DENTAL SHOP SAFETY

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INTRODUCTION

• Several shops are present on all campuses of CU.
• College of Dental Medicine shop have various types of machines for teaching and training students, which are routinely used.
• You must familiarize yourself with types of equipment you will be using and associated hazards before starting your work.
• This training is intended as an introduction to general shop safety. You must also get machine specific safety training from the Shop Supervisor before using any shop equipment.
TRAINING OBJECTIVES

• Types of Machines at Dental School lab
• Types of Hazards Present In a Shop
• General Shop Safety Rules to Follow
• Shop Safety Guidelines
• What to do in Case of Injury
• Keeping Your Work Area Clean
• Machine Specific Hazards and Precautions
• Ergonomics in Dental Practice
• Q & A
Which machine have you used?

A. Only one
B. Two of them
C. All
D. None

Total: 80
Which one of the following issue is more common in the dental lab?

A. Dusty environment
B. Broken Machinery
C. Chemicals
D. All of the above
THINK

The shop can either be Safe or Dangerous; it all depends on:

– How you conduct your work,
– How strictly you follow the shop safety rules,
– How considerate you are about your safety and safety of your colleagues.

REMINDER:

• You will be asked to leave the shop if you do not follow the Shop Safety Rules
TYPES OF HAZARDS

HAZARDS TO EYES:
Metal chips, particles, and or dust
Use Appropriate safety glasses, Goggles, shields, etc.

HAZARDS TO HANDS:
Sharp chips, Rotating/Moving parts, cutters, etc.
Keep your fingers away from moving parts,
do not clean moving parts, use proper PPE

HAZARDS TO LUNGS:
Dust in grinding or handling powdery materials
Use proper respirator and discuss with supervisor

ENTANGLEMENT HAZARDS:
Long hairs, necklace, Necktie, dangling ID badge
Jewelry, loose cloths, watch or Ring may get
caught in moving machine and drag you along.
Always remove or secure them before work.
TYPES OF HAZARDS

FIRE HAZARDS:
• Keep flammable materials (oily rags, paper,...) away from source of heat.
• Oil rags must be kept in a safety can.
• Know where the fire extinguishers are located in the shop.
• Make sure you know how to use it. Remove the safety pin prior to use.
• Call Public Safety or 911 in case you cannot extinguish fire.

ELECTRICAL HAZARDS:
• All power sources for machinery are potential sources of danger.
• Equipment and electrical system must be properly grounded.
• Lock-out/Tag-out Equipment before any manipulation.
• Identify the location of the emergency stop prior to start of work.
• Watch for frayed, exposed, or old wiring to protect from electrical shocks or electrocution.
• Do not use extension cords to avoid tripping hazards.
• Other Hazards like Noise should also be considered
Most likely serious hazards in a dental lab is?

A. Potential Electrocution  
B. Lack of fire extinguisher  
C. Lack of proper PPE?  
D. All of the above
SAFETY RULES

• **RULE 1**: Never operate machine without training – it is must
• Must get general shop safety and machine specific training

• **RULE 2**: -Never work alone – always use “buddy system”.

• **RULE 3**: -Never work with loose hair, jewelry, etc. –Always remove or secure anything that might get caught in moving machinery.

• **RULE 4**: -Never use machine when impaired - be sober and smart.
SAFETY RULES-Conti--

• **RULE 5:** Never start work if you cannot do the job safely - discuss with your supervisor for other options, other time.

• **RULE 6:** Never wear open toe shoes - always wear closed-toe shoes in the shop and labs.

• **RULE 7:** Never work without proper eye protection - always wear appropriate safety glasses or goggles when working or cleaning tools.

• *Laser and UV protection:* Special safety gasses are required when exposure to laser and UV is expected. Ask your supervisor.

• **RULE 8:** Never bring hands close to sharp objects – always keep your hands at a safe distance from sharp tools.
SAFETY RULES-Cont--

- **RULE 9:** Never create a dusty and smoky environment; dust, chemicals, and smoke can be dangerous so work in a well-ventilated area, minimize contamination, and use appropriate protective equipment.

- **RULE 10:** Never be shy to seek help – always ask if you’re unsure about the safe operation of a tool or any aspect of a job – have shop staff check the tool or work with which you are unfamiliar.

- **RULE 11:** Never leave your work area in a mess – always clean up after yourself.
SAFETY RULES-Conti--

• **RULE 12:** - Never remove safety guards – they are present for reason

• **RULE 13:** - Never wear gloves while working on rotating equipment – remove them before starting work.

• **RULE 14:** - Never leave broken or damaged tools or abnormal equipment unreported – always inform your supervisor to remove that from service and get it repaired.

• **RULE 15:** - Never make any adjustments to a machine when it is in operation. Before making adjustments always talk to your supervisor for permission:
When working in a dental lab, fundamental safety rules to observe are?

A. Never use a machine if you do not have machine specific training
B. Always secure loose hair and jewelry before starting work
C. Do Not work alone, "use buddy system".
D. All of the above
SHOP SAFETY GUIDELINES

• No visitors (non CU-employees/students) will be allowed in the shop while the machinery is in operation unless accompanied by the Supervisor.

• No one under the age of 18 is allowed to use any tools or machinery unless assisted by a supervisor or a trained person.

• No one (such as a custodial staff, facilities maintenance personnel, etc.), enters the shop without safety glasses unless those machines have shielding in place.

• Prepare for the worst case scenario and understand the unique hazards of the equipment in the shop you are using.
IN CASE OF INJURY

Report to your Supervisor:

• Any Physical Accidents Regardless of Severity
• Any Damaged, Defective Tools, Machines, or Other Equipment
• If you need to Work After Shop Working Hours. Must discuss it with supervisor well in advance.

• In Emergency - Call Your Campus Public Safety Office
  CUMC = 212- 305-7979 or 911
In case of any injury in the shop, you should Inform your Supervisor and seek immediate medical help?

A. Yes
B. No

Total: 40
ENCOURAGE SAFETY CULTURE

• Set good example by working safely - Be diligent and considerate
• Help others to work more safely
• Question unsafe practices
• Report unsafe conditions to your supervisors
• Always use proper PPE
• Keep the shop clear of scraps and litter and Keep work site clean
• Never use your hands to wipe away debris
• Make sure that oily rags and combustible materials get placed in the proper sealed containers.
MACHINE SPECIFIC TRAINING

• This general shop safety training does not replace machine specific shop training.
• Each machine has specific operating procedures and safety requirements.
• Talk to your supervisor to arrange machine specific training before using any machine.
• You will not be allowed to use a machine before you receive a machine specific training.
You do not need any additional training if you have attended this lecture?

A. Yes
B. No
**MACHINE SPECIFIC HAZARDS**

**TRIMMER MACHINE**

- Secure all loose clothes, hair, etc. in place to prevent possible injury.
- Keep clear of blade and other moving parts. Keep your fingers away.
- Do Not push model against abrasive wheel with excessive force.
- Use safety glasses when trimming.
- Know where emergency shut-off is.
- Use proper grounding.
- Always keep the security door closed. Never turn the motor on with door open.
- Maintain & unit-inspect periodically
- Unplug the unit before maintenance
MACHINE SPECIFIC HAZARDS

HIGH SPEED LATHE MACHINE

• Secure all loose clothes, hair, etc. in place to prevent possible injury.
• Ensure guards are in place before using.
• Keep clear of blade and other moving parts. Keep your fingers away.
• Use safety glasses when using.
• Know where emergency shut-off is.
• Use proper grounding.
• Never turn the motor on with door open.
• Maintain & unit-inspect periodically.
• Unplug the unit before maintenance.
Hand Tools

- Hand tools are used to make jobs easier.
- They can cause injury if not used properly. To avoid injury, you must:
  a. A. Keep your mind on the job
  b. Select proper tool for the job
  c. Keep tools in good condition
  d. Only use tool for the intended purpose.
  e. Never leave tools on the floor after use.
  f. Wear proper safety equipment, like safety glasses, etc.
SAFETY RULES REVIEW

1. Be Smart

2. Wear Head Gear If Necessary

3. Tie Long Hair

4. Wear Safety Glasses

5. Remove Jewelry

6. Wear Ear Protection If Necessary

7. Wash Hands

8. Remove or Cover Tie

9. No Slippery Foot Wear

10. No Open Toe Shoes

11. No Pets
Ergonomics for Dentists

RISK FACTORS FOR MUSCULOSKELETAL DISORDERS

• Excessive force
• Awkward and/or prolonged postures
• Repetition
• Direct Pressure
• Vibration
• Noise
• Work organization
• Combinations of factors
Ergonomic risk factors includes all of the following, except:

A. Awkward posture
B. Repetition
C. Steel toe shoes
D. Excessive force
IN CLOSING

• Make sure you have attended shop safety training and machine specific training from your supervisor before you start work.
• Make sure you are familiar with the shop environment, types of equipment present and tools needed for your work.
• Make sure you know the equipment you will be using for your project, hazards associated with its use and safety precautions required before starting work.
• Make sure to know the shop safety rules and then follow them.
• Make sure you know who to report to an incident, nonfunctional tools and where to seek medical help in case of an injury or any other emergency.
• Make sure you clean up your work area after finishing work.
• If you are not sure, you must talk to your supervisor– there is no penalty for asking - but not knowing what to do may be pretty expensive.
• Pay attention to your posture, the way you stand & work could make a difference
THANK YOU