventilation)

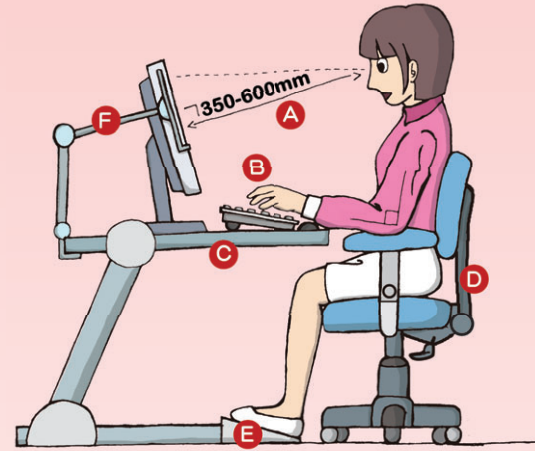
工作間須注意的特點 Noteworthy Characteristics in Workplace

工作間設計須符合人體功效學原理，以確保操作員的職業安全及健康。根據《職業安全及健康(顯示屏幕設備)規例》，有以下針對工作間的安全及健康要點而訂的一般規定：

DSE workstation is best designed in accordance with the ergonomic requirement in order to protect the safety and health of the operator. The main features of a DSE workstation design and the suggested precautionary measures are listed as follow:

A. 屏幕 Display Screen

- 屏幕顯示清晰、分明而穩定的影像
The screen should give a clear, sharp and steady image.
- 顯示適中的字體大小，字裡行間必須有足夠的空間
The characters should be of adequate size, with adequate spacing between the characters and lines.
- 影像的光度和對比度應可調校
The brightness and contrast of the image should be easily adjusted.
- 屏幕應可以轉向及調校傾斜度，以配合操作員的需要
The screen should be easily swiveled and tilted to suit the needs of the operator.
- 屏幕擺放的位置應與操作員保持舒適的觀看距離（約350至600毫米），而屏幕的最頂一行字樣適宜在或略低於眼睛的水平
The screen should be kept at a comfortable viewing distance at 350-600 mm and the first line on screen is suitable at about or just below eye level.



B. 鍵盤 Keyboard

- 薄身及可調校傾斜度，並可與顯示屏幕分離，以便操作員可以採取舒適的工作姿勢
The keyboard should be as thin as possible, tiltable and detachable from display screen to accommodate frequent postural change of the operator.
- 鍵盤表面不應反光，宜採用中性柔和的顏色
The keyboard should be neutral in color and non-reflective.
- 鍵上的字體和符號應清楚及容易辨認
The letters and symbols on the key tops should be clear and easily recognized.
- 鍵盤前面應有足夠的空間來承托雙手
There should be sufficient space in front of the keyboard to provide support for the hands.
- 桌邊最好是圓滑的
The table edge should preferably be rounded.
- 如需作長時間鍵盤操作，可考慮使用手腕墊，來減輕手部的壓力
Use of wrist support is recommendable to alleviate muscle strain of hands if prolonged keyboard operation is required.
- 鍵盤的擺放位置應使操作時前臂與手臂大約成直角
Forearm at about right angle to arm.

C. 工作檯面 Work Surface

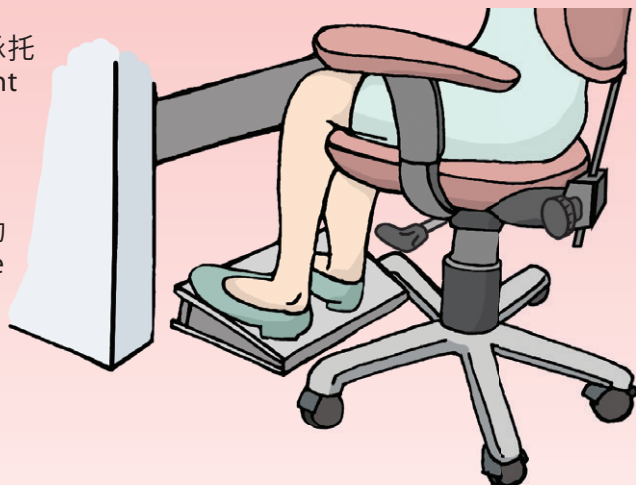
- 檯面面積應足夠放置屏幕、鍵盤及滑鼠等設備
The work surface should be large enough for the screen, keyboard, mouse and other peripheral equipment.
- 放置屏幕和鍵盤的工作檯最好可調校高度，以配合個別操作員的需要
The height of work surface for the screen and keyboard should be adjusted to suit the needs of the user.
- 工作檯面下要保持足夠的腳部空間，以便伸展雙腿
Sufficient leg clearance should be kept under the work surface.



D. 座椅 Chair

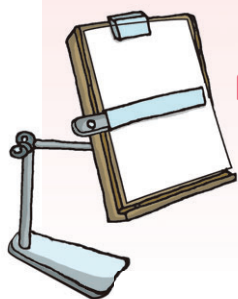
- 座椅的高度應可調校(距離地面 400至500毫米之間)
The chair should be adjustable in height to suit the body size of the user (400-500 mm from the floor).

- 座椅靠背的高度及傾斜度應可調校，以提供腰背足夠的承托
The backrest should be easily adjustable in the both height and tilt to provide adequate support to the lower back.
- 如有手靠，其位置不應阻礙鍵盤操作
Armrests should not interfere with keyboard operation.
- 座椅底部應穩固(應有五點座腳)，並可設置滑輪以便移動
The chair should have a stable base (a five-pronged base) and be provided with smooth castors for easy movement.
- 座墊的軟硬度要適中，而前面邊沿應為渦形
The seat pan should be of appropriate hardness and the front edge should be scrolled.



E. 腳踏 Foot Rest

- 如座椅過高，操作員雙腿不能平放在地上，則應提供穩固的腳踏來承托下肢
A stable footrest should be made available to the user if the chair is too high for the feet to rest firmly on the floor.



F. 文件架 Document Holder

- 如需透過閱讀文件輸入資料，應使用穩固和可調校的文件架，以便操作，亦可避免不良的頸部姿勢和動作
If reading of document and entering data are both necessary, suitable document holder should be provided to operators so as to avoid awkward neck posture and movement.

工作環境 Working Environment

適當的照明度 Sufficient Luminance

- 顯示屏幕的操作應配合適當的照明和輔助照明設施，舒適的光度宜在300至500勒克司(Lux)之間。
Suitable lighting and auxiliary lighting facilities should be provided according to the nature of DSE work and the visual demand on the operator. Suitable illumination for general office work ranges from 300 to 500 lux.



避免反光及眩光 Avoidance of Reflections and Glare

- 避免把屏幕擺放在照明裝置之下或近於窗戶，以避免產生反光及眩光的情況，令眼睛不適。
Avoid placing the screen directly under the light sources or close to windows to eliminate glare and reflections.
- 光源及窗戶應與屏幕成直角，並善用窗簾遮擋過強的陽光。
The screen should be perpendicular to the light sources and windows. Fit all windows with blinds to prevent excessive sunlight and to control lighting level.

控制噪音 Noise Control

- 工作間範圍內的周邊設備如打印機、影印機發出的聲音，可能對僱員造成滋擾；應盡量控制會發出噪音的設備，如分隔設備與工作間範圍或設置屏障阻隔噪音。
Noise produced by the equipment such as printers and photocopiers in the workplace should be controlled to avoid nuisance to operators. Noisy equipment should be located away from the DSE workstation or placed suitable barrier to reduce the noise level.
- 對於一般的電腦工作，噪音水平宜控制在60分貝(A)以下。
For general computer work, a noise level below 60dB(A) is optimal.

適當的溫度和濕度 Suitable Temperature and Humidity

- 應把工作間的溫度和相對濕度控制在適當舒適的水平：室內溫度應保持23-26°C（夏季）或20-24°C（冬季），而相對濕度應為40-70%。

The temperature and humidity at workplace should be kept at a suitable level to avoid discomfort to the operator: optimum temperature for office work is best kept at 23-26°C (in summer) or 20-24°C (in winter) with relative humidity between 40-70%.

保持新鮮空氣的供應 Sufficient Supply of Fresh Air

- 工作間應有良好的通風，以保持新鮮空氣的供應。
Suitable ventilation should be provided to the workplace to ensure sufficient fresh air supply.

提供安全及健康訓練 Provision of Safety and Health Training

僱主亦應為僱員提供使用工作間的安全及健康訓練。訓練內容主要包括：

Employers should provide safety and health training on working with DSE. The content of training can be focused on the following items:

觀看屏幕 Viewing Angle

- 顯示屏幕擺放位置。除了與操作員保持350-600毫米的距離外，更應注意操作員觀看屏幕的角度。調校屏幕的轉向和斜度至舒適的觀看角度。避免頸部過度伸展或屈曲。
The operator should not only keep a comfortable viewing distance 350 to 600 mm from the screen, but also should bear a comfortable viewing angle. The suitable viewing angle should be adjusted to accommodate the users so as to avoid awkward neck bending.

鍵盤輸入 Keyboard Operation

- 鍵盤的傾斜度要調校至適中的輸入角度，過份傾斜的鍵盤會令手腕過度屈曲。操作時手腕應平直或最多輕微傾斜。
The keyboard should be adjusted to suitable inclination for proper keyboard operation. Excessive inclination can cause extreme wrist bending. Wrist position is best kept straight or most slight inclined.



滑鼠擺放 Position of Mouse

- 滑鼠應靠近擺放。避免過度伸展前臂，而注意操作時手腕應保持平直。
The mouse should be positioned at an easily reachable distance to the operator. It should be close to the area of operation so as to avoid overstretching of forearm but to keep the wrist in neutral position.

坐姿 Sitting Posture

- 坐姿要挺直，避免扭轉側身的坐姿，並須善用靠背來承托腰背的負荷。
A correct sitting posture should have the back straight but allow no twisting at all. The back rest should be capable of providing support to the back of the operator in sitting position.
- 切勿長時間維持同一坐姿，應間歇轉換姿勢來促進血液循環。
Prolonged sitting is a static load to the body. Periodic postural change is encouraged to facilitate blood circulation.

休息及伸展運動 Rest Break and Stretching Exercise

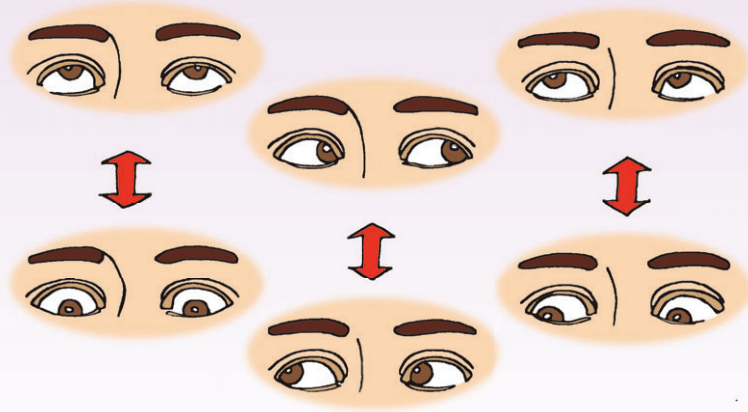
- 應安排小休，以紓緩因持續的鍵盤操作所導致疲勞。

Short breaks should be arranged to relieve muscle strain arose from prolonged keyboard operation.

- 除顯示屏幕操作外，應編排其他不同類型工作如影印或檔案整理，這樣不但可以減少固定或重複性動作，也可以給予身體不同部位輪流休息的機會。

Apart from DSE work, job allocation should also be planned in such a manner to incorporate different varieties (e.g. mix of DSE work with photocopying and other paper work). This arrangement not only helps to minimize static or repetitive movement, but also takes chances for different muscle groups to rest.

- 如長時間觀看顯示屏幕，可間歇遠望景物來紓緩眼睛疲勞，亦可做一些眼部運動。
- 如操作電腦的時間過長，上肢及腰背肌肉會容易疲累。平日休息時可以考慮做一些簡單的上肢及頸背伸展運動，除可鬆弛神經外，亦有助紓緩筋骨及預防勞損。



職安健訓練課程 OSH Training Courses

如欲更深入了解關於使用顯示屏幕設備的職安健要點，可參加職安局舉辦之有關訓練課程：
OSHC organizes the following training courses related the safe use of display screen equipment:

安全使用顯示屏幕設備(課程編號：DSE)

Safe Use of Display Screen Equipment (Course Code: DSE)

顯示屏幕設備評估合格證書課程(課程編號：DSEA)

Certificate of Competence in Display Screen Equipment Assessment (Course Code: DSEA)

有興趣人士可致電本局職安健訓練中心 2311 3322 查詢。

For further information, please contact our OSH Training Centre at 2311 3322.

圖書館 Library

職安健資訊中心內的圖書館，藏有超過6,500本與職業安全健康有關的書籍、逾160種職業安全健康雜誌、期刊及通訊，為目前本港最大型之同類專題圖書館。本局圖書館每星期開放6天，時間如下：

The Library located in our OSH information Centre has over 160 kinds of magazines, journals and newsletter; and about 6,500 technical books or videos in the field of occupational safety and health which is among the largest in Hong Kong. Our library is open 6 days per week at:

星期一至五 Mondays – Fridays	: 上午9:00至下午6:30 (9:00am to 6:30pm)
星期六 Saturdays	: 上午9:00至中午12:00 (9:00am to 12:00 noon)
星期日及公眾假期 Sundays and Public Holidays	: 休息 (Closed)
地址 Address	: 九龍觀塘鴻圖道1號地下1室 Unit 1, G/F, No.1 Hung To Road, Kwun Tong, KLN (Ngau Tau Kok MTR Station Exit B5)

有獎 問答遊戲 Quiz

文職系安全及健康委員會於本通訊內續設了一個有獎問答遊戲，藉此來提高大家對工作安全的警覺性，希望讀者們踴躍參加，若能答中以下三條問題，便可參加抽獎，有機會獲得價值\$150購物禮券乙張，名額共5個。
The Sedentary Workers Safety & Health Committee has included a prize quiz in this bulletin to help raise awareness of work safety. We look forward to your participation. If you can answer the following three questions correctly, you can enter the lucky draw and have an opportunity to receive one of a total of 5 shopping vouchers to the value of \$150.

- 1 屏幕與操作員之間的舒適觀看距離應為多少？
To have a comfortable viewing on screen, the viewing distance should be?
A. 250-400毫米 250-400mm
B. 300-500毫米 300-500mm
C. 350-600毫米 350-600mm
- 2 以下哪項關於顯示屏幕設備的工作檯面是錯誤的？
Which of the following is wrong for the work surface of a display screen equipment workstation?
A. 工作檯面積應足夠放置屏幕、鍵盤及滑鼠等設備
Work surface should be large enough for the screen, keyboard and other peripheral equipment
B. 工作檯面必須要配備文件架
Work surface must have a document holder
C. 工作檯面下要保持足夠的腳部空間，以便伸展雙腿
Sufficient leg clearance should be kept under the work surface
- 3 操作電腦鍵盤時，其手腕應？
While operating keyboard, wrist position is best kept?
A. 向上傾斜 Inclined
B. 保持平直 Straight
C. 向下微斜 declined

請圈出正確答案及填妥下列表格，郵寄或傳真回本局總辦事處，信封面請註明「文職系安全健康通訊問答遊戲」。截止日期：2009年5月31日。Please circle the correct answers and fill in the following form and send it or fax it to the Council. Please write "Sedentary Workers Safety & Health Bulletin Prize Quiz" on the envelope. Closing date: 31 May, 2009.

姓名 Name : _____ 身份證號碼 Identity Card No. : _____

地址 Address : _____

日間聯絡電話 Daytime Contact Tel. No. : _____

參加細則

1. 每人只限參加一次。
2. 主辦機構之員工及其直系家屬均一律不得參加。
3. 得獎結果以主辦機構的決定為準。
4. 主辦機構保留更改有關是項活動事宜的權利，恕不另行通知。
5. 倘有任何爭議，一切以主辦機構的決定為最終決定。
6. 歡迎複印參加表格。

個人資料聲明

本局會保留閣下個人資料作推廣職業安全及健康之用，包括研究及統計。本局或需將資料轉遞予服務提供者、活動共同舉辦者和夥伴機構。

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本人不欲收到上述訊息

Rules for Participation

1. Each participant may only enter once.
2. The employees and direct family members of the organising body are not eligible to enter.
3. The decision of the organising body regarding the prize results is final.
4. The organising body reserves the right to make changes to any matters related to the competition and will not provide further notice.
5. In the event of any dispute, all decisions by the organising body are final.
6. Welcome to photocopy the form.

Personal Data Statement

We will keep your personal data for promotion of safety and health at work, including related research and statistical purposes. We may need to transfer such data to service providers, event co-organizers and partner institutions. If you do not wish to receive information and news relating to safety and health at work from us, please mark the box at the end of this Statement.

I do not wish to receive the aforesaid information and news

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中文姓名 Chi Name : _____ 英文姓名 Eng Name : _____

電話 Tel. No : _____ 傳真 Fax No : _____ 電子郵件 E-mail Address : _____

填妥後請將表格傳真至 2739 9779 職業安全健康局

Please fax the form to Occupational Safety and Health Council (Fax No.: 2739 9779)

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The information provided would be kept for promoting safety and health, including research and statistics. The information may need to be passed to service providers, function co-organizer and partnerships. If you do not want to receive Occupational Safety and Health information. Please tick the box in the bottom of this statement.

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Sedentary Workers Safety & Health Committee

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