

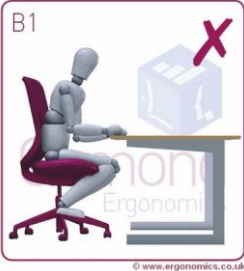

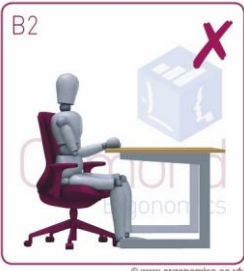



This Information Sheet provides guidance on how to prevent health problems which may arise as a result of having your display screen equipment set up incorrectly. It forms part of a series of Information Sheets which supports the Safe Use of Computers (DSE) Policy Standard.

Additional information can also be found on the Health and Safety Services Website – hss.bangor.ac.uk



Preventing Health Problems

Problem	Incorrect	Correct
<p>Wrist and finger pain</p>	<p>B1</p>  <p><small>© www.ergonomics.co.uk</small></p> <p>Cause: Chair not adjusted to the correct height or too far from the desk to allow a perfect L between the shoulder, elbow and wrist so the fingers are not horizontal to the keys or the mouse. Dirty mouse. Striking keys too hard. Not using the mouse correctly</p> <p>Effect: Head tilts forward, shoulders are hunched, blood circulation restricted as feet wrapped round chair. If the fingers are not horizontal to the keys or mouse the wrist ends up unsupported which leads to additional strain</p>	<p>G1</p>  <p><small>© www.ergonomics.co.uk</small></p> <ul style="list-style-type: none"> • Move the chair to the desk and sit back on the seat • Adjust chair back to support the upper body • Raise the chair seat so the upper arms are vertical with the elbows and level with or just above the desk • Place the mouse directly in front of the shoulder and as close to the body as possible • Ensure the mouse is kept clean • Use keyboard shortcuts to prevent overuse of mouse
<p>Shoulder pain</p>	<p>B2</p>  <p><small>© www.ergonomics.co.uk</small></p> <p>Cause: Setting the chair so feet are firmly on the ground leading to the chair being too far from the desk OR fixed chair arms. Both cause the User to sit with arms stretched out rather than in the L position (see above)</p> <p>Effect: Arms stretched forwards, shoulders lifting causing muscle tension</p>	<p>G2</p>  <p><small>© www.ergonomics.co.uk</small></p> <ul style="list-style-type: none"> • Set the chair as above • Use a foot rest if feet don't touch the ground when the chair seat height is adjusted • Height adjustable chair arms support the upper body, if they restrict desk access consider removing them

Problem	Incorrect	Correct
<p>Lower back pain</p>	<p>Cause: Chair set at the wrong height. Using a chair that does not have an adjustable back, separate from the seat which can offer lumbar support. Sitting on the edge of the chair leaning forwards. Sitting with the legs crossed causing uneven weight on each buttock. Cramped conditions so user can only sit at the desk by twisting or leaning forwards</p> <p>Effect: Unnecessary strain on the back muscles leading to back ache and discomfort</p>	<ul style="list-style-type: none"> • Ensure the chair has adjustable height and back support to achieve the sitting posture shown above • Ensure the under desk space is kept clear and that legs are not obstructed by drawer units / equipment • Don't sit with legs crossed • Use a footrest to support legs if the floor can't be reached following adjustment of the height of the chair seat
<p>Neck pain</p>	<div data-bbox="562 651 927 959" data-label="Image"> </div> <p>Cause: Too much up and down movement of the neck. Sitting with telephone handset held at the base of the neck. Using bifocal glasses so the neck is bent backwards to focus on the screen. Twisting to see the monitor</p> <p>Effect: Constantly moving the neck or sitting with the neck in one position for a prolonged period can cause muscle fatigue leading to aches and pains</p>	<div data-bbox="1341 651 1706 959" data-label="Image"> </div> <ul style="list-style-type: none"> • Sit with the monitor face on • Use a document holder placed at screen height and in the same focal plane to minimise head twisting and tilting • Hold the handset in the 'non-writing' hand or use a headset instead of handset • Seek advice from an Optician regarding special glasses for bifocal wearers or have the bifocal section made wider

Problem	Incorrect	Correct
<p>Eyesight defects – temporary visual fatigue, dry eyes</p>	<div data-bbox="562 188 907 571"> <p>B5</p> <p>© www.ergonomics.co.uk</p> </div> <div data-bbox="943 188 1288 571"> <p>B3</p> <p>© www.ergonomics.co.uk</p> </div> <p>Cause: Staying in the same position, concentrating for too long. Poor positioning of DSE. Poor legibility of the screen or source document. Flickering screen. Glare from monitor, lights or windows</p> <p>Effect: DSE is not associated with eye damage but it can raise awareness of those with pre-existing vision defects. Temporary visual fatigue can lead to impaired visual performance, red or sore eyes and headaches. Glare can cause eye strain and some contact lens wearers suffer from dry eyes as the heat generated by DSE can make the air seem drier around the monitor area</p>	<div data-bbox="1339 188 1774 539"> <p>G5a</p> <p>© www.ergonomics.co.uk</p> </div> <div data-bbox="1563 379 1774 539"> <p>G5b</p> <p>© www.ergonomics.co.uk</p> </div> <div data-bbox="1809 188 2069 475"> <p>G3a</p> <p>© www.ergonomics.co.uk</p> </div> <div data-bbox="1809 475 2069 762"> <p>G3b</p> <p>© www.ergonomics.co.uk</p> </div> <ul style="list-style-type: none"> • Make sure there is a comfortable viewing distance between the eyes and screen • Ensure the top of the monitor is just below eye level • Place the desk between lights and not directly under them. If this is not possible switch the overhead light off and use an angle poise lamp • To reduce glare from windows move the monitor or fit blinds to eliminate the glare. If blinds can't be fitted, fix a tinted film to the window instead • Ask IT Services to look at the monitor if there are problems with flickering, poor legibility etc • To overcome dry eyes, blink more often and drink plenty of water to avoid dehydration • Every hour carry out a task away from the monitor to give the eyes a rest eg photocopying, rest break • If work is difficult wearing bifocals seek advice from an Optician regarding specialist glasses

Problem	Incorrect	Correct
<p>Fatigue and stress</p>	<p>Cause: Poor job design or work organisation. Including unsuitable equipment, uncomfortable environment, increase in work pace, pressure to complete the task and lack of training</p> <p>Effect: Fatigue and stress and their associated side effects eg headaches, dizzy spells, vision problems</p>	<ul style="list-style-type: none"> • Training. So Users have the competence to carry out any tasks, reducing unnecessary worries / concerns • Select equipment and software which is suited to the work requirements • Assign tasks according to User capabilities • Good design of the User's workplace, environment and task • Ensure the room is a comfortable temperature as this causes discomfort which can exacerbate fatigue and lead to stress • Change posture
<p>Laptop Users</p>	<div data-bbox="566 719 853 1043" data-label="Image"> </div> <p>Cause: Using a laptop on its own for any length of time will inevitably cause poor posture. The keypad and monitor are smaller than a normal computer with the monitor below the recommended height of eyes level with the top of the screen and usually too far away from the User</p> <p>Effect: Poor posture will result in neck, shoulder and / or back pain</p>	<div data-bbox="1339 719 1637 1043" data-label="Image"> </div> <ul style="list-style-type: none"> • A separate keyboard and mouse will make a significant improvement to layout flexibility • Use a proprietary laptop stand to tilt the computer and raise the screen to an acceptable height and viewing distance