



SAFETY & HEALTH HAZARDS IN NAIL SALONS

Presented by
MIOSHA
Consultation Education and Training
Division (CET)
For the
MDHHS Body Art Educational
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OBJECTIVES

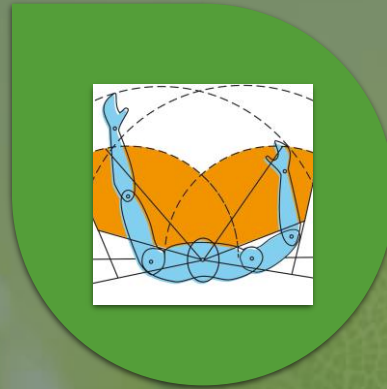
- Discuss the hazards nail salon workers are exposed to
- Identify exposure prevention methods
- List MIOSHA standards that apply
- Provide resources available to employers/employees/contractors
- Q & A
- Exercise



Three Main Nail Salon Hazard Types



CHEMICAL



ERGONOMOMIC



BIOLOGICAL

Chemical Hazards

Products used in nail salons can contain many chemicals that can have serious health effects. Some potentially hazardous chemicals, the types of products they can be found in, and how they can affect a worker include:

- **Acetone** (nail polish remover): headaches; dizziness; and irritated eyes, skin, and throat.
- **Acetonitrile** (fingernail glue remover): irritated nose and throat; breathing problems; nausea; vomiting; weakness; and exhaustion.
- **Butyl acetate** (nail polish, nail polish remover): headaches and irritated eyes, skin, nose, mouth, and throat
- **Dibutyl phthalate (DBP)**, (nail polish): nausea and irritated eyes, skin, nose, mouth, and throat. Long-term exposures to high concentrations may cause other serious effects.
- **Ethyl acetate** (nail polish, nail polish remover, fingernail glue): irritated eyes, stomach, skin, nose, mouth, and throat; high levels can cause fainting.
- **Ethyl methacrylate (EMA)**, (artificial nail liquid): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating. Exposures while pregnant may affect your child.
- **Formaldehyde** (nail polish, nail hardener): difficulty breathing, including coughing, asthma-like attacks, and wheezing; allergic reactions; irritated eyes, skin, and throat. Formaldehyde can cause cancer.
- **Isopropyl acetate** (nail polish, nail polish remover): sleepiness, and irritated eyes, nose, and throat.
- **Methacrylic acid** (nail primer): skin burns and irritated eyes, skin, nose, mouth, and throat. At higher concentrations, this chemical can cause difficulty breathing.
- **Methyl methacrylate (MMA)**, (artificial nail products, though banned for use in many states): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating; loss of smell.
- **Quaternary ammonium compounds** (disinfectants): irritated skin and nose and may cause asthma.
- Toluene, formaldehyde, and dibutyl phthalate are sometimes referred to in the industry as the "**toxic trio**".
- **Toluene** (nail polish, fingernail glue): dry or cracked skin; headaches, dizziness, and numbness; irritated eyes, nose, throat, and lungs; damage to liver and kidneys; and harm to unborn children during pregnancy.

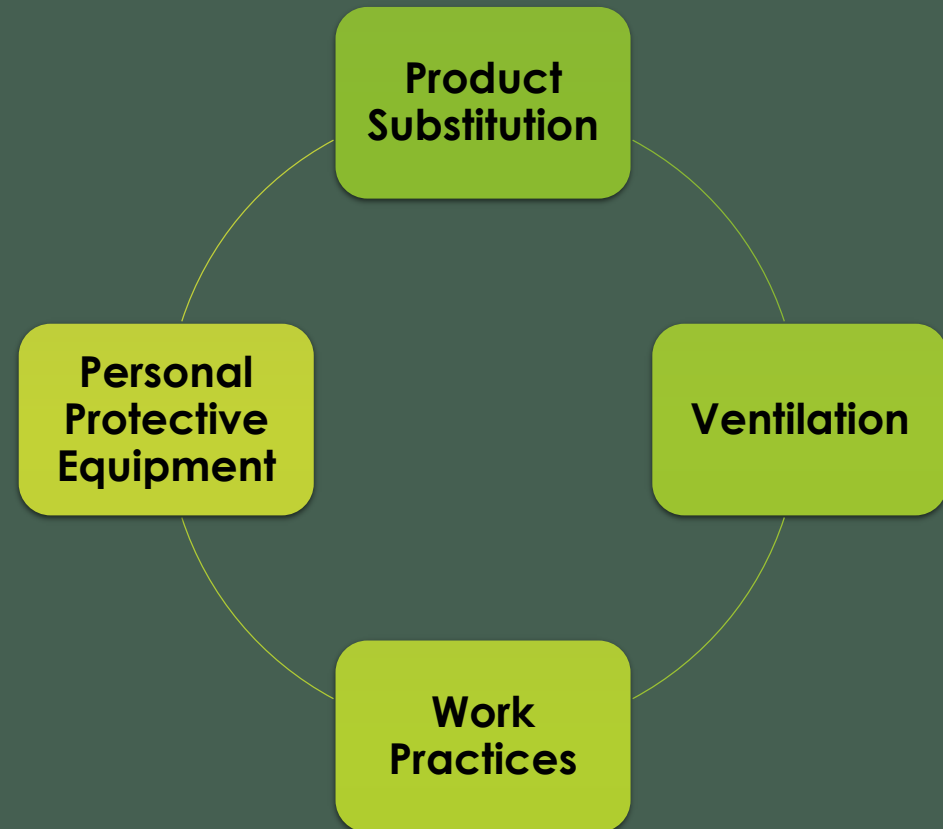
CHEMICAL HAZARDS

Cont.

Chemical exposures can be controlled



Toluene, formaldehyde, and dibutyl phthalate are sometimes referred to in the industry as the "toxic trio".



Chemical Hazards cont.

Product information is available on packaging, or in printed materials delivered with the product such as safety data sheets.

- Product Labels

At minimum, professional-use nail salon products must provide the following information:

- ■The name and address of the product manufacturer or distributor.
- ■An identity statement explaining the type and use of the product through use of name, descriptor, or illustration;
- ■Facts about the product, such as directions for safe use if a product could be unsafe if used incorrectly; and
- ■All necessary warning and caution statements.



Chemical Hazards cont.

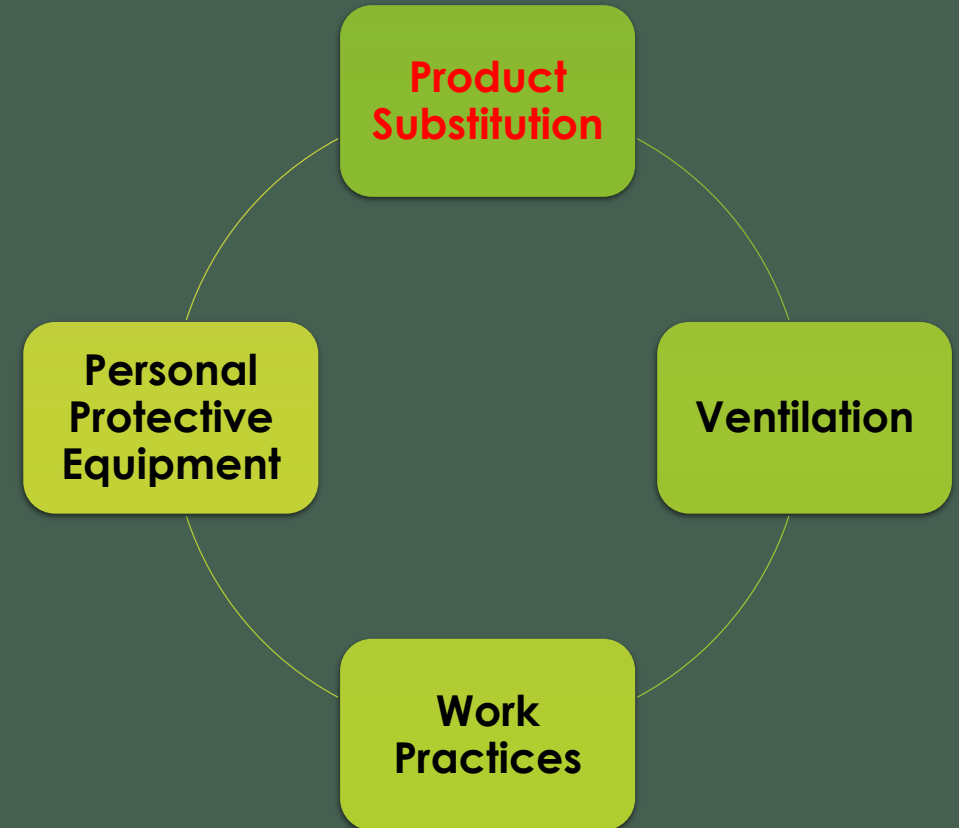


- *Safety Data Sheets (often called "SDS")*
- Is required for each product used in the salon. The SDS explains the health risks of the product and lists precautions for worker protection. In general, the SDS must provide information about:
 - Hazardous ingredients in the product;
 - How users can be exposed to the ingredients;
 - Health and safety risks to users when using the product; and
 - Precautions for safely using and storing the product, including what to do in emergencies.
- Employers should read each SDS and make sure they understand them. They must also
- Make the SDSs available to their workers in a place near the product so workers can conveniently access the information.
- Provide information and training to all workers about the chemical's potential hazards and how to use the product safely.

Steps to Prevent Exposures & Protect Worker Health

Choose Safer Products and Read about the Products Being Used

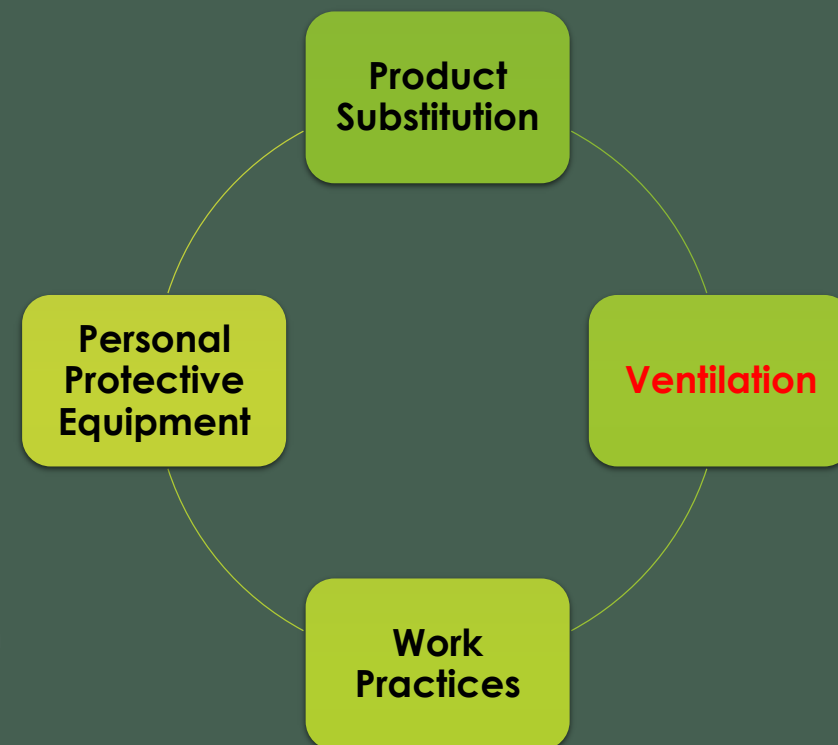
- Whenever possible, use products with the least hazardous chemicals in them.
 - Some products now claim to be made without the "toxic trio" (toluene, formaldehyde, and dibutyl phthalate). These products are called "3-free" products.
 - Some primers claim to be made without chemicals like methacrylic acid. These are labeled "acid free."
- For any product used in your salon, be aware of the health effects it may cause and how to prevent overexposure.



Ventilate the Room

Ventilation is the best way to lower the level of chemicals in a salon

- These steps really help improve worker health:
- Let in fresh air, when possible, by opening doors and windows. If the salon has a ceiling vent, it should be turned on and working.
- Always keep the nail salon's exhaust system on.
- If your salon does not have an exhaust system, always keep the heating, ventilation, and air conditioning (HVAC) system on during work hours. The HVAC thermostat fan switch should always be in the "on" position (not "auto") so that it runs even when the heat or air conditioner is off. The salon owner should have a HVAC contractor clean the HVAC system and replace the filters at least once a year.
- Install exhaust fans wherever possible. Place fans near open doors or windows. Fans should pull air in one end of the salon and push it out of the other end.
- If the salon has ventilated tables, make sure they are turned on. Also, change the charcoal filters at least once a month and clean out the catch basin at least once a week.
- Consider using portable ventilation machines to remove dust and chemicals directly from the work area.

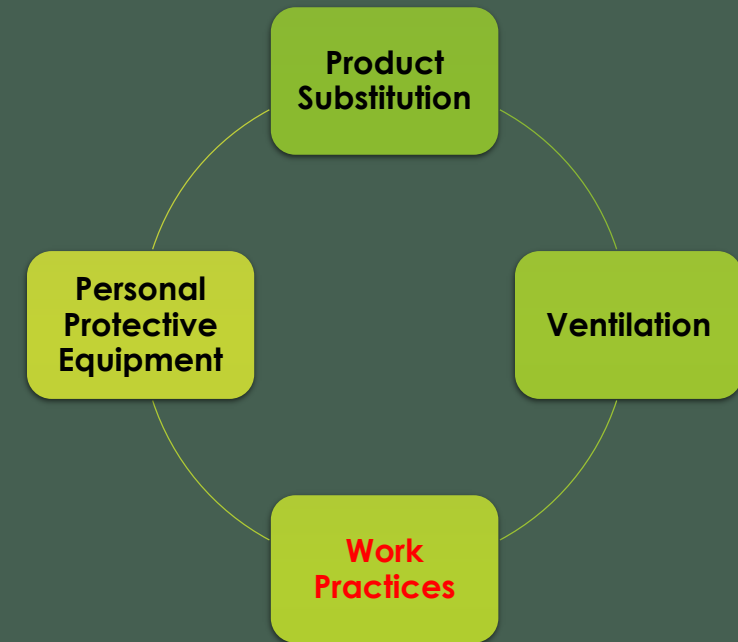


NIOSH laboratory tests indicate that exhaust ventilation systems may reduce worker chemical exposure in nail salons by at least 50% .

Use Safe Work Practices to Avoid Regular and Accidental Exposures

- Label chemicals moved from large bottles to smaller bottles with the information from the manufacturer's label.
- Close bottles tightly when they are not being used so the product does not spill or get into the air.
- Use metal trash cans with tight, self-closing lids to keep the nail products soaked on cotton balls and other trash from evaporating and getting into the salon's air.
- Use only the amount of product you need to perform services. When possible, do not keep extra product at workstations.
- Follow instructions for safely disposing of used chemicals. **DO NOT** pour them down the sink or toilet, throw them on the ground or down outside drains, or pour them onto cotton balls.
 - Some chemicals have specific disposal requirements. For example, used liquid acetone must be saved in a fire department-approved metal container and disposed of as hazardous waste.
- Wash your hands before eating, drinking, applying cosmetics, and smoking.
- Keep food and drink covered at all times, and do not store or eat food in work areas.

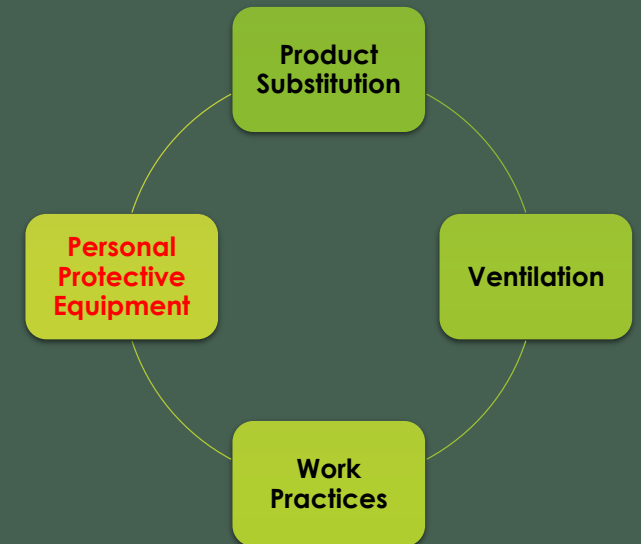
Work Practices



Personal Protective Equipment (PPE)

Keep Products Off of Skin and Out of Eyes

- Wear long-sleeved shirts to protect your arms and pants or skirts that are at least knee-length to protect your lap from acrylic nail and other dusts.
- Wash your hands before and after working on clients; before eating, drinking, applying cosmetics, or smoking; and after handling or transferring products.
- Wear goggles and the appropriate type of disposable gloves when handling and transferring products. For example, nitrile gloves protect against many chemicals used in nail salon products.
- Replace gloves immediately if there are cuts, tears, or holes in them.
- Cover and protect cuts or cracks in your skin. Damaged skin can increase chemical absorption and exposure.
- Do not continue to use a product if there are visible signs of skin irritation immediately after exposure to the product or from previous exposure to the product.



Personal Protective Equipment (PPE)

Determine if Respiratory Protection if Needed

- **Respirators protect against breathing in hazardous gases and vapors (such as formaldehyde) and particulates (such as dusts, germs, and viruses).** Employers must evaluate worker exposure to dust and/or chemical vapors, determine if the levels in the work place are a risk to workers, and decide if respirators are required to protect workers. Small employers can get help with this process from MIOSHA's free [Consultation Program](#). Other groups that can help include an employer's private insurance carrier, professional associations, and private industrial hygiene consulting firms.
- **Most work in a nail salon will not require respiratory protection; good ventilation and good work practices should keep exposure to gases, vapors, and particulates to a minimum.** However, when respiratory protection is required, employers must implement a respiratory protection program that meets the requirements in MIOSHA's Respiratory Protection Standard, **Part 451**. This program must include proper respirator selection, fit testing, medical evaluations, and training. Workers may also decide that they want to wear a respirator while transferring chemicals or buffing and filing nails, in which case the employer may also have responsibilities under MIOSHA's Respiratory Protection standard.

Personal Protective Equipment (PPE)

Types of Respirators that May Be Used in Nail Salons

- **N95s**
 - *Filtering facepiece respirators (often called "N95s" or dust masks): Only use N95s that are NIOSH-approved. N95s protect workers from particulates, such as dust, viruses, and other germs, and are helpful when buffing or filing nails or using acrylic power. They do not protect workers from vapors or gases, such as hazardous chemicals. Employers who allow their employees to wear this type of respirator voluntarily must give their employees Appendix D of the OSHA Respiratory Protection Standard. This appendix has certain requirements that include training and medical evaluation.*
- **Half-facepiece**
 - *Half-facepiece elastomeric respirators with cartridges: These respirators can protect workers from hazardous gases and vapors (such as formaldehyde) when performing tasks such as moving chemicals from large bottles to smaller bottles and cleaning up large spills. Using this type of mask requires that the employer implement a respiratory protection program under OSHA's Respiratory Protection Standard, 29 CFR 1910.134. This standard has certain requirements that include training and fit testing. In addition, employers must evaluate the appropriate cartridge for the job, provide the cartridge to workers, and inform workers of how and when to change cartridges.*



PERSONAL PROTECTIVE EQUIPMENT(PPE)

Ergonomic hazards like static work and repetitive tasks can cause injuries to workers' muscles, joints, ligaments, tendons, and nerves

Ergonomic Hazards

Ergonomic Hazards

- Common causes of injury to workers' muscles, bones, joints, ligaments, tendons, and nerves include:
 - Leaning over a work table for a long time
 - Repetitive movements like filing and buffing nails
 - Resting hands, wrists, and forearms and/or elbows against hard surfaces or sharp edges of work tables.

These common causes are often called ergonomic hazards and can lead to aches and pains that workers may feel while at work or at home.

- Proper positioning, stretching, and other work practices can reduce the risk of these hazards



GOOD ERGONOMIC PRACTICES CAN REDUCE STRESS TO THE BODY AND AVOID HAZARDS THAT MAY CAUSE ACHES AND PAINS.

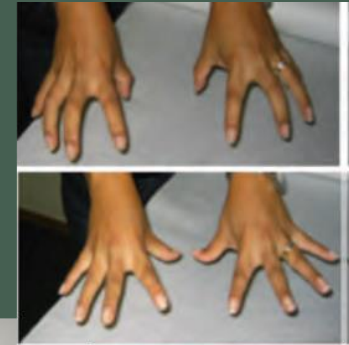
THIS SLIDE ILLUSTRATES SOME POSITIONING, STRETCHING, AND OTHER RECOMMENDED WORK PRACTICES INCLUDING:

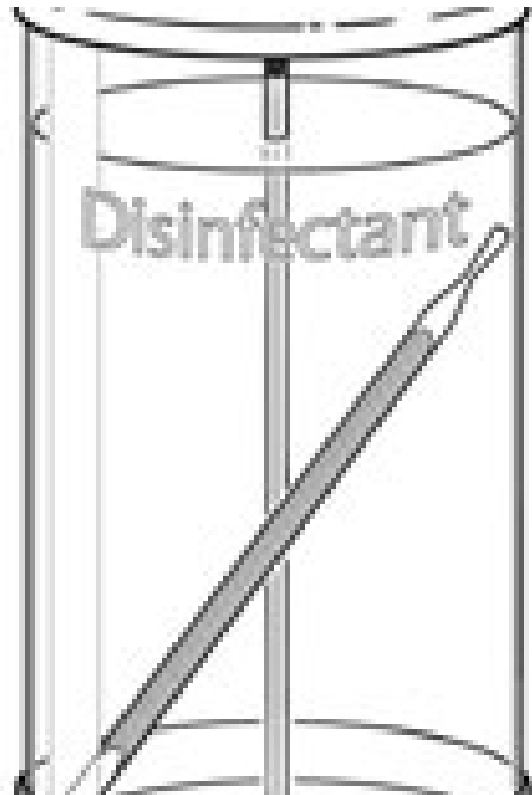
USE AN ADJUSTABLE CHAIR THAT GIVES PROPER BACK SUPPORT AND CAN BE RAISED AND LOWERED.
ADJUST THE LIGHTING TO SEE WITHOUT BENDING OVER A WORK TABLE.

RAISE AND POSITION THE CLIENT'S HAND OR FOOT TO AVOID BENDING OVER.

AVOID RESTING HANDS, WRISTS, FOREARMS, AND ELBOWS AGAINST HARD AND/OR SHARP EDGES OF WORK TABLES – AND PUT A TOWEL OR FOAM PAD ON THE WORK TABLE EDGE FOR A SOFTER SURFACE FOR THE ARMS.

TAKE FREQUENT BREAKS IF POSSIBLE. CHANGING POSITIONS AND DOING A DIFFERENT TASK IS ALSO HELPFUL.
PERFORM GENTLE STRETCHING EXERCISES IN BETWEEN SESSIONS WITH CLIENTS

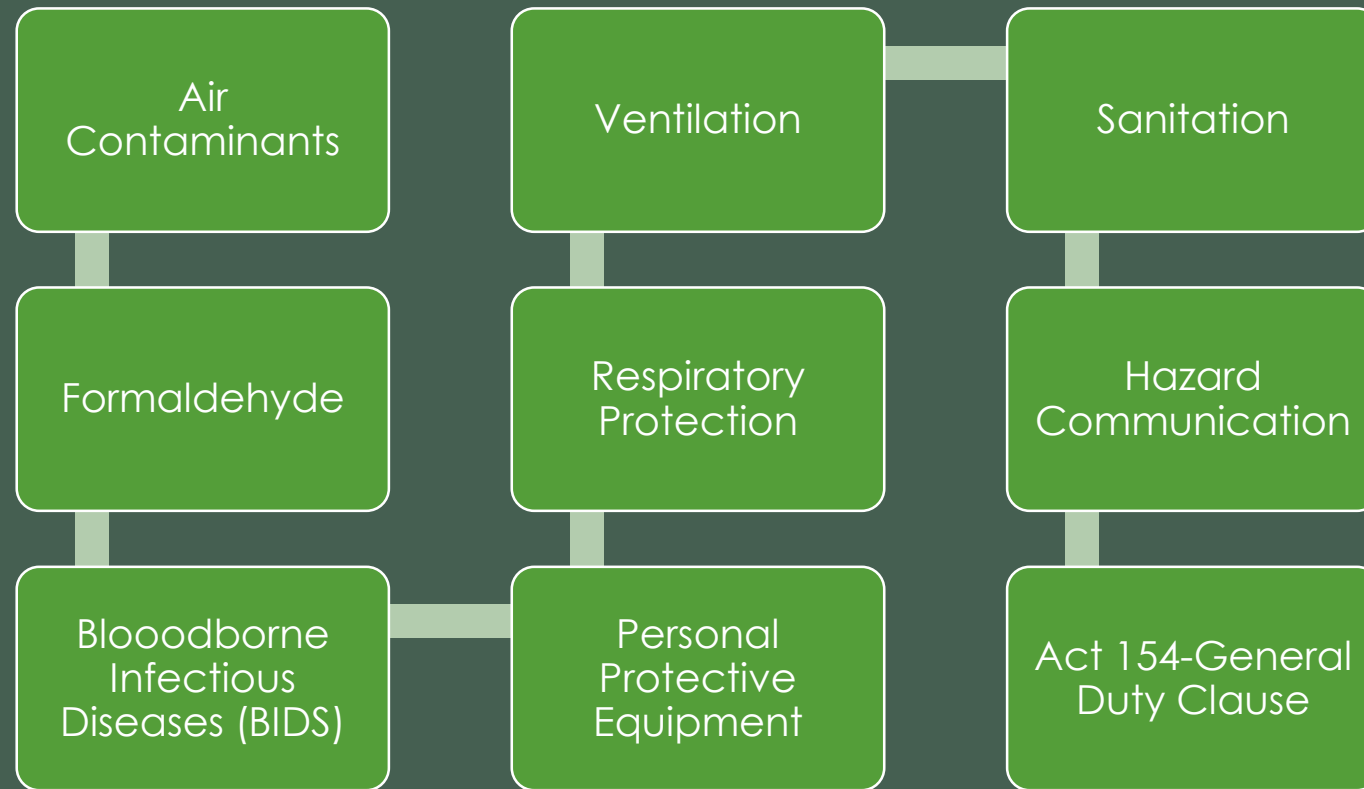




Biological Hazards

- Bacteria, fungi, and viruses are potential biological hazards. If workers come in contact with infected blood, skin, or equipment from clients or co-workers

Applicable MIOSHA Standards



serve as a resource and
advocate for preventing injury
and illness in the workplace

investigate serious
health and safety
problems in workplaces

discuss Occupational safety
and health regulations with
employers

The mission of
MIOSHA is to
help protect the
safety and
health of
Michigan
workers.

Resource s



Call 1-800-866-4674 or

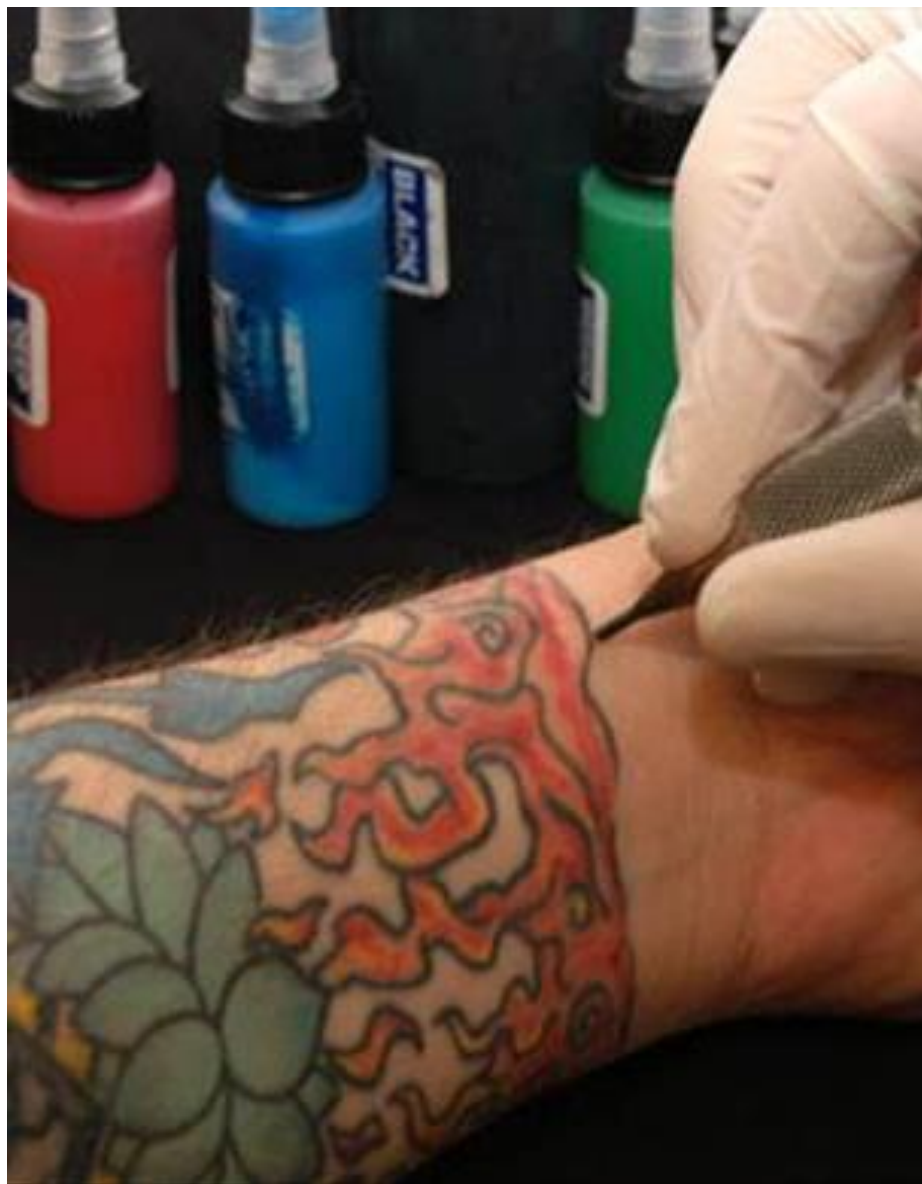
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