Performing Risk Assessments

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# Purpose

<<<< This SOP is left in DOCX format so that you may edit it for your own laboratory and your own risk assessments>>>

The purpose of this SOP is to lay out the responsibilities, equipment and procedures required performing risk assessments.

# Scope

This SOP applies to all persons prescribing and requiring to perform risk assessments.

# Responsibilities

## Supervisors

Supervisors are responsible for:

* **Reviewing this SOP on a regular basis.**
* Ensuring that all workers under their supervision are trained on and are proficient in performing the steps of this SOP.
* Approving all risk assessments performed by their workers.
* The Supervisor is the subject matter expert in these hazards.

## Workers

Workers are responsible for:

* Following this SOP as approved by their Supervisor
* Reporting any hazards or additional risks to their Supervisor.

# When a Risk Assessment is Required

* When there is a new hazard in the laboratory.
* When there is a change to an existing hazard.
* When a new procedure is to be employed or a new piece of equipment is introduced.
* When an incident or an injury is a result of any of the above.
* When the Supervisor deems that it is necessary for any reason.

# Risk Assessment of Chemical, Physical and Biological Hazards

1. Obtain the relevant safety information for the hazard you are handling.
2. If you are modifying the hazard, describe how you are modifying it.
3. For any chemical modifications to the hazard (chemical modifications to a chemical, physical or biological hazard), determine whether or not it renders the original hazard more hazardous.
4. For any physical modifications to the hazard (physical modifications to a chemical, physical or biological hazard), determine whether or not it renders the original hazard more hazardous.
5. For any biological modifications to the original hazard (biological modifications to a chemical, physical or biology hazard), determine whether or not it renders the hazard more hazardous.
6. Determine if any changes result in additional or different exposure routes. Was the hazard a solid and now a liquid? Or a gas? Or any combination? This may change the personal protective equipment required. An example is a cytotoxic drug that is diluted in DMSO for injection into mice. The hazard has changed from a *powder to a liquid*. The hazard has now changed from *drug* to *drug and DMSO*. The symptoms of exposure or effects on health will be different.
7. By documenting the starting hazard, any changes, any risks associated with those changes including increased toxicity or changed exposure routes, and have provided solutions to deal with those changed or additional hazards, you have completed a risk assessment.

# Risk Assessment for a Procedure

1. Complete or review the Standard Operating Procedure.
2. For each step, assess for the risk of spill, harm or exposure to the hazard.
3. For each step additionally assess the risk of ergonomic hazard (repetitive motion, forceful motion, awkward posture and contact stress).
4. For each step, include what actions you can take to prevent or mitigate each risk.
5. Re-write the SOP to include all mitigating steps.
6. You have completed a risk assessment and have created an improved SOP to mitigate the risk.

# Approval of the Risk Assessment

* The Supervisor is the subject matter expert in the work, the reagents and the hazards. The safety staff do not provide risk assessments for the Supervisors. They can help you find sources of occupational health and safety information.
* The Supervisor reviews the risk assessment documentation and the revised SOPs and determines if the provided information and procedures are appropriate.
* The Supervisor must ensure the entire process is repeated if the information changes or new information becomes available.

# Training

1. Each lab member is to read, agree and sign off on this SOP.
2. Upon revision or re-write, this SOP is to be re-circulated and re-signed by all lab members.