



THE UNIVERSITY OF  
WESTERN AUSTRALIA

FACULTY OF  
Life and Physical  
Sciences



**School of Human Movement and Exercise Science**

The University of Western Australia  
35 Stirling Highway, Crawley WA 6009

Location: Parkway Entrance #3, Nedlands

# **SCHOOL OF HUMAN MOVEMENT AND EXERCISE SCIENCE**

## **2006 SAFETY AND HEALTH MANUAL**

**VERSION 1 – FEBRUARY 2006**

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## 1. GENERAL POLICY STATEMENT ON SAFETY AND HEALTH MANAGEMENT

This School full endorses the UWA OSH policy. This handbook supplements the main UWA policy (UWA Occupational Health and Safety Policy [www.safety.uwa.edu.au/policies](http://www.safety.uwa.edu.au/policies)) to provide and maintain safe and healthy working conditions, equipment and systems of work for its entire staff, students, contractors and visitors. To this end, information, instruction, training and supervision is provided as necessary. Responsibility is also accepted for the safety and health of other people who may be affected by the schools activities, as far as reasonably practicable. The evidence of accidents within the School are low due to the high quality of ongoing supervision and training of students and staff.

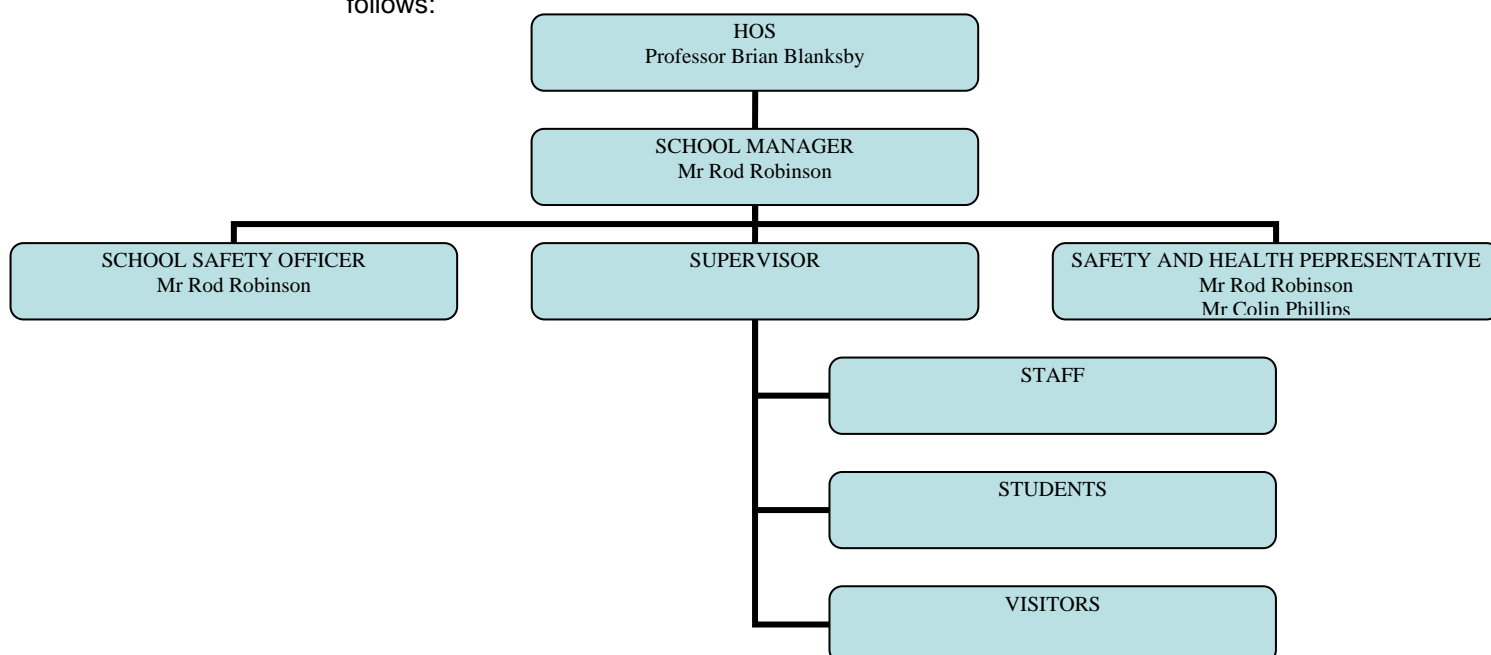
The allocation of safety-related duties, the particular arrangements made to implement this policy and the way in which the policy is to be monitored is set in the follow information.

A copy of this statement will be made available to all staff and students via the School's website. (School of Human Movement and Exercise Science safety web site [www.hmes.uwa.edu.au/Safety](http://www.hmes.uwa.edu.au/Safety))

The policy will be kept up-to-date to take account of changes in the Schools activities. To ensure this, the policy and the way in which it has operated will be reviewed when necessary and confirmed by the Head of School. Following review, a copy of the policy will be sent to the UWA Safety and Health Office (SHO).

## 2. THE ORGANISATION FOR CARRYING OUT THE POLICY

- Ultimate responsibility for safety and health in the School lies with the Head of School.
- Processes for identifying and controlling risk are effectively achieved with the participation of all staff at all levels.
- The organisational chart for the safety and health management structure is as follows:



**SCHOOL'S HEALTH AND SAFETY MANAGEMENT STRUCTURE**

<b>DUTIES</b>	<b>MEMBER</b>	<b>CONTACT</b>
UWA Safety Committee	Professor Tim Ackland Mr Rod Robinson	6488 2668 6488 2372
School's Safety & Health Committee	Professor Tim Ackland Dr Carmél Goodman Mr Rod Robinson, School Manager Mr Colin Phillips	6488 2668 6488 2364 6488 2372 6488 7313
First Aid Officers	Mr Rod Robinson Mrs Brenda Churchill Mr Steve Franklin	6488 2372 6488 2360 6488 2266
Fire Wardens	Mr Rod Robinson (Chief) Mrs Brenda Churchill Mr Steve Franklin Mrs Robyn Woods Mr Ron Kelly Mr Colin Phillips Mr Don Gordon Mr Tony Roby Mrs Kerry Smith	6488 2372 6488 2360 6488 2266 6488 3510 6488 3503 6488 7313 6488 2653 6488 2371 6488 2474

**ROLES AND RESPONSIBILITIES**

The following web site has been designed to consolidate the roles and responsibilities of the various safety positions. These include Safety Officers, Safety and Health Representatives, Fire Wardens, First Aid Officers and Safety Committees. [www.safety.uwa.edu.au/policies/responsibility\\_and\\_accountability](http://www.safety.uwa.edu.au/policies/responsibility_and_accountability)

**DUTY OF CARE**

For any event for which you have responsibility for the safety and health of others, you should familiarise yourself and those within your care with the basic domestic safety arrangements ie.,

- Location of First Aid Boxes  
2 x Pool Area (fixed)  
2 x Technical Area (1 portable and 1 fixed)  
1 x Unigym (portable)  
1 x Rehabilitation Clinic (fixed)
- Diffibulator in pool attendants office – G09
- All pool supervisors have valid and current Senior First Aid Certificates
- Wheelchair available in the Rehabilitation Clinic
- Emergency procedures and evacuation are listed at the following web site: [www.hmes.uwa.edu.au/Safety](http://www.hmes.uwa.edu.au/Safety)

## THE ARRANGEMENTS OF SAFETY AND HEALTH

### 3.1 Reporting and Investigating Safety and Health Issues

Any person with in the School noticing a safety or health issue that they are unable to rectify themselves should immediately inform their supervisor and the School's Safety and Health Manager in accordance with the resulting safety issues. You will be asked to complete an Incident/Injury Report form, which may be down loaded from the Safety and Health Office web site on [www.safety.uwa.edu.au/forms/incident](http://www.safety.uwa.edu.au/forms/incident).

### 3.2 Consultation for Safety and Health

All members of the School are encouraged to raise concerns about safety and health with the School's Safety and Health Manager.

Formal consultation regarding safety and health issues takes place through the School's staff meeting format. Should an issue involving health and safety be placed on the Staff Meeting Agenda for discussion not be resolved at the meeting, it is then referred to the Safety and Health Committee for further action. Agendas and Minutes can be located on the School's intranet [http://www.hmes.uwa.edu.au/for/staff/hmes\\_intranet](http://www.hmes.uwa.edu.au/for/staff/hmes_intranet)

## MEMBERSHIP OF THE SCHOOL'S SAFETY COMMITTEE

ROLE	CONTACT
Professor Brian Blanksby	6488 2658
Mr Rod Robinson (Coordinator)	6488 2372
Professor Tim Ackland	6488 2668
Dr Carmél Goodman	6488 2364
Mr Colin Phillips	6488 7313

### 3.3 Safety and Health Training

The School Manager ensures that all new staff are inducted for safety and health as soon as practicable, by using the UWA guidance, Safety and Health Office checklist ([www.safety.uwa.edu.au/policies/./policies/induction](http://www.safety.uwa.edu.au/policies/./policies/induction)) and School's checklist (see attached) as a framework. All records of induction are maintained by the School Manager.

The School Manager ensures that all new postgraduate students are given the same information as for new staff, but are also made aware of the student guide to safety and health.

[www.safety.uwa.edu.au/policies/./policies/student\\_guide\\_to\\_safety\\_and\\_health](http://www.safety.uwa.edu.au/policies/./policies/student_guide_to_safety_and_health)

All records of staff/student/visitor induction are maintained by the School Manager.

Members of the School will not be expected to undertake any procedure for which they have not been adequately trained. The need for specialist training is identified by the School Managers as part of the safety and health induction process or by the supervisor, and all requests for such training are directed to either the HOS or SHO. Records are kept of these training sessions by the School Manager and all training records are kept centrally in the School's Safety and Health Manual folder.

### 3.4 Fire and Emergency Procedures

The UWA Main Procedure is outlined at the following site:  
[www.safety.uwa.edu.au/policies/emergency\\_fire\\_and\\_evacuation](http://www.safety.uwa.edu.au/policies/emergency_fire_and_evacuation))

If the fire warning alarm is sounding wait one or two minutes then leave your area and proceed to the centre of Human Movement **oval**. Alternately at the request of a **Fire Warden** leave immediately and proceed to **oval**.

1. Do not risk your own life.
2. If required and once instructed, evacuate the building as calmly as possible.
3. Close all windows
4. Turnoff all electrical equipment (i.e. computers, fans, etc.)
5. Close the door behind you and proceed to the **centre of the Human Movement Oval**.
6. Warn others on the way out.
7. Move at a quick walk: **Do not run**.
8. Do not use the Lift.
9. If a person is trapped, immediately inform a Fire Warden or Emergency Response Officer (Security) on **2222**.
10. People who panic: take their hand and lead them out. If they refuse to go any further, leave them and report their location to Fire Warden.
11. People with a disability. In an evacuation, offering assistance, ask the person to tell you how you can best help them. This may involve lifting, carrying and escorting them from the building and may mean their wheelchairs or walking aids need to be left behind.
12. Move to the **centre of Human Movement Oval** (Outdoor Lab) and wait for further instructions.
13. **Do not** congregate in car park areas or around buildings.
14. **Do not return** to the building until cleared by Fire Brigade or Fire Wardens.

**FIRE WARDENS**

Rod Robinson	113	6488 2372	1st floor North Building
Brenda Churchill	103	6488 2360	1st floor North Building
Brenda Churchill	103	6488 2360	1st floor North Building
Robyn Woods	107	6488 3510	Ground Floor North Building
Ron Kelly	111	6488 1865	1st floor South Building (SE wing)
Colin Phillips	G14	6488 7313	1st floor South Building (West wing)
Don Gordon	G15	6488 2653	Ground Floor South Building
Tony Roby	G16	6488 2371	Swimming Pools
Steve Franklin		6488 2266	South East Building (Ground & 1st Floor)
Kerry Smith	162	6488 2474	

Further information regarding UWA fire emergency procedures are obtainable through [Emergency Procedures for students - Fire & Evacuation](#) and [Emergency - Fire & Evacuation](#).

- The School's policy is outlined at the following site:  
<http://www.hmes.uwa.edu.au/Safety/fire>

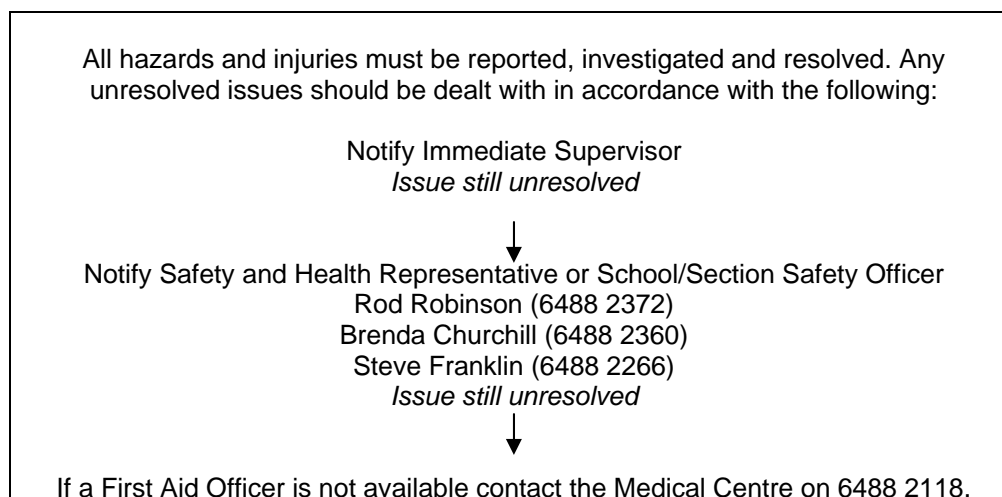
**3.5 Action in the Event of an incident – First Aid Procedures**

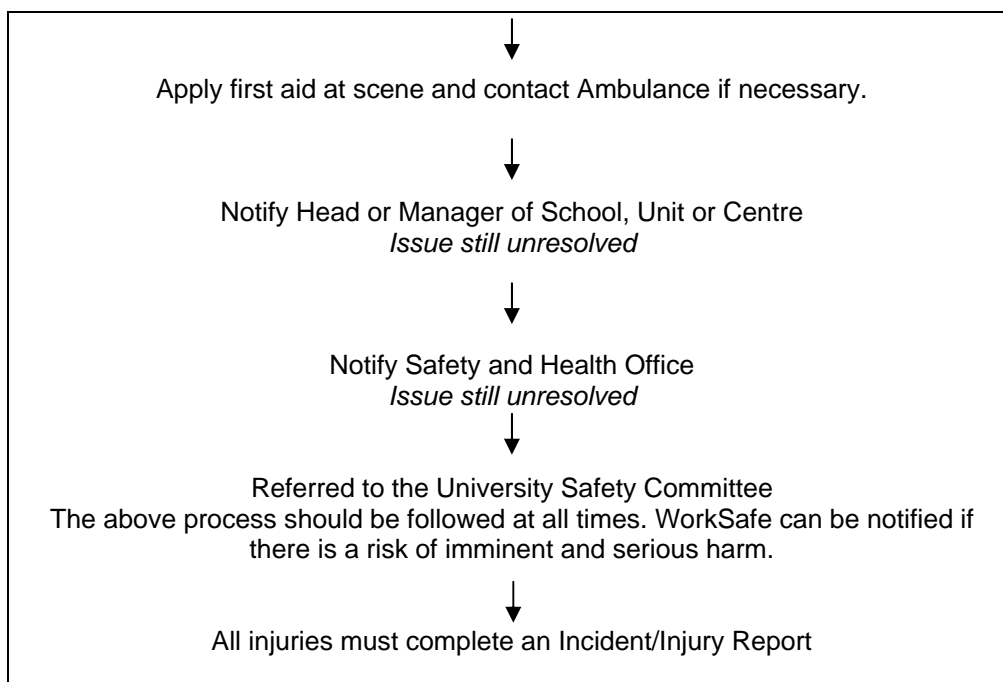
- The UWA Main Procedure is outlined at the following site:  
<http://www.safety.uwa.edu.au/policies#Hazard>

In the event of an injury or sudden illness the nearest First Aid Officer needs to be contacted who will be able to assess the situation and provide first aid treatment.

If a First Aid Officer is not available then the person should be brought to the Medical Centre if possible, or the Centre should be contacted on 6488 2118 or an ambulance called through the emergency number 6488 2222 for severe illness or injury.

If an incident or injury occurs at the University or during normal University activities, **it must be reported to your School Safety Officer Rod Robinson on 6488 2372**. If the incident occurs elsewhere, you should report it to the responsible person: Warden of a College, Manager of UWA Sports or Manager at the Sport Centre as appropriate. Alert Security if outside normal University hours, but inform the appropriate person as soon as possible.

**FIRST AID PROCEDURES**



## SCHOOL'S HAZARDS PROCEDURES

### Chemical Spills

If a chemical spillage occurs, STOP and alert the **Chief Safety Warden (Rod Robinson, 6488 3732)** and your lecturer or supervisor who have expert knowledge. They also have access to emergency kits for cleaning up spillages. Always wear appropriate protective clothing, glasses and gloves to avoid skin contact with spillages. Some situations may also require respiratory protection to be worn.

1. Avoid breathing vapours from spill.
2. Alert people in laboratory of spill.
3. Turn off ignition sources, power supplies and heat sources.
4. Avoid contact and Evacuate immediate vicinity to well ventilated area.
5. Close doors to affected area.
6. Phone or tell the **Chief Warden** (Rod Robinson - 6488 2372). Do not use mobile telephone.

### Needle stick injuries

Should a person suffer a needle stick injury, the following procedures should be followed:

1. Wash the area gently with soap and running tap water as soon as possible.
2. Apply an antiseptic and a clean dressing.
3. Obtain prompt medical advice from your doctor, the University's Medical Centre or an emergency department of a hospital.
4. Place the needle in a rigid plastic container and take it with you to the doctor.
5. Complete the University's "[Confidential Incident/Injury Report Form](#)" and forward to the Safety and Health Office.

Should you become aware that discarded needles and syringes are becoming a problem within your area please report it to:

**Chief Safety Warden (Rod Robinson) on 6488 2653**  
**Student Services Medical Centre on 6488 2118**  
**Safety and Health Office on 6488 3938**  
**Security and UniPark on 6488 3020**

### 3.6 Risk Assessments – UWA Main Procedures

[http://www.safety.uwa.edu.au/policies/./policies/risk\\_management](http://www.safety.uwa.edu.au/policies/./policies/risk_management)

#### **Responsibilities**

Risk management is an integral part of day to day operations and is an important element of effective internal control. Managers and staff at all levels are responsible for developing an understanding of and becoming competent in the implementation of risk management principles and practices in their work areas.

#### **All Deans/Heads and Managers are required to:**

- Design, resource, operate and monitor internal control systems;
- Ensure that a risk based approach to internal control is communicated to our staff and embedded in operational processes;
- Assign accountability for managing risks within agreed boundaries; and
- Report the results of balanced assessments regarding the effectiveness of the risk based internal control system, including identified weaknesses or incidents, to executive management.

#### **RISK CONTROL ROLES AND RESPONSIBILITIES**

Risk control roles and responsibilities have been identified and can be viewed at the following web site: [Risk Control Record Form - Appendix 4](#)

### 3.7 Smoking Policy

The University is committed to ensuring that its students, staff, contractors and visitors are not exposed to tobacco smoke in its workplaces including its building and vehicles. In the interest of having a healthy workforce, staff who smoke are provided with assistance to quit smoking. Accordingly, managers and supervisors shall promote and ensure compliance with the Smoking Policy. All staff, students, contractors and visitors shall abide by the provisions of the policy and report all breaches in accordance with the relevant section herein.

The School follows the UWA Smoking Policy outlined at:  
<http://www.safety.uwa.edu.au/policies/./policies/smoking>

### 3.8 Electrical Safety

Please refer to the UWA Safety and Health web site:  
<http://www.safety.uwa.edu.au/policies/./policies/electrical>

### 3.9 Purchasing Policy

Please refer to the UWA policy web site:

<http://www.finserv.uwa.edu.au/sp/policy>

#### Ordering New Supplies

- For consumable items (tissues, gloves, paper towels etc.), let the technical staff (Colin Phillips) know.
- For sharps (scalpels, needles, lancets etc.) drugs (local anaesthetic, etc.) and chemicals (biochemistry kits etc.), tell your supervisor, who will then order the required goods through Rod Robinson.

### 3.10 Children

Please refer to the UWA policy web site:

[http://www.hr.uwa.edu.au/policy/toc/appointment\\_and\\_employment/equal\\_opportunity/children\\_in\\_the\\_workplace?childfx=on](http://www.hr.uwa.edu.au/policy/toc/appointment_and_employment/equal_opportunity/children_in_the_workplace?childfx=on)

### 3.11 Visitors and Contractors

Please refer to the UWA policy web sites:

<http://www.safety.uwa.edu.au/policies/contractor>

[http://www.safety.uwa.edu.au/policies/student\\_guide\\_to\\_safety\\_and\\_health](http://www.safety.uwa.edu.au/policies/student_guide_to_safety_and_health)

### 3.12 Services and Facilities

Please refer to the Safety and Health policy web site:

<http://www.safety.uwa.edu.au/policies/./policies/contractor>

### 3.13 General Office Safety

Please refer to the Job Safety Analysis review and documentation on the Safety and Health policy web site:

[http://www.safety.uwa.edu.au/policies/job\\_safety\\_analysis](http://www.safety.uwa.edu.au/policies/job_safety_analysis)

#### Safety Off University Premises

Many School activities take place off University premises, including outdoor education activities and supervision in isolated areas. Staff and students have a responsibility to identify foreseeable risks and take appropriate action. Relevant aspects might include:

Outdoor Education Activities - adequate competent supervision, including first aid training, appropriate protective clothing and sensible footwear, sufficient communications arrangements, availability of emergency equipment. Tutors responsible for fieldwork should familiarise themselves with the University guidance on fieldwork.

Guidelines for outdoor education and camps held within the teaching program are available on the [www.hmes.uwa.edu.au](http://www.hmes.uwa.edu.au) web site.

### 3.14 Manual Handling

Please refer to the Safety and Health policy web site:

[http://www.safety.uwa.edu.au/policies/manual\\_handling](http://www.safety.uwa.edu.au/policies/manual_handling)

Manual handling is one of the most common and costly of workplace injuries. Manual handling involves the use of human effort to push, pull, carry, hold or restrain any object or animal. It does not just relate to the lifting of heavy objects.

UWA has a policy on manual handling which requires areas to undertake risk assessment of all manual handling hazards and implement strategies to reduce the level of risk. This includes but is not limited to the provision of training, and ongoing supervision of staff and students involved in manual handling activities.

The key hazards identified, risk ratings as well as the control measures in place within the School are outlined in the attached report and summarised below. [School of Human Movement MHRMP](#)

WorkSafe's code of practice is downloadable at

<http://www.safetyline.wa.gov.au/pagebin/pg000121.htm>

WorkSafe WA also has a great powerpoint presentation for manual handling training see <http://www.safetyline.wa.gov.au/pagebin/edcngenl0107.htm>

- No one should undertake any manual handling task that they feel that they are unable to manage, if in doubt, do not do the task, and seek assistance. A safety first mentality should be adopted.
- Be aware of the risk factors – the safety of the general environment e.g is it cluttered, is lighting adequate, are there any slip or trip hazards? The characteristics of the load e.g. heavy, awkward, difficult to grasp. Be mindful of your own ability e.g fatigue, unwell, lacking in coordination.
- Where possible use assistive equipment, such as trolleys and lifting devices. Technical staff should be contacted for assistance and location of safety equipment.
- Always use correct manual handling technique – keep the spine neutral, bend with the knees using semi squat and avoid twisting, flexing forward with the spine, or sideways leaning of the spine.

Assistance with manual handling risk assessment and training in manual handling technique is provided by the Safety and Health Office, phone ext 2784. Staff are encouraged to phone if they have concerns.

Relying on training of staff is not as effective in reducing manual handling injuries as proper workplace design and provision of equipment– please keep this in mind!

### **3.16 Safety in the Use of Computer Workstations**

Please refer to the Safety and Health web site:

[http://www.safety.uwa.edu.au/policies/computer\\_workstation\\_ergonomics](http://www.safety.uwa.edu.au/policies/computer_workstation_ergonomics) and note that the same principles of adopting correct posture at the computer applies to lap tops as well as desk based computer monitors. Be aware that if you are working from home, you should also apply the same principles.

Most people to have difficulty checking whether they have correct posture when set up at a computer, even after reading a pamphlet! If needing assistance, or if at any time you start to develop symptoms, please contact the Occupational Therapist in the Safety and Health office. Since there are many computer “ergonomic” accessories on the market, the UWA Safety and Health office provides free trial of equipment. It is a myth to think that using all things that are available will prevent problems likewise what works for one person may not suit another. A professional opinion Occupational Therapist is warranted if you are having any difficulty with comfort at the computer.

### **3.17 Working Alone**

Please refer to the Safety and Health web site:

<http://www.safety.uwa.edu.au/policies/./policies/isolation>

### **3.18 Working from Home on UWA Business**

Where staff have approval to work from home on a regular and ongoing basis, their manager or supervisor should ensure that they have received all information concerning safety and health and the management of sensitive University information. The same duty of care applies to staff who work at home on University business, as when they work on-site. This arrangement can have significant repercussions on provision of equipment, at the very least the School/Area is charged with the responsibility of ensuring that the home based workplace is safe.

Staff who work from home on a regular basis should undertake a self-assessment of their working environment in accordance with the UWA working from home policy.

It is the managers and supervisors responsibility to ensure that a formal written agreement is in place to delineate who has responsibility for costs and equipment required to support the working from home arrangement. Please refer to the Safety and Health policy on home based work guidelines: [www.safety.uwa.edu.au/policies/./policies/homebased\\_work\\_guidelines](http://www.safety.uwa.edu.au/policies/./policies/homebased_work_guidelines)

The Senior Occupational Therapist in the UWA Safety and Health Office is available to provide assessment of home based workplace environments in the event that there are any concerns. Please phone 6488 2784.

### **3.19 Safety in Workshops and Laboratories**

It is the duty of supervisory academic and technical staff to familiarise themselves with the safety and health legislation and Codes of Practice which are relevant to the work being undertaken in their area of responsibility and to ensure that other members of staff and students comply with these requirements.

Laboratories can be place of danger as a lack of experience and knowledge may contribute to a safety and health incident. We can never totally eliminate

the risk of injury, however you can reduce them by abiding by a number of safety and health rules.

1. Ensure that you follow all instructions that your supervisor gives you.
2. Wear the correct clothing such as covered shoes and laboratory coats. Laboratory coats can easily be forgotten and thought of as waste of time however they provide valuable protection against such things as spills.
3. Use appropriate personal protective equipment such as safety glasses, hearing and respiratory protection when needed. Remember to always wear your laboratory coat and other protective equipment.
4. Eating, chewing, drinking, smoking, taking medication, or applying cosmetics is forbidden, as is mouth pi petting.
5. Never undertake potentially hazardous activities whilst working alone.
6. Familiarise yourself with the emergency preparedness procedures. Know the location of the nearest emergency shower, eyewash station, first aid kit, fire fighting equipment and emergency exits.
7. If chemical spillage's do occur and you are unsure of how to deal with it, STOP and immediately contact your supervisor or safety warden (Rod Robinson, 2372). You should however always know how to clean up the chemicals you are working with prior to beginning your work.
8. Never undertake repairs of electrical equipment. Unauthorised modification to electrical equipment is not allowed; only qualified persons are permitted to carry out electrical work.
9. Ensure you know how to operate equipment and machinery safely before beginning.
10. When planning a new experiment always consider the hazards that might occur and take the necessary precautions to eliminate or reduce these hazards.
11. Always report all known or observable hazards, incident and injuries to your supervisor and complete and submit the necessary report forms.
12. Be aware of posture: ergonomics. Prolonged postures without regular change are to be avoided.
13. Remember to always wear your laboratory coat

### **Housekeeping**

1. Good housekeeping in the laboratory can reduce the risk of injury. Keep corridors and doorways clear.
2. Store chemicals in an appropriate cabinets or storeroom areas to ensure proper segregation.
3. Always use the sharp disposal containers provided.
4. Clean up all spills immediately.
5. Keep laboratory free from clutter, clean up work surfaces
6. Store gas bottles in their correct manner.

## **General Laboratory Safety**

### **B. Cleanliness and tidiness**

- Leave equipment and workspace as found. WHEN YOU LEAVE, THE LABORATORY SHOULD BE CLEANER AND TIDIER THAN YOU FOUND IT.
- When you enter the lab, leave your coat and bags in the doctor's room. Do not spread out your clothes in the lab!! Instruct your subjects to do the same.
- Clean and sterilise surfaces and equipment after use. Be sure to come back and put the clean equipment away!!! (eg. do not leave mouthpieces and hoses in the sterilizing solution for more than 60 minutes!).
- Clean not only the equipment, but also the floor around the equipment you used (blood, sweat etc.)
- If something needs cleaning, then clean it!

### **C. Breakages/Malfunctions**

Everyone MUST report all breakages and malfunctions. In the first instance, inform your supervisor and then the technical staff, and also place a sign on the equipment to let other lab users know there is a problem. Sign and date this. Be sure to record the performance of the major pieces of equipment in their respective logs to make it easier for the monitoring of consumables as well as the actual machinery.

### **D. Computers**

- Do not install any software on a computer in the lab without informing the Electronic Technicians.
- Do not use the computers in the lab as storage space. Take the files you need to your own computer. Do not leave files on a computer in the lab without filing them in a folder with your name. Occasionally the hard drives will be cleaned and files with no clear purpose will be deleted.

### **E. Emergency Procedures**

Lab users should be familiar with the locations of safety and emergency equipment such as fire extinguishers, fire alarms, first-aid kits, emergency telephones, exits and the School Evacuation Plan.

- Rob Robinson is the School's designated Safety Officer and should be contacted (Ext. 2372) in the event of an accident.
- The UWA emergency phone no. (2222) is shown on the handset.
- A first aid kit is located in the technical area (ground floor).
- Showers for rapid washing in the event of a chemical spill on skin etc. are located in the Exercise Biochemistry lab and also downstairs in the Technical storage area.

#### F. Safety Considerations

- Loose clothing and long hair must be kept away from moving equipment (be SMART!).
- Closed shoes must be worn when working in the lab.
- Always wear protective gloves when handling chemicals or biological samples and/or waste. Safety glasses are also recommended.
- **DO NOT** risk needle stick injury by attempting to re-sheath needles. For more information on needle and syringe disposal/needle stick injuries, see the UWA Safety and Health policy included as an Appendix to this manual.

#### G. Poisons Cupboard

- By government regulation, products such as local anaesthetics (Xylocaine and Emla cream) must be stored in a locked cupboard. David Bishop holds the Poison's License for the lab, therefore he is responsible for maintaining a register of the stored products and he and Rod Robinson have keys to the cupboard.
- To adhere to government regulations, the cupboard should be locked again immediately after removing the required products. **DO NOT LEAVE THE CUPBOARD OPEN WHEN WORKING IN THE LAB.**

#### H. Security

- Do not remove anything from the lab without permission.
- Always lock the Laboratory door when unoccupied. Things can disappear very quickly.
- Keep your valuables safe while working in the lab.
- **DO NOT** leave polar heart rate monitors and stopwatches in the lab. They disappear!

#### Booking Procedures

- Bookings (including subject's name) are to be written in the lab diary that is kept by the radiometer.
- Please book as far in advance as possible to avoid potential conflict and disappointment! The lab works on a 'first come, first serve' basis wherever possible.
- Give an approximate start and end time for equipment usage. Do not forget to allow time for set-up, calibration and clean-up.
- If you require the WHOLE lab (eg. for performance testing or a large group), please indicate in your booking.
- List ALL the equipment you require (which ergometer, treadmill, skin fold callipers, etc...)
- Wherever possible, please try to book subjects in blocks to help with lab efficiency.
- Cancel bookings as early as possible if your circumstances change.

## Cleaning And Sterilising Equipment

### A. Polar heart rate monitors:

- **DO NOT** immerse the transmitter belts in water. Rinse under hot water, wipe down with paper towels and leave to dry. The receivers (wristwatch) should be wiped down with paper towels.

### B. Breathing Valves / Mouthpieces / Hosing / Nose clips

- All breathing valves, nose clips, hosing and mouth pieces should be separated, rinsed thoroughly in hot water and placed into Milton solution for 1 hour (see instructions on wall and follow **exactly**).
- It is very important you return and take items out of the sterilising solution.
- If you suspect that these items have been left in solution for more than 60 minutes, **PLEASE REMOVE THEM IMMEDIATELY**.

### C. Sweat

- Sweat on equipment and floors is to be wiped away with paper towels. **THIS IS TO BE CARRIED OUT AT THE END OF EVERY TESTING SESSION.**

### D. Blood Spills

- All personnel involved in blood handling are required to wear latex gloves. All blood spills should be wiped away with alcohol.
- Any items involved in blood/body fluid sampling are to be deposited in biological waste containers (see Waste disposal).
- All sharps are to be deposited in sharps containers (see Waste disposal).

### E. Muscle Biopsy Needles and Syringes

- As soon as possible after the muscle sample is removed from the needle, all parts of the needle should be separated and washed off with running water, to remove all blood and tissue.
- After washing, reassemble the needle and place it back into its plastic cover.
- Sterilisation of the needles is performed at Sir Charles Gairdner Hospital. Count the number of needles delivered and check that the same number is returned. When dropping off at the Hospital make sure the bag containing the needles is clearly labelled with "**HMES, UWA**".
- The 50ml syringes used for suction can be re-used providing they are not soiled with blood or tissue. If so, dispose of correctly (see Waste disposal).

### F. Rectal Temperature Probes

- After use, discard any plastic covers and/or tape/gauze used to secure the probe, then wash off under running water, then place in Milton solution for 1 hour. **DO NOT** mix these probes with other items, such as mouthpieces, breathing valves.

### G. Skin Temperature Probes

- Wipe dry with paper towels to remove sweat.
- If necessary, wipe with alcohol to remove tape adhesive.
- Plastic holders (if used) should be wiped dry with paper towels.

## Waste Disposal

### A. Sharps

- All sharps (needles, lancets, scalpels etc) **must** be deposited into sharps containers! **No other waste should be placed in these containers!**
- When full, the sharps container is to be placed into the large Medi-Collect bin for removal from the lab.

### B. Biological (Soiled) Waste

- All (non-sharp) items that have blood, tissue, saliva or sweat on or in them are to be placed into plastic bags marked for "Biological Waste". This includes vacutainers, soiled tissues and swabs, used alcohol wipes, syringes etc. **Unsoiled paper waste, such as tissue boxes, alcohol swab covers, etc. must not be placed in these bags.**
- When full (or finished for the day) a biological waste bag should be clearly labelled with the appropriate sticker, firmly sealed and placed in the large Medi-Collect bin for removal from the lab.

### C. Paper and General (Unsoiled) Waste

- Other than sharps or soiled waste, all other paper and general waste that is unsoiled, must be placed into a general waste bin. **DO NOT mix this type of rubbish with biological waste.**
- General waste bins will be emptied by the cleaners.

## Animal Handling Procedures

Experiments with animals **must** comply with UWA, State and Federal guidelines for the care and use of animals for scientific research. See "Handling and Disposal of Animals" included as an Appendix to this manual.

## Radioisotope Handling Procedures

- Experiments using radioactive material **must** comply with UWA and government guidelines for this type of research.
- For further information, go to [www.safety.uwa.edu.au/policies](http://www.safety.uwa.edu.au/policies)

## Liquid Nitrogen Handling Procedures

- Liquid N<sub>2</sub> is obtained from Physics, but can only be collected by walking there with one of our canisters and a trolley (see Colin Phillips). You can no longer drive there to pick it up as we are not permitted to transport liquid N<sub>2</sub> in a vehicle unless it is specifically designed for this purpose.
- Use thick protective gloves when handling liquid N<sub>2</sub> to prevent burns.

## **Needle and Syringe Disposal**

These procedures provide guidelines for the appropriate disposal of needles and syringes used, or found, at the University and emergency action to be taken following a needle stick injury. Diseases caused by needle stick injuries have increased in recent years due to the proliferation of diseases such as hepatitis B and C and HIV in the population. For every 100 needle stick injuries involving hepatitis C positive blood, 4 results in transmission (4% risk). With hepatitis B needle stick injuries, the risk is 30% (30 in 100) and for HIV the risk is 0.4% (4 in 1000). Therefore, it is important for employees of the University to be aware of safe disposal procedures for needles and syringes and emergency action to take in the event of a needle stick injury.

## **Safe Disposal of Needles and Syringes**

### **Syringes used in Education and Research**

- UWA Schools are responsible for supplying sufficient and appropriate sharps containers to allow disposal of all syringes used in education and research. Schools are to ensure that syringes are disposed of by incineration at a government authorised facility.
- Employees, researchers and students are to place all needles and syringes in appropriate sharps containers immediately after use.
- Syringes used in work with radioisotopes are to be placed in puncture proof containers within radioactive waste boxes. Syringes used in bio hazardous work are to be placed into commercial sharps containers and then into bio hazardous waste receptacles for disposal. All other syringes are to be placed in yellow sharps disposal containers.

### **What to do if you find a discarded needle and syringe?**

Should you find a needle and syringe discarded in the laboratory or elsewhere on campus the following steps should be followed to minimise the likelihood of a needle stick injury.

1. Do not be alarmed.
2. If possible acquire a sharps container. If one is not available a container with a well secured lid, preferably a screw top, will be appropriate. Rigid plastic containers are the best (eg plastic milk, juice or soft drink bottles). Avoid using glass which may shatter, or aluminium can which may be squashed.
3. Don't touch the sharp point with your fingers or hands.
4. Pick up the used needle and syringe by the blunt end, away from the point.
5. Don't try to put the plastic protective cover back on a needle if it has fallen off.
6. Put the needle and syringe, point first, into the container. More than one can be placed in the container, but do not overfill. Do not carry the needle and syringe unless it is in a suitable container.
7. Make sure the container is tightly sealed.
8. Put the sealed container in a domestic rubbish bin (mobile green sulo bin) or deliver to Student Services Medical Centre at the Guild Village.

If you are uncomfortable in picking up the syringe please contact the Medical Centre on 6488 2118 for advice.

## **Handling and Disposal of Animals**

### **Animal handling**

All procedures on animals must comply with the Western Australia State regulations and the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes.

All procedures on animals must be approved by the Animal Ethics Committee (AEC) of The University of Western Australia (UWA). Any animal experimenter who wishes to use animals must have a current AEC approval for the research project to be carried out.

All animal users must have received a formal training in animal handling and experimentation that is approved by the AEC. In the absence of such training, one must enroll to the Programme in Animal Welfare, Ethics and Science (PAWS) course offered at UWA.

All animal users (with the exception of Honours students under direct supervision) must hold a current Vivisection License from the Government of Western Australia.

All animals must be purchased through the Animal Care Unit of UWA.

No animal should be kept permanently in the School of Human Movement and Exercise Science at UWA. Only short duration holding (less than three days) is allowed.

All animal holding and experimentation should be performed in the Animal Experimentation Room located in the Exercise Biochemistry Laboratory of the School of Human Movement and Exercise Science, with the fume hood switched on to maintain adequate ventilation.

### **Carcass disposal**

The animals should be killed by anaesthetic overdose, and cardiac excision should be performed on the carcass prior to disposal.

All carcasses and other biological materials should be double-bagged and only temporarily stored (less than 48 hours) in the freezers of the Exercise Biochemistry Laboratory at the School of Human Movement and Exercise Science prior to being disposed of at the Animal Facility Unit on the Crawley Campus, UWA.

Radioactive carcasses should be stored and disposed of in accordance with Radiation Protection Office Guidelines.

The animal holding cages must be kept clean and stored away after usage.

### **Contact details**

For more information on any of the issues raised above, please contact Dr Paul A. Fournier (6488 1356) or the AEC Secretary, Research Services, Registrar's Office, UWA (Tel: 6488 7887).

## **Use of Radioactive Materials**

All radioisotope users at the University are required to have attended and passed the Unsealed Radioisotope Handling Course (3-day course) within the first year of using radioisotopes, and preferably prior to starting such work.

All procedures involving radioactive materials at UWA requires the user to have completed a protocol application before commencing the work. Protocol forms are available from the Safety & Health Office (SHO) or from the SRSO. The forms must be completed, signed by the applicant and signed by the SRSO (thus ensuring that the appropriate school personnel are aware of the work proposed) before being sent to the SHO for a final assessment. The application is reviewed by the SHO and if approved it is signed and issued with a protocol number. Copies of the approved protocol are sent to the SRSO and the applicant. Any changes to an agreed protocol must be approved by the SRSO and SHO. Such changes may include alterations to the procedure as submitted, using larger activities or different radionuclides or performing the work in different radioisotope laboratories (which would also need to be registered).

### **Local Working Rules for Radioisotope Laboratory**

1. **Personal conduct.** Eating, drinking, smoking and application of cosmetics in the lab are forbidden. No mouth operations are permitted. Avoid personal habits such as pen sucking or touching bare skin with potentially contaminated gloves. Always work carefully and tidily. When leaving the laboratory, monitor yourself, remove gloves, wash hands and monitor again.
2. **Laboratory preparation.** No unnecessary materials such as bags, brief cases and text books should be in the lab. Keep active and inactive areas separated and well labelled. Label all containers with the radionuclide, compound, activity, date and your name. All work with unsealed liquid radionuclides shall be carried out in a double container or over trays lined with absorbent paper to restrict the spread of any spilt liquid. The bench of the work area shall be covered with absorbent paper and the work area shall be identified with signs and or radioactive marking tape.
3. **External radiation protection.** Arrange work so that the hands and body are kept at the maximum practicable distance from high specific activity radionuclides by the use of tongs or other handling devices. Use suitable shielding materials (such as perspex for beta radiations) wherever possible.
4. **Laboratory procedures.** Practice runs with non radioactive materials are necessary for all new procedures. Contaminated items must be well labelled.
5. **Airborne hazards.** Operations that have the potential to produce vapour, dust, spray or radioactive gas shall be carried out in a fume cupboard or a glove box.
6. **Monitoring.** A contamination monitor with suitable detection characteristics for the radiations from the radionuclides in use shall be available at each work station. Personal monitors (film badges) are not sensitive to radiations from H3, C14 and S35. When worn, monitors

should be located at waist level, remain at work, be changed regularly (every two months) and submitted for assessment if known or suspected exposures or contamination has occurred.

7. **Solid wastes.** Solid radioactive wastes must be well packaged and labelled.
8. **Emergency procedures.** In the event of a spill verbally warn others, restrict unnecessary movement into and through the area, report the spill to the School Radiation Safety Officer (Dr Paul Fournier, Tel: 6488 1356), treat contaminated personnel first and decontaminate laboratory and equipment.
9. **Personal protective equipment.** Laboratory coats, gloves and closed footwear must be worn at all times in the lab. Safety glasses should also be worn.

## Radioactive Waste Disposal Procedures

### Liquid Radioactive Waste

- Liquid radioactive waste is best disposed of via the sewer system. Such waste may only be disposed of via flushing sinks connected to approved radioactive drains provided for this purpose.
- Ensure that the activity per flush is below the dilution concentration limit for each radionuclide.
- Organic solvents are not to be disposed of via flushing sinks.

### Solid Radioactive Waste

- Solid waste must be sealed in a red plastic bag and placed in a cardboard radioactive waste box.
- Waste must be segregated by radionuclide and waste type unless otherwise permitted. For example, the following waste should be packaged in separate boxes:
  - radionuclide
  - animal carcasses (will be stored frozen and incinerated)
  - syringes in a sharps container (will be incinerated)
  - scintillation cocktail contained in counting tubes (may be incinerated)
- All sharps (needles & broken glass) must be enclosed in a hard container (metal tin or plastic sharps container) before being placed into waste boxes.
- An estimate of the total activity of each radionuclide must be written in the details section of each box. Only units of activity (Bq, Ci and their derivatives) are acceptable.
- **Do not** use counts per second or Bq per mL.

- Current WA government regulations limit the activity of radionuclides in a waste box for landfill burial. Box limits for long lived radionuclides are:

Radionuclide	Box Limit	
	MBq	µ Ci
<sup>3</sup> H	48	1300
<sup>14</sup> C	3.4	92
<sup>36</sup> Cl	2.2	59
<sup>22</sup> Na	0.63	17

- Boxes should be sealed with 50 mm wide masking tape such that the box label is not obscured.
- Do not use Caution - Radioactive tape on waste boxes.
- **Ensure all wastes are labelled clearly and correctly.**

As part of their day-to-day responsibilities they will ensure that:

- safe methods of working exist and are implemented;
- staff, students and others under their supervision are instructed in safe working practices;
- new employees working within their School are given instruction in safe working practices;
- regular safety inspections are made;
- positive, corrective action is taken where necessary to ensure the safety and health of all staff, students and others;
- all plant, machinery and equipment in the area in which they work is adequately guarded, regularly maintained and in safe working order;
- all reasonable practicable steps are taken to prevent the unauthorised or improper use of all plant, machinery and equipment in the area in which they work;
- appropriate protective clothing and equipment, first aid and fire appliances are provided and readily available in the School in which they work;
- toxic, hazardous and highly flammable substances are correctly used, stored and labelled;
- they monitor the standard of safety and health throughout the unit in which they work, encourage staff, students and others to achieve the highest possible standards of safety and health and discipline those who consistently fail to consider their own well-being or the safety and health of others;
- all signs used meet the statutory requirements;
- they report, as appropriate, any safety and health concerns to the appropriate person in authority.

All work will be conducted in accordance with the University's Occupational Safety and Health Policy and any specific Codes of Practice relating to particular activities and industry specific standards.

**20. Safety and Equipment**

Please refer to the Safety and Health policy web site:

[www.safety.uwa.edu.au/policies/./policies/personal\\_protective\\_equipment\\_guidelines](http://www.safety.uwa.edu.au/policies/./policies/personal_protective_equipment_guidelines)

**4. MONITORING OF THE POLICY**

Day to day monitoring of compliance is the responsibility of all those with managerial responsibility. Managers should also use reports of injury, near misses and sickness linked to work to determine whether existing arrangements require modification in order to prevent a recurrence.

Monitoring the effectiveness of the policy will be carried out by way of planned School/Unit inspections. This should follow the University policy on inspecting the workplace at:

[www.safety.uwa.edu.au/policies/./policies/inspecting\\_the\\_workplace](http://www.safety.uwa.edu.au/policies/./policies/inspecting_the_workplace)

**INSPECTION CHECKLIST**

2006 LabWorkshop\_Safety\_Schedule  
2006 Manual Handling RMP  
2006 Safety & Health Plan  
2006 Biohazard\_Injury\_Report\_From  
2006 hazard\_report\_form  
2006 Risk Assessment Record Form - Appendix 2  
2006 Risk Control Record Form - Appendix 4

**APPENDICIES:**

1. Diploma of Education Safety Manual – see School for copy
2. Outdoor Education Safety Manual – see School for copy