

Occupational Health @MIT

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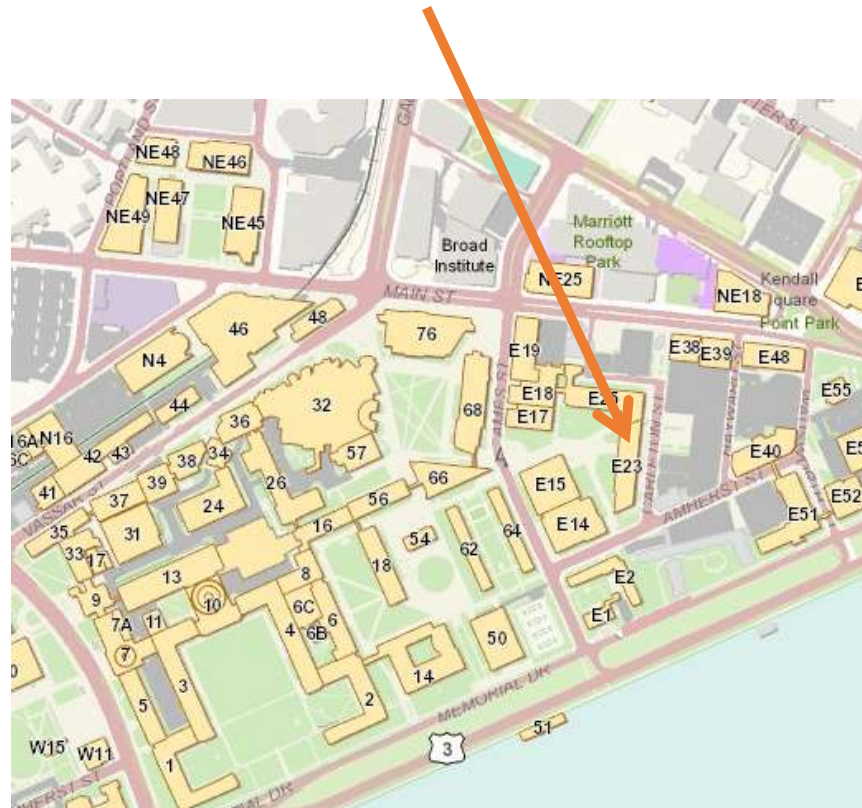
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Occupational Health at MIT Health

- physician, nurse, assistant & coordinator
- other providers:
 - Urgent Care
 - Sports Medicine / Orthopedics
 - Primary Care
 - Eye Service



What Does Occupational Health Do at MIT?

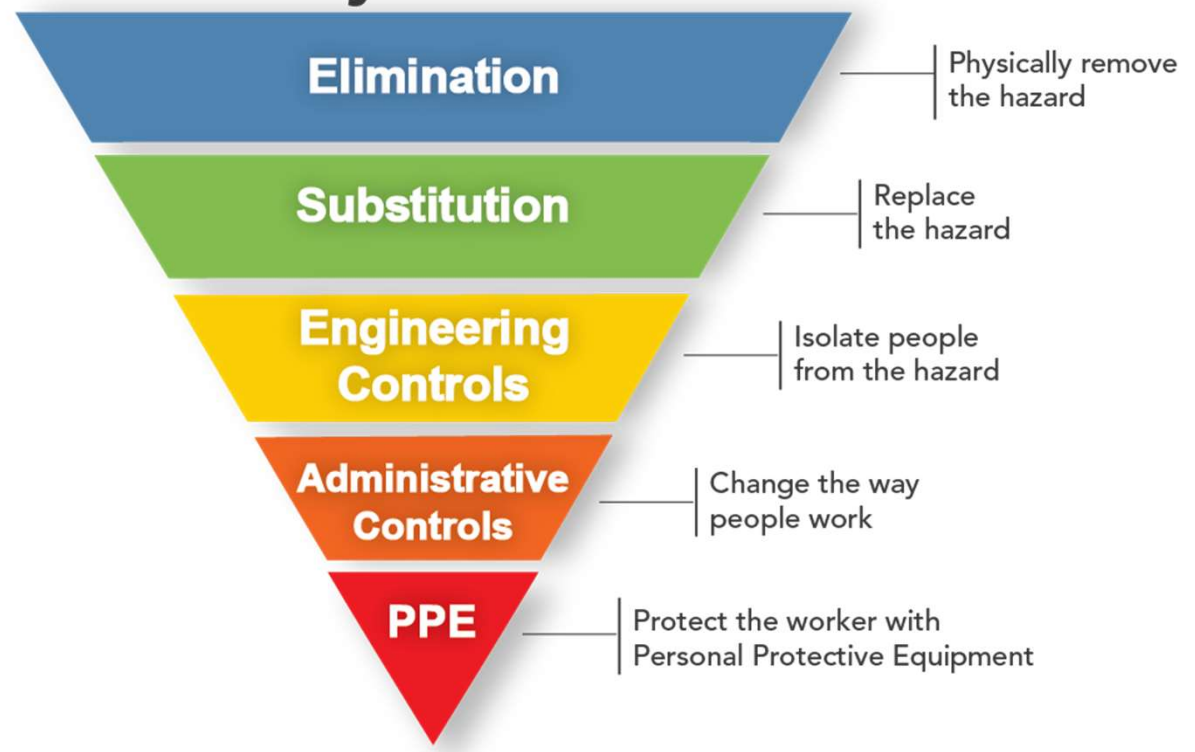
- assists EHS in determining which jobs require the following occupational health services
- determines if workers are physically capable of performing certain jobs by performing **fitness evaluations**
- assesses **individual risk** and what can be done for **personal protection**
- monitors health of workers chronically exposed to a hazard above the safe level through **medical surveillance** programs
- **treats injuries & acute exposures**; helps workers **return to work**

Hierarchy of Controls

Most effective



Least effective

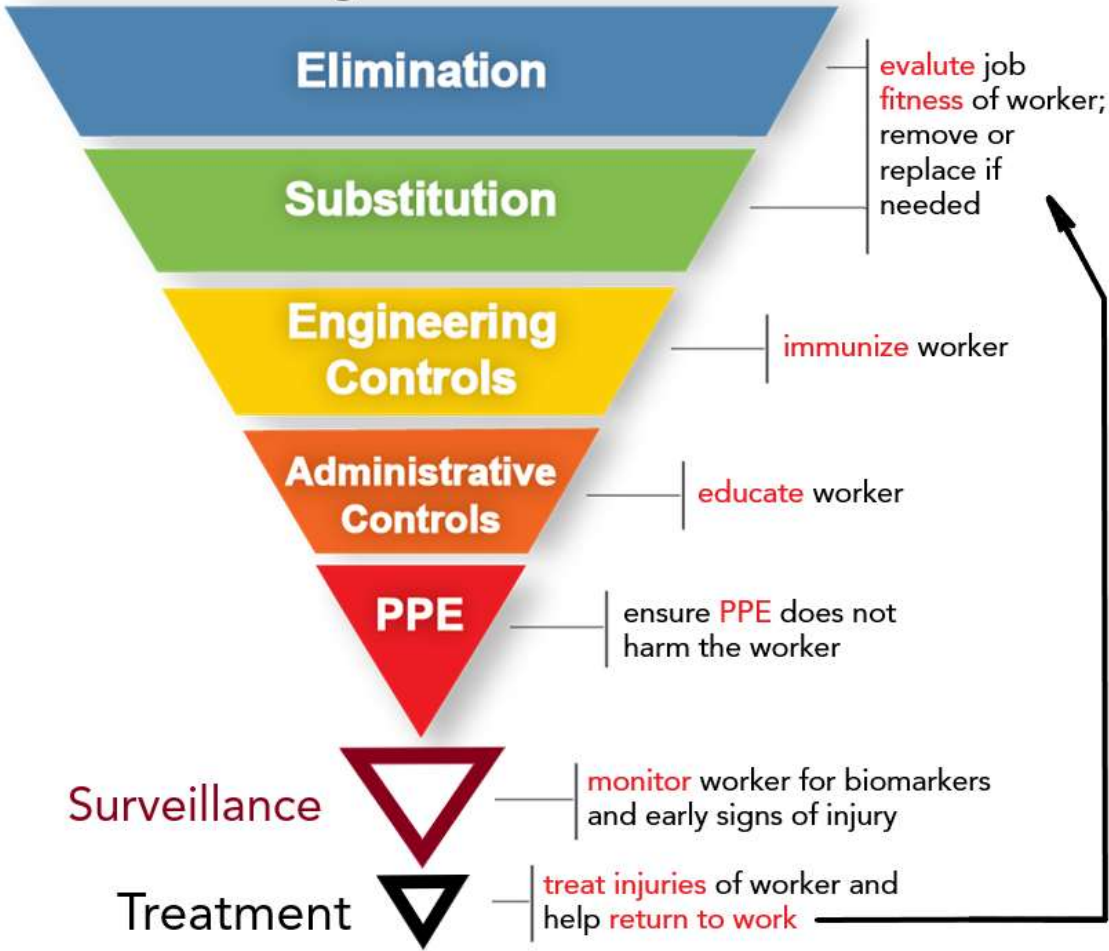


Hierarchy of Controls

Most effective



NOT effective



What Does Occupational Health Do @MIT?

- Individual Risk Assessment and Protection
- Fitness for Duty
- Medical Surveillance
- Work Injury Management

Individual Risk Assessment and Modification

- do standard administrative & engineering controls work for you personally?
- do you tolerate personal protective gear (PPE) necessary for your worksite?
- Occ Health also assists through committees (Safety, CTC, RPC, CAB, CAC)
- Occ Health may also become involved upon request by EHS or by worker

Prophylaxis (Immunizations)

- hepatitis B
 - if worker asks and/or has negative surface antibody titer
- tetanus
- diphtheria
- hepatitis A
 - if working with human waste
- ?rabies
 - we only have rabies viral vectors; no live rabies is at MIT
- ?typhoid

Fitness for Duty Evaluations @MIT

to place workers in a new position safely or to determine readiness to return to work after injury or illness

- **Post-Offer Pre-Placement (ADA)**

- Medical staff: measles, mumps, rubella, varicella, pertussis, TB, flu, COVID (MADPH), vision (ACP)
- non-human primate workers: measles, tuberculosis (AAALAC)

- **Regularly per Regulation**

- respirator users (OSHA)
- NRC nuclear reactor operators (NRC)
- commercial drivers, forklift drivers, hoisters (DOT, MA RMV & Division of Occ. Licensure)
- tower climbers
- Lincoln Lab civilians who deploy to military base in Marshall Islands (~DOD)

Medical Surveillance @MIT

*periodic medical evaluation of workers regularly exposed to hazards plus data analysis to determine and eliminate underlying causes as per OSHA, NIOSH, ACGIH, AAALAC, ANSI ...
research environment has lots of different hazards but intermittent and/or unpredictable exposures*

- **hearing**
 - annual audiograms
- **UV & lasers**
 - baseline & exit eye exams
- **beryllium**
 - blood test, pulmonary function test annually
- **heavy metals**
 - blood or urine tests every 6-12 months
- **toxoplasma (Whitehead Laredo lab)**
 - titers at baseline, if negative, then annual & exit
- **tuberculosis (Broad BSL-3 lab)**
 - every 6 months
- **animal allergies**
 - questionnaire triannually for researchers
 - in person annually for vet & husbandry staff

Work Injury Management

as per OSHA, workers compensation laws and insurance

- evaluate
- treat
- coordinate with supervisors to manage work restrictions
- collaborate with EHS
 - record
 - report
 - investigate
 - surveill
 - prevent recurrence

Injuries or Exposures are Work-Related if ...

... an **employee (or MIT affiliate)** ...

- *undergrad, grad student, post-doc, fellow, associate, visiting scientist/student*

... while **working** ...

- *was performing “normal” work duties during “normal” work hours **OR***
- *was on company property and attendance was expected by employer **OR***
- ***was involved in official activity furthering MIT’s educational or research missions***

... has an **event** causing **injury OR exposure**.

whether treated at **Emergency Room** or **Urgent Care**,

MIT **WILL** HELP WITH MEDICAL EXPENSES

for injuries or illnesses that happen while

participating in MIT's educational and research missions

regardless of MIT appointment (**student, employee, non-employee**)

to do start this process, a **supervisor report** is submitted & one contacts the

Workers Compensation Office or **Office of Insurance**

hr-dsmlo@mit.edu

617-253-9496

insurance@mit.edu

617-324-7117

if your injury, illness or exposure ...

... happened **BEFORE today** & doesn't need same day care

- call 617-253-8552 or message "Occupational Health" in HealthELife

... happened **TODAY** and/or **NEEDS SAME DAY** care

- **get yourself** to Urgent Care at MIT Health (8am-8pm M-F; 10am-4pm Sa-Sun)

... happened **TODAY** and/or **NEEDS SAME HOUR!!!** care (or UC is closed)

- **stay in place** & call **617-253-1212** (campus phone: x100) -> **MIT Police** -> **ER**

please note:

there is no “medical advice” phone-line for work injuries

a phone call cannot replace

an **in-person** evaluation by a medical professional

some general information,
guidelines and heuristics

going to an **Emergency Room** is the same as ...

... going to a **hospital** without an appointment

going to an **Urgent Care** is the same as ...

... going to a **doctor's office** without an appointment

Why Urgent Care?

- near by & shorter wait
- avoid sick & stressed people
- basic life support (BLS)
- non-trainee providers have time and focus
- may have your medical records
- familiar with MIT worksites and hazards
- you may need to return here for follow-up
- linked to MIT plans & workers comp
- nearby CVS pharmacy
- \$0 – \$20 copay with MIT plans

Why Emergency Room?

- always open
- advanced diagnostics
- advanced life support (ALS) (ie, intubation)
- renowned hospitals with specialists
- may have your medical records
- can admit you to hospital if necessary
- Urgent Care may end up sending you here
- better patient portal to their EMR
- in-house pharmacy
- \$100 copay with MIT plans
 - *can be reimbursed if exposure or injury @MIT*

*as a **GENERAL GUIDELINE,***

go to the **E.R.** if there are **sudden changes** in:

- vision
- bleeding
- breathing
- bodily control
- sensation or pain level
- ability to think or speak clearly

which **exposures** should go where?

*except for the very few individuals who work with “select toxins”
(i.e., diphtheria toxin, botulinum toxin, tetrodotoxin)*

biohazard exposures can be treated
(better*) at MIT Health

animal bites

Simian B*

lentiviral vector*

blood-borne pathogens (hep B, hep C, HIV)

call x3-1212 for (toxic) **chemical exposures** if:

- **ingestion**

- **inhalation**

- definitely call if symptoms (shortness of breath, dizziness, drowsiness, headaches, nose/throat irritation) continue despite getting fresh air
- *note: odor is a poor guide for determining level of exposure;
see SDS for STEL & IDLH and consider vapor pressure & exposure duration*

- **“life-threatening” skin exposure**

- see next slides

UNCERTAIN? call x3-1212

Life-Threatening Chemical Skin Exposures

if YES to any of these, call x3-1212

- are you in pain or in distress?
- is skin non-intact, blistered or charred?
- is chemical an acutely fatal systemic toxin?

*note: this is just a guideline or a heuristic!
when in doubt, always call x3-1212*

if NO to above, but YES to one of each of these two groups, call x3-1212

- is the chemical a solvent or a corrosive?
- are you uncertain what chemical was?
- is the SOP or SDS unclear or unavailable?

+

- was splash more than a few drops or is exposed area more than 3 inch diameter?
- was eye, face or groin exposed?
- was entire hand or foot exposed or a limb encircled?
- was the chemical injected (e.g., needle-stick)?
- did it soak through your clothes?
- can you contaminate the public?

Chemical Skin Exposures: Three Scenarios

- **flushable with minimal harm**

- *e.g., a few drops of ethanol on arm*

- **urgent but not life-threatening: go to Urgent Care**

- *e.g., back of wrist splashed with potassium hydroxide*

- **life-threatening: call x3-1212 to go to an Emergency Room**

- *e.g., an ungloved hand immersed into hydrofluoric acid*

again ...

that was just general information,
guidelines and heuristics

if there is uncertainty,

about what to do,

for any reason,

err on the side of caution

DON'T KNOW WHAT TO DO?

Three-One-Two-One-Two

617-253-1212

so ... you called

Three-One-Two-One-Two

NOW WHAT?

when x3-1212 is called, the MIT Police Dispatcher ...

- tells the worker to stay in current location (safely)
- always sends patrol officer to that location (who reports back to dispatch)
- collects information: # people, age, symptoms, etc.
- asks for category of substance to which worker was exposed
- contacts Facilities Operations Center which contacts EHS on-call
- contacts **ECC** which sends ambulance and/or Cambridge Fire +/- HazMat
 - *Cambridge Combined Emergency Communications & 911 Center*
 - *Dispatch always contacts ECC if told “**exposure of unknown substance**”*

if uncertain, tell the dispatcher: “exposure to unknown substance”

(ambulance transports worker to E.R., usually Mount Auburn or MGH)

What To Do While Waiting for First Responder?

- **decontaminate** (if not done already)
 - as appropriate, use the sink, eye-wash or high volume shower in the lab
 - Cambridge Fire can:
 - give advice on how to decontaminate using local resources
 - has portable shower or dry decon for a few workers if local resources are unavailable

*but if possible, **don't wait for Cambridge Fire to decontaminate***
- follow **SOP** if any or perform first aid as appropriate
- find **SDS** to give to responders
- **stay at location**
 - but do so safely ... for example, exit building or get fresh air as needed

Decontamination: General Procedure if no SOP

- **FLUSH** for at least 15 min with tepid water
 - no solvents, no hot water
- while flushing, **REMOVE** any contaminated apparel
 - avoid eyes if pulling over head
- **ASSESS** skin for pain or visible damage and check **SAFETY DATA SHEET** for delayed or systemic effects
- obtain appropriate **MEDICAL** care
- (later ... separately **LAUNDER** or **DISCARD** contaminated apparel)

Decontamination

- **USE NEAREST SINK, EYEWASH OR HIGH FLOW SHOWER**
- **DON'T USE RESTROOMS OR OTHER PUBLIC FACILITIES**
- **DON'T WORRY ABOUT THE LACK OF DRAIN IN FLOOR**
- **DON'T WORRY ABOUT MODESTY**
- **(FOLLOW Standard Operating Procedure IF ANY)**

Decontamination: Special Cases

- **hydrofluoric acid**

- rinse skin 5 min then 2.5% Ca gluconate; if not available rinse 15 min
- rinse eyes at eye wash station for 15 minutes
- and then go get medical attention
- if it's large splash or you inhaled vapor from >50% HF or a visible white mist, **call x3-1212**

- **>10% phenol**

- flush 15 min or until skin turns from white to pink
- apply 400 mol. wt. polyethylene glycol (NOT ETHANOL)

- **flammable solids**

- brush off as much as possible before flushing like with other chemicals

Near Misses and Minimally Toxic Exposures

if you had a near miss or an exposure to a minimally toxic agent (i.e. the SDS does not say to seek medical attention), then:

- report event to supervisor
- supervisor needs to fill out Supervisor Report for EHS (next slide)
- discuss with your EHS coordinator
- make appointment with Occupational Health if you would like

MIT Supervisor Injury Report

*to be filled out by supervisor with worker's assistance **within 24 hours of event***

EHS Supervisor's Injury Report OR Non-Employee Incident Report

- *atlas.mit.edu*
- *ehs.mit.edu/workplace-safety-program/occupational-injury-or-illness-reporting/*

the report documents:

- injured individual's identity and contact information
- department, job position, shift
- description of incident (where, when, what, how)
- injury type and body part
- if and where individual got medical attention
- how long individual was or will be out of work

Follow Up

- MIT workers injured at work are “expected” by Human Resource Policy to see MIT Occ Health within 7 calendar days of injury (or soon as practicable)
- this visit with Occ Health is by default only an **administrative visit** in order to help with accident investigation
- workers may choose to be **treated** by Occ Health instead of just an admin visit or they may choose to seek medical care with another provider or not at all; this doesn’t change the Occ Health admin visit requirement

for questions, comments or feedback
(not including personal medical information),

please email me at

njenkins@med.mit.edu

to make an appointment with me, call **617-253-8552**

Mon-Fri 9am-5pm or send a message through

HealthELife to Occupational Health