**Ergonomics in the Laboratory - Points to Consider**



| **The Objective of this document** |
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| **Consider the points below when assessing the ergonomic hazards associated with your laboratory activities and include them in your risk assessment (RA).**    The hazards listed and control measures proposed are indicative not comprehensive, if you identify other ergonomic hazards they must also be included in the RA and controlled.  The Laboratory Ergonomics toolkit contains a Check List to help those specifically working in bioscience laboratories. |

| **Hazard** | **Harm** | **Measures to control the risk of harm** |
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| **Task** Poor work planning | Potential for musculoskeletal injuries e.g. back pain  Potential for stress/muscle tension leading to WRULDs (work related upper limb disorders) | Specific tasks are assessed.  Work is planned to reduce stress, as this may cause users to grip equipment more tightly and muscles to become tense. |
| **Task** Repetitive movements | Potential for musculoskeletal injuries including WRULDs | Work is planned to ensure there is appropriate time to complete the work, take breaks and vary tasks where possible.  Users take regular breaks from practical tasks, or vary tasks.  Where necessary, tasks are rotated amongst workers, to reduce exposure time.  Users adopt appropriate position, further advice is provided below.  If necessary for highly repetitive tasks consideration is given to automating the tasks.  The HSE [tool](http://www.hse.gov.uk/msd/uld/art/index.htm) (ART) for the assessment of repetitive upper limb tasks, is used if a more detailed analysis of the risk is required. |
| **Task** Over-reaching | Potential for musculoskeletal injuries including WRULDs | Where practicable users keep equipment close to the body and arrange work area accordingly.  All items not required for the task are removed from the work area.  Items required (such as solutions, tubes etc.) are arranged within reach so they can be reached without stretching. |
| **Individual** Poor posture | Potential for musculoskeletal injuries including WRULDs | Users are advised to adopt the most comfortable position to work in, either standing or sitting and vary this where possible. |
| **Individual** Lack of awareness of risk and early warning signs of health problems | Potential for musculoskeletal injuries including WRULDs | Users are provided with information and training about the risks of poor ergonomics in the workplace, e.g. Induction/tool box talk.  Staff inform their manager if they notice any early warning signs of work related ill health. [Ref 1](#ref1)  When notified, [Line managers](http://documents.manchester.ac.uk/display.aspx?DocID=26242) will consider whether reasonable any adjustments are necessary to the work environment or equipment and whether further assessment or a referral to Occupational Health is required. |
| **Individual** Equipment does not fit to certain individuals | Potential for musculoskeletal injuries including WRULDs | Staff who find working at benches or equipment uncomfortable are encouraged to notify their line manager***.***  Users are involved in selection of tools/equipment to ensure a good fit between the person and equipment. |
| **Load** Storage, transport and lifting/handling of heavy items | Potential for musculoskeletal injuries | Staff receive training in the correct lifting and handling techniques and are given an understanding of when to ask for assistance.  Heavy or bulky items are stored where they are easy to lift.  Mechanical lifting aids are used if required (e.g. trollies).  Weight and weight distribution of load is clearly indicated on items as appropriate. |
| **Equipment** Work tools and equipment not suitable | Potential for musculoskeletal injuries including WRULDs | The suitability of tools and equipment is assessed as part of a general risk assessment process for laboratory procedures or tasks.  If tools or equipment are found not to be suitable a more detailed assessment is carried out; the manager should consider whether any adjustments are necessary to the work environment or equipment.  Staff are consulted about the suitability of tools and equipment, to ensure that they meet their requirements and where possible are offered a range of sizes and types. |
| **Equipment** Work tools and equipment not well maintained | Potential for musculoskeletal injuries including WRULDs | A formal schedule is in place for routine inspection and maintenance of laboratory tools and equipment to ensure they are fully operational and in a safe condition.  Equipment is designated to specific individuals to ensure it is well maintained (for ease of use). |
| **Environment** Excessively hot temperature can lead to sweating and loss of grip.  Cold/draughts can exacerbate muscle tension | Potential for WRULDs | Keep hands and forearms warm when carrying out repetitive tasks (wear additional clothing, make sure room temperature is adequate).  All workshop occupants are made aware of how to report concerns about poor environmental control: temperature/draughts etc. to Estates and Facilities. |
| **Environment** Space constraints or obstructions that prevent good posture or prevent correct use of equipment | Potential for musculoskeletal injuries including WRULDs | Each work area is assessed to ensure that staff can work without obstruction.  Items are relocated or removed to ensure adequate work space. |
| **Environment** Poor lighting, dark/glare, artificial lighting not suitable | Potential for accident arising from poor visibility  Potential for muscle tension due to bad posture for trying to avoid glare | Change type of light, shield light.  Ensure light is suitable for the environment. |
| **Environment** Floor uneven | Trip | Ensure floors are even and sufficiently non slip, changes of level should be obvious. |

**Ref 1**

The early warning signs of WRULDs are: pain, soreness, numbness, tingling in hands, wrists or forearms, or clumsiness. They should report this as soon as possible to their line manager who should then make a referral to Occupational Health. Line managers should consider making initial adaptations to the individual’s work in the meantime depending on the severity of the symptoms.