Safety as a Component of Creating Art

Facts, Knowledge, Workspace, Personal Practices, and Medium-Specific Hazards
PROGRAM CONTENTS

• Facts of Work in the Arts
• Review Video – “Creating Art Safely”
• Knowledge Resources
• An Ideal Working Environment
• Individualized Mechanisms of Staying Healthy
• Difference, and Similarity, among Artistic Mediums
• Risk and Risk Assessments – High Risk/Low Frequency
Why Art Safety?

- Health and Safety Issues
- Environmental Issues
- Fire Safety
- Hazard Communication
- Community Right to Know
- Inform/Educate/Create
## Fact Comparison

<table>
<thead>
<tr>
<th>Chemical Industry Workers</th>
<th>Artists</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Historical ailments due to lack of knowledge (e.g. Marie Curie)</td>
<td>1. Goya → plumbism; van Gogh → mental illness (camphor, turpentine, absinthe)</td>
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<tr>
<td>2. Hazards</td>
<td>2. Mechanical, Chemical</td>
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<td>4. Reactions to Exposure</td>
<td>4. Acute, Chronic (Latency Periods)</td>
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<td>5. Risk Factors</td>
<td>5. Body burden, Dose, Environment, Precautions, Susceptibility</td>
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<tr>
<td>6. Chemical Hazard Classification</td>
<td>6. Toxic, NonToxic, Carcinogen, Reproductive Toxin, Anesthetic, Asphyxiant, Oxidizer, Combustible, Flammable, Explosive, Corrosives</td>
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</tbody>
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Let's Review: “Creating Art Safely”
http://www.yale.edu/ehs/onlinetraining/video/artsafety.htm
Woodworking Tools Videos

In collaboration with the University of Oregon's Environmental Health and Safety Department, Architecture and Allied Arts has purchased a series of videos from Films Media Group, titled Woodworking Tools.

This series correlates to competency standards for core curriculum and carpentry from the National Center for Construction Education & Research. A Shopware Production 16-part series, 12-22 minutes each.

Each video provides in depth information for proper and safe use of most tools found in the A&AA wood shops, and other wood shops on the U of O campus.

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Knowledge Resources

**Regulatory**
- U.S. Occupational Safety and Health Act
- U.S. Consumer Product Safety Commission
- U.S. Environmental Protection Agency
- OSHA HazCom
- CDC - NIOSH
- ICC Life/Safety Codes

**Peer**
- Art and Creative Materials Institute: [www.acminet.org](http://www.acminet.org)
- City of Tucson, Health & Safety in the Arts: [http://www.tucsonaz.gov/arthazards](http://www.tucsonaz.gov/arthazards)
Labeling & Hazard Communication

- ACMI approved/certified products
  - AP = NonToxic
  - CL = Certified to have adequate hazard warning information
- Hazardous Materials
  - OSHA MSDS
  - OSHA SDS
  - NFPA labeling
  - HMIS labeling
  - GHS labeling

Danger – hazards can cause serious injury (blindness, amputation) or death.
Warning – hazards can cause less than serious injuries.
Caution – warning that users should be careful when using, handling, or storing a chemical.
Books

“Artist Beware”, Michael McCann, PhD, CIH

“The Artist’s Complete Health and Safety Guide”, Monona Rossol, MS, MFA

“Overexposure: Photography Hazards”, Susan Shaw and Monona Rossol

“Making Art Safely”, M. Spandorfer, D. Curtiss, J. Snyder, MD

“Stage Fright: Health & Safety in Theater”, Monona Rossol, MS, MFA

“Health Hazards Manual for Artists”, Michael McCann, PhD, CIH
Emergency Procedures

EMERGENCY—CALL 9-1-1
Call the Department of Public Safety at (541) 346-6666 for emergency assistance.

Building Power Outage
• Turn off and unplug computers and other electrical equipment if possible to do so safely.
• Move cautiously to a lighted area.

Suspicious Person
• Call (541) 346-6666 to report the situation.
• Do not physically confront the person or block exits.
• Do not let anyone into a locked building or office.

Suspicious Object
• Do not touch or disturb the object.
• Call (541) 346-6666 to report the situation.
• Notify your supervisor.

Person with a Weapon
• Move quickly to a safe place and call 9-1-1.
• Do not physically confront the person.

Earthquake
• Get under a table or desk or against an inside wall—not in a doorway—until the shaking stops.
• After the shaking stops, check yourself and others for injuries and evacuate the building.
• Go to your evacuation assembly point.
• Do not leave the area or campus before reporting to your instructor or building manager.

Hazardous Materials Release
• Move away from the site of the hazard to a safe location.
• Call (541) 346-6666 to report the situation.
• Alert others to stay clear of the area.
• Follow the instructions of emergency personnel and notify them if you have been exposed or have information about the release.

Fire
• Activate the nearest fire alarm pull station.
• Evacuate the building.
• Go to your evacuation assembly point.
• Do not leave the area or campus before reporting to your instructor or building manager.
• Do not reenter the building until authorized by emergency personnel.

Prepare, Plan, Train, and Stay Informed
• Build emergency supply kits for your dorm room or office and home.
• Make an emergency plan for yourself and family.
• Get CPR and first-aid training. Call Environmental Health and Safety at (541) 346-3192 to schedule training.
• Stay informed: participate in the UO Alert! text notification system.
• Visit the UO Emergency Management Program website at em.uoregon.edu for emergency-related information.

Evacuation Information
• Walk, do not run.
• Evacuate the building by the nearest usable exit.
• Do not use elevators.
• Take personal belongings—keys, purses, wallets—if possible.
• Secure any hazardous materials or equipment before leaving if possible.
• Follow directions given by building managers.
• Gather outside at your designated assembly point.
• Assist persons with disabilities or special needs if possible.

Introduction
Civil Disturbance or Demonstration
Explosion
Suspicious Package, Envelope, or Object
Flooding
Power Outage
Severe Weather
Earthquake or Tsunami (coastal facilities)
Bomb Threat
Hazardous Materials Incident
Medical Emergencies
Evacuation (Evacuation: Persons with Disabilities)
Fire
Threatening, Violent, or Disruptive Behavior
Suicide or Psychological Emergency

Emergency Management Program
Department of Public Safety
University of Oregon

Emergency Procedures

Department and Individual Emergency Information
Building Address
Room Number of Office/Work Space
Building Manager Name and Phone
Evacuation Assembly Area

Emergency Call
911

Department of Public Safety (DPS)
Emergency Assistance (541) 346-6666

Evacuation Information

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Assist persons with disabilities or special needs if possible.
Hazardous Waste: Collection, Processing, & Disposal

Environmental Health and Safety (EHS) collects hazardous materials in several categories for disposal, treatment or recycling for all University of Oregon departments.

**Hazardous Waste Pick-up Request**

- Submit your service request through the online request form.
  - Login to your workgroup's online interface to view and submit requests.
  - Please review the [short tutorial on waste pick-up](https://example.com).
- If your workgroup is not set up in the online interface, contact Environmental Health and Safety at 541-346-3192.
  - You will be asked to provide: your name, workgroup, contact person, type of containers.
  - Allow two business days for collection.

**UO Hazardous Materials Guide**

- This guide outlines procedures established for the University of Oregon. These procedures are intended to minimize the potential for injury or illness arising from the handling and disposal of hazardous materials. In addition, some materials may be considered hazardous, but have special procedures that may be different.

**Disposal of Refrigerators, Freezers, and other Refrigeration Equipment**

**Electronics & Computer Disposal**

**Contact**: Craig Biersdorf, Hazardous Waste Specialist
(541) 346-2348 | craigb@uoregon.edu
The Ideal Environment

• Kept up – diligently
• Ventilation – appropriate/adequate
  – General (dilution) vs. Local
• Wastes – disposed properly
• Fire – managed risks & prevention
Best Design & Work Practices

Ventilating the Indoor Environment:
Ventilation controls heat, humidity, removes airborne hazards, prevents fire & explosion.
Local exhaust employed for high hazards.

Storage practices that minimize hazards:
Compliance with regulation.
Storage segregated from Use.
Small quantity containers & numbers.
Closed containers.
Labeled containers.
No high-piled storage.
Separate incompatibles.
Flammable cabinets and Safety Cans.
Rag cans – empty nightly.
Spill kits at the ready.

Life/Safety practices:

Practiced emergency procedures.
Practice use of Fire Extinguishers.
Store minimum flammables needed for work.
Remove all sources of ignition.
Transfer liquids in small quantities.
Keep exits clear (esp. combustibles).
Inspect studio regularly.
Involve professional staff in responses to large spills of flammables.
Wear appropriate protective clothing.
Keep an accurate inventory of flammable materials.
Discard old and unused materials.
Evaluate MSDS and SDS for hazards & response guidance.
Ensure functionality of smoke/fire detection apparatus.

Work practices
Storage practices
Artist Status = Healthy

- Good personal hygiene
- Use of protective attire
  - Clothing
  - Gloves (what, why)
  - Eye Protection
  - Respiratory protection through UO Program
- Symptoms of Exposure
- First Aid – be prepared
- Medical Attention

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Possibilities</th>
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<tr>
<td>Skin dryness, itching, inflammation</td>
<td>Solvents, resins, cutting oils, fiberglass, photochemicals</td>
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<tr>
<td>Eye inflammation, irritation, tearing</td>
<td>Acid/alkali vapors, dusts, gases, smoke, sprays</td>
</tr>
<tr>
<td>Ear ringing, deafness</td>
<td>Noise, caffeine, quinine, hydroquinones</td>
</tr>
<tr>
<td>Sneezing, runny nose, cough, sore throat</td>
<td>Dusts, fumes, gases; vapors from solvents, printmaking, photochemicals</td>
</tr>
<tr>
<td>Wheezing, shortness of breath</td>
<td>Dusts and powders (rosin, silica); alkali, photochemical, and solvent vapors</td>
</tr>
<tr>
<td>Flulike</td>
<td>Metal fumes</td>
</tr>
<tr>
<td>Dizziness, drowsiness, headache, body tingling</td>
<td>Solvent vapor inhalation, asphyxiant gases, carbon monoxide, cyanide</td>
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<td>Abdominal discomfort</td>
<td>Photo and printmaking chemicals; solvents</td>
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Mediums of Art

- Drawing
- Painting
- Printmaking
- Photography
- Jewelry & Metalsmithing
- Sculpture
- Woodworking
Drawing

- Irritating Dusts (chalk, charcoal)
- Solvent-based inks
- Toxic pigments (e.g. chrome yellow, PbCrO4)
Painting

• Volatile solvents; toxic pigments
  – Hg not prohibited in art paints (vs. interior house)
  – Aerosols
• Latex & Water-based products
  – Glycol ethers & possibly formaldehyde (preserv.)
• Fresco – potentially corrosive/toxic lime, CaOH
• Volatile/toxic strippers & cleaners
  – Acetone, Methanol, Toluene, Methylene Chloride
Printmaking

- Dusts, Inks, Etchants, Resists, Stone/Plate Cleaners, Solvents, Mechanical Tools
  - Flammable, Toxic, Corrosive, Physical injury
    - Ferric chloride, acids, Dutch Mordant (KClO₄, HCl, H₂O)

- Mitigating risks
  - Hazard Communication
  - Risk analysis
  - Protective mechanisms
Photography

• Dusts, Developers, Stop Baths, Fixers, Intensifiers, Toners
  – Flammable, toxic, mutagen, corrosive, oxidizers
    • Hydroquinone, acetic acid, boric acid, potassium dichromate (hexavalent chromium), potassium ferricyanide, heavy metals, sulfides, silver salts, bleach, potassium permanganate.

• Mitigating Risks
  – HazCom, Risk Analysis, Substitution, Protection
Glass, Jewelry, Metalsmithing

• Dusts, Stains, Fluxes, Solder, Fumes, Plating Solutions, Pickle, Welding
  – Flammable, toxic, corrosive, carcinogen
• Temperature, Non-ionizing Radiation
  – Burns, fatigue

• Mitigating Risks – HazCom, Risk Analysis, Substitution, Protection
Sculpture

- Dusts, Pigments, Borax, Lime, Acids, Finishing products
  - Irritants, toxics, corrosives, flammables
- Tools & Toolwork
- Mitigating Risks – HazCom, Risk Analysis, Substitution, Protection

Hazard 2: I like powertools, a wheel with a motor, a radio and a shop vac...

Clay likes moisture and water.

You might spot a possible problem here...
Woodworking

• Dusts, Engineered Wood Products, Finishing Products, Adhesives

• Tools & Toolwork

• Mitigating Risks – HazCom, Risk Analysis, Substitution, Protection, Guarding
Risk Assessment

EXHIBIT 1 Measuring high and low risks

TRADITIONAL

Likelihood
High (3) | 3 | 6 | 9
Med. (2) | 2 | 4 | 6
Low (1)  | 1 | 2 | 3

Impact
Low (1) | Med. (2) | High (3)

MODERN

Frequency
High (3) | N/A | N/A
Med. (2) | N/A |
Low (1)  |     |

Severity
Low (1) | Med. (2) | High (3)

- Phantom Risk
- Real Risk
UO Environmental Health and Safety

http://ehs.uoregon.edu/

- Craig Biersdorff, Dana Peterson, Drew Standridge, Steve Stuckmeyer