

INJURY & Illness MANUAL

Hotel Industry



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INJURY/ILLNESS PREVENTION
GUIDELINES MANUAL
HOTEL INDUSTRY

DISCLAIMER:

Information provided in this written material should not be considered as all-encompassing, or suitable for all situations, conditions or environments. Each company is responsible for implementing their own safety/injury/illness prevention program and should consult with their legal, medical or other advisors as to the suitability of using this information. Application of this information does not guarantee you will be successful in your safety efforts, or that the information will meet acceptable standards or requirements. At the time this information was provided, it was believed to be from reliable sources and current with applicable safety standards, however, the producers of the program assume no liability arising from the use of, or reliance on the information provided. Always seek the advice of your legal, medical or other advisors as necessary before using this information in your Company's safety efforts.

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CHAPTER I ADMINISTRATION OF SAFETY GUIDELINES

ACCIDENTS/INJURIES/ILLNESSES

Report all work-related accidents, injuries or illnesses to Supervision **WHEN THEY OCCUR**. First aid facilities are available and when required, competent medical assistance will be provided. Worker compensation insurance will cover all medical costs for injuries that are work related. Report all accidents, injuries and illnesses when they occur, even if you don't think medical treatment is required.



Records that should be maintained on all accidents, injuries and illnesses:

UNSAFE ACTS/HUMAN BEHAVIOR

If your Safety Program objective or goal is to reduce or eliminate accidents and injuries, this is your most important topic to implement. This one program will reduce 85% to 98% of your accidents and injuries.

ENFORCEMENT OF SAFETY RULES

Management and Supervisors have an obligation and responsibility to all employees to enforce safety rules. The vast majority of work related injuries are caused by the unsafe acts of employees, such as carelessness, negligence, violation of safety rules, taking short cuts or not following proper procedures.

When an investigation reveals the cause of an incident was a result of the unsafe acts of an employee(s), that employee(s) will be given a written counseling as to what behavior contributed to the cause of the incident and what action must be taken by the employee to eliminate this behavior.

A time frame in which to correct the unsafe behavior will be given the employee. This counseling should be viewed as **TRAINING**. Understanding the cause of the incident is essential and then what the employee should do to correct the unsafe

behavior should follow. Without this information, the employee would not know why the incident occurred and would have no reason to change his/her behavior. A safety counseling is not disciplinary action; however, continued demonstration of unsafe behavior could result in disciplinary action, up to and including termination of employment. In the context of SAFETY, a written counseling for violation of safety rules, unsafe acts or unsafe behavior is of unparalleled value. To ease the temperament of the person receiving a written counseling for safety violations, the best thing to do is call the written counseling, a "SAFETY COUNSELING" or "SAFETY TRAINING".

SAFETY TRAINING



Management and Supervisors will provide safety training, for your job. Employees are responsible for obtaining proper training as may be necessary to adequately educate themselves in the safe work practices required to prevent all accidents, injuries and illnesses.

Generally, safety training includes, but is not limited to the following:

1. GENERAL HAZARDS TO WHICH EXPOSED.
 - A. Employee Safety Orientation
 - B. Safe Lifting/Back Injury Prevention
 - C. Unsafe Acts
 - D. Fire Extinguisher Operations and Safety
 - E. Basic Chemical Safety.
 - F. Electrical Safety
2. SPECIFIC HAZARDS OF YOUR SPECIFIC JOB.
 - A. Hearing Conservation.
 - B. Ladder Safety.
 - C. Eye Protection.

- D. Personal Protective Equipment.
- E. Office Safety.
- F. Bloodborne Pathogens for First Aid Persons/Emergency Personnel.
- G. Specific Equipment/Machinery Operations.
- H. Video Display Terminals/Computers.
- I. Control of Hazardous Energy Sources/Lockout-Tagout.
- J. Bonding and Grounding of Flammable Liquids.
- K. Forklift Operations
- L. Confined Spaces

(Note: Each Company must determine what training is necessary, based upon equipment, hazard exposure and other criteria, to be sure training is provided for each specific hazard or potential hazard).

Where the employee is exposed to specific hazards, additional training will be provided, such as servicing tires/wheels, respiratory protection, chemicals or other hazards.

CUSTOMER SERVICE

Hotel customer service begins with a positive relationship between the guest and the hotel employee. Build a relationship with the hotel guest and potential guest using listening skills, paying attention to what the guest says especially the little things such as if the guest is celebrating a special occasion, and being courteous at all times. Greeting a guest with a warm smile will help the guest feel more comfortable and the hotel employee more approachable. Good posture with unfolded arms shows the guest the hotel employee respects them, and that they have a willingness to assist. Hotel customer service trust is built when the hotel employee goes the extra mile for the



guest; it is built when the hotel employee makes promises that can be met. Professionalism is the skill of giving accurate information to the hotel guest in a timely matter and being proactive with each guest when a problem occurs.

SAFETY SIGNS AND PLACARDS

It is each employee's responsibility to obey all hazard or safety signs posted.

ENGINEERING OF PHYSICAL HAZARDS

Physical hazards should be controlled and eliminated. This is a management and Supervisor responsibility, however, employees should be trained to spot and report work hazards so they may be corrected before an accident or injury can occur. A checklist of each facility location should be developed and a person who has been trained in inspection and detection of identified physical hazards should conduct an inspection at least monthly,

- Management, Supervision and all Employees in this specific area should know those minor hazards that cannot be corrected immediately, and corrections scheduled as soon as possible. Signs or other identification should identify these minor hazards until they can be repaired.
- Any hazard that is a potential accident or injury should be corrected immediately or that portion of the facility or machinery barricaded, tagged or otherwise taken out of service, until repairs can be made.
- Immediate Danger to Life or Health hazards must be removed, repaired immediately or action taken to prevent anyone from being injured due to this type of hazard.

SAFETY POLICY

"One of the principles of sound business Supervision is the control of all factors which have a bearing on "incidents of loss". Whenever there is a personal injury or

damage to property, from whatever cause, it is a direct reflection on our ability to perform our work in a correct and conscientious manner.



Our basic safety policy for all employees is simply stated:

WE HAVE NO JOB OR TASK TO PERFORM THAT WOULD ENDANGER THE HEALTH OR SAFETY OF ANY EMPLOYEE AND EACH EMPLOYEE HAS THE RESPONSIBILITY TO WORK AND ACT SAFELY AT ALL TIMES, IN THE FACILITY OR ON ASSIGNED DUTIES AWAY FROM THE OFFICE. IF ANY TASK IS UNHEALTHY OR UNSAFE TO PERFORM, NO ONE SHALL PERFORM THAT TASK. IF IT CAN'T BE DONE SAFELY, WE DON'T WANT ANY EMPLOYEE TO DO IT.

Safety is a team effort, requiring the diligence of all levels of Management, Supervisor and employees.

APPOINTMENT OF SAFETY COORDINATOR

The following named person is hereby appointed as Safety Coordinator:

The following named person is hereby designated as Acting Safety Coordinator, in the absence of the appointed Safety Coordinator:

The Safety Coordinator's job is to COORDINATE safety efforts, however, the RESPONSIBILITY for safety remains with Supervision and Supervisor. Each

employee is responsible for following all safety and health rules and to work and act safely on every job.

GENERAL SAFETY DUTIES OF EMPLOYEES

Each employee should be the person most concerned for his/her own safety.

In addition, each employee has a responsibility to assure safety and health on the job, for the general public and other employees. By accepting employment, safety responsibility is a condition of continued employment:

- * Knowing his/her job and applying safe work practices on all jobs.
 - * Recognizing the hazards of the job and taking precautions to assure the safety of all employees and visitors to our facility.
 - * Informing your Supervisor or the Safety Coordinator of hazards and recommending how to eliminate them or improve performance.
 - * Actively participating and cooperating in the overall safety program.
 - * Maintaining cleanliness and good personal health habits.
- * Each employee has the responsibility to communicate with Supervisors, openly and without fear of reprisal, any aspect of safety and health, specifically to make recommendations for safety and health improvement in the facilities, equipment and procedures. Each employee has the responsibility to report to Supervisors any safety or health hazard, so it may be corrected to prevent injury or illness.

BASIC SAFETY REQUIREMENTS

1. **PERSONAL HYGIENE.** Be fit for the job, through good healthy habits, proper meals, sufficient rest, and appropriate personal cleanliness.
2. **KNOW YOUR JOB AND RESPONSIBILITIES.** You learn the proper way by asking, not by trial and error. Communicate suggestions to Supervision, on better and safer methods of improving job safety and health. Always be conscious of the safety of others, as well as your own. If you see a hazard, correct it if possible, even if it's not in your



department. For those hazards you cannot immediately correct, notify your supervisor so the hazard can be corrected.

3. **CLOTHING.** Wear proper, acceptable clothing for the job. If you're not sure of what clothing is acceptable, ask your supervisor. Rings and jewelry should not be worn on, around or near moving machinery. Long hair must be kept tied back or confined under a cap or hat to prevent long hair from entanglements with machinery or equipment.
4. **PROTECTIVE CLOTHING OR EQUIPMENT.** Although routine tasks performed by employees may not require personal protective equipment, there may be times on the job, in the facilities or off site, where personal protective clothing/equipment is necessary for special hazards. Each employee has an obligation to use this personal protective clothing or equipment, for personal protection.



5. **HOUSEKEEPING.** Keep equipment, tools, materials and work areas clean and orderly. Particular attention must be paid to electrical and cables/wires and other tripping hazards. All hazardous materials must be properly stored, according to their requirements. Hotels would find it impossible to run without a housekeeping staff. Most housekeepers work in specific areas of housekeeping, including in the laundry room, ironing and laundering towels and sheets, and cleaning rooms or other hotel areas. Hotel housekeeping skills encompass

a wide range of skills from emptying trash, cleaning windows and bed making. The Bureau of Labor Statistics predicts an increase of 15.8% in house-keeping jobs by 2016.



BEDBUGS Protect yourself from hotel bedbugs. Bedbugs are biting insects found in homes, apartments, hotels/motels and other buildings. The bugs require warm blood to reproduce and complete their life cycle. When a bedbug bites you, you may notice an itchy

red welt where the bug came into contact with your skin. You may not feel the bite, but frequent bites may be noticed. An infestation of bedbugs can disturb your sleep and cause health issues like anemia and blood loss. Protecting yourself from hotel bedbugs starts with checking the bedding in your hotel room. Pull the mattress of the bed and remove the sheet. Look for bedbugs - they are flat, reddish-brown in color, about 1/4" long and have an oval body. Place large garbage bags over the mattress creating a temporary barrier. Check for bedbugs during the night. Bedbugs usually look for hosts at night time. Professional exterminators will have to be called.

6. MACHINE GUARDING.

Any machine that has exposed hazardous parts must be properly guarded. Should any machine or equipment have guards removed, or require guarding, that equipment will not be used until it has been properly guarded. Should equipment or machinery be locked or tagged out, with words such as: "Danger-Do Not Start Machine" or similar wording means this tag indicates that the machine is being repaired, serviced or otherwise out of service and must not be started or tampered with while the lock or tag is in place. Only the person installing the lock or tag is authorized to remove the lock or tag.



7. MOVEMENT.

Walk, never run. Use handrails on stairs. Be cautious when approaching swinging doors, corners or congested areas.

Particular attention should be devoted to the prevention of slips and falls, particularly when carrying materials,

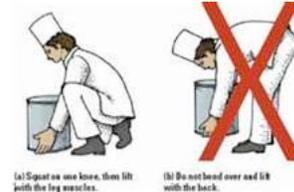
equipment or tools. Most slips and falls are the result of not watching where a person is walking or inattention to footing. Pay attention to your surroundings. Although it's possible to stub your toe while walking incorrectly, most people trip over objects that they don't notice or see clearly. You should look for and remove them and make sure that carrying packages or other items doesn't obstruct your view. Make sure that there are no wrinkled or ragged carpets, exposed electrical cords, partially open drawers near floor-level, uneven or unstable stair steps, or children's toys lying around. Also make that walkways are well-lit, so you can spot obstructions before you hit them.



8. SAFE LIFTING.

Each employee has been, or will be trained in the safe lifting method and each employee must exercise these

techniques and methods when lifting anything. If at anytime, an employee believes an object is too heavy or awkward to be lifted by one person, then get help or move the object by mechanical lifting means.



9. HORSEPLAY/PRACTICAL JOKES.

Practical jokes, horseplay and similar activity are strictly prohibited. Each employee has the responsibility to his/her behavior in a professional manner at all times. Unsafe acts are the cause of most accidents and injuries.



10. FIRE AND EMERGENCY PREPAREDNESS.

Know what to do, what action to take and where to go in the event of an emergency. In the event of a fire, life safety is of paramount importance. If you have been trained and can safely extinguish a fire, use portable fire extinguishers or hoses, but only if there is no danger to your life. Follow emergency procedures and use common sense to protect yourself and property.



SUPERVISOR ACCIDENT INVESTIGATION FOR ACCIDENT PREVENTION

Accidents are usually complex. An accident may have 10 or more events that can be causes. A detailed analysis of an accident will normally reveal three cause levels: basic, indirect, and direct. At the lowest level, an accident results only when a person or object receives an amount of energy or hazardous material that cannot be absorbed safely. This energy or hazardous material is the **DIRECT CAUSE** of the



accident. The direct cause is usually the result of one or more unsafe acts or unsafe conditions, or both. Unsafe acts and conditions are the **INDIRECT CAUSES** or symptoms. In turn, indirect causes are usually traceable to poor management policies and decisions, or to personal or environmental factors.

INVESTIGATIVE PROCEDURES

The actual procedures used in a particular investigation depend on the nature and results of the accident. The agency having jurisdiction over the location determines the administrative procedures. In general, responsible officials will appoint an individual to be in charge of the investigation. The investigator uses most of the following steps:

1. Define the scope of the investigation.

2. Select the investigators. Assign specific tasks to each (preferably in writing).

3. Present a preliminary briefing to the investigating team, including:

- a. Description of the accident, with damage estimates.
- b. Normal operating procedures.
- c. Maps (local and general).
- d. Location of the accident site.
- e. List of witnesses.
- f. Events that preceded the accident.

4. Visit the accident site to get updated information.

5. Inspect the accident site.

- a. Secure the area. Do not disturb the scene unless a hazard exists.
- b. Prepare the necessary sketches and photographs. Label each carefully and keep accurate records.

6. Interview each victim and witness. Also interview those who were present before the accident and those who arrived at the site shortly after the accident. Keep accurate records of each interview. Use a tape recorder if desired and if approved.

7. Determine

- a. What was not normal before the accident?
- b. Where the abnormality occurred.
- c. When it was first noted.
- d. How it occurred.
- e. Analyze the data obtained. Repeat any of the prior steps, if necessary.

Determine:

- a. Why the accident occurred.
- b. A likely sequence of events and probable causes (direct, indirect, basic).



- c. Alternative sequences.
- d. Check each sequence against the data already obtained.
- e. Determine the most likely sequence of events and the most probable causes.
- f. Conduct a post-investigation briefing.

Prepare a summary report, including the recommended actions to prevent a recurrence. Distribute the report according to applicable instructions. An investigation is not complete until all data are analyzed and a final report is completed. In practice, the investigative work, data analysis, and report preparation proceed simultaneously over much of the time spent on the investigation.

In addition, document the location of victims, witnesses, machinery, energy sources, and hazardous materials.

INTERVIEWS

In general, experienced personnel should conduct interviews. If possible, the team assigned to this task should include an individual with a legal background. In conducting interviews, the team should:



- a. Appoint a speaker for the group.
- b. Get preliminary statements as soon as possible from all witnesses.
- c. Locate the position of each witness on a master chart (including the direction of view).
- d. Arrange for a convenient time and place to talk to each witness.
- e. Explain the purpose of the investigation (accident prevention) and put each witness at ease.
- f. Listen, let each witness speak freely, and be courteous and considerate.

- g. Take notes without distracting the witness. Use a tape recorder only with consent of the witness.
- h. Use sketches and diagrams to help the witness.
- i. Emphasize areas of direct observation. Label hearsay accordingly.
- j. Be sincere and do not argue with the witness.
- k. Record the exact words used by the witness to describe each observation. Do not "put words into a witness' mouth."
- l. Word each question carefully and be sure the witness understands.
- m. Identify the qualifications of each witness (name, address, occupation, years of experience, etc.).
- n. Supply each witness with a copy of his or her statements. Signed statements are desirable.

After interviewing all witnesses, the team should analyze each witness' statement. They may wish to re-interview one or more witnesses to confirm or clarify key points. While there may be inconsistencies in witnesses' statements, investigators should assemble the available testimony into a logical order. Analyze this information along with data from the accident site.

- a. Discussion (Analysis of the Accident - HOW; WHY)
- b. Direct causes (energy sources; hazardous materials)
- c. Indirect causes (unsafe acts and conditions)
- d. Basic causes (management policies; personal or environmental factors)

A successful accident investigation determines not only what happened, but also finds how and why the accident occurred. Investigations are an effort to prevent a similar or perhaps more disastrous sequence of events.

WHY ACCIDENTS MUST BE INVESTIGATED

Investigating accidents is a responsibility of all levels of management and concern of every employee, but the supervisor's unique position gives him/her special priority and responsibility in this function. As the supervisor in the area where an accident occurs, the supervisor has certain qualifications and advantages other members of management do not have.

1. Knows the most about the situation.
2. Has a personal interest in identifying accident causes.
3. Can take the most immediate action to prevent an accident from recurring.
4. Can communicate more effectively with the workers.

THE CRITICAL IMPORTANCE OF ACCIDENT REPORTING

No matter how conscientious a supervisor might be, the supervisor cannot investigate an accident until he/she is aware of the accident. Accident reporting, including minor injuries, property damage, etc., must be reported when the accident

EVERY ACCIDENT TO BE INVESTIGATED AND REPORTED

An accident investigation is basically the supervisor's analysis and account of an accident based on factual information gathered by a thorough and conscientious examination of ALL factors involved. It is not a mere repetition of the workers' explanation of the accident. True accident investigation includes the objective evaluation of all facts, opinions, statements and related information, as well as definite action steps to be taken to prevent a recurrence.



WHEN IS THE TIME FOR ACCIDENT INVESTIGATION?

The time for accident investigation is always as soon as possible. The less time between accident and investigation, the better the information, which can be obtained. Facts are clearer, more details remembered and the conditions are nearest those at the time of the accident. The only situations, which should be permitted to delay the investigation, are when medical treatment is needed, or the worker is emotionally upset. Naturally the supervisor thinks of the employee first.

CONDUCTING THE ACCIDENT INVESTIGATION

INTERVIEW THE WORKER WHO HAD THE ACCIDENT, if at all possible. The first step in a normal accident investigation is to interview the employee involved. The next step is to separate the witnesses and interview each witness separately. There are certain proven techniques for successful interviewing of any kind, and while most supervisors may be familiar with them, they are certainly important enough to repeat.



1. Put the worker at ease. Remind the person that you are interested SOLELY in preventing a recurrence of the accident and that you can only do this with the employee's cooperation.
2. Conduct the interview at the scene of the accident whenever possible. It will help the person to explain and for you to understand. Make the interview as private as you can.
3. Ask for the employee's version of the accident. Be sure he/she understands you want his/her version, just as the employee saw it and not "dressed up".
4. Ask any necessary questions. Limit your questions to facts, particularly early in the interview. Use the guide of asking who, what, when, where and why of the accident.

5. Repeat the story, as you understand it. The employee can clarify or modify your understanding if there is any confusion.
6. Close the interview on a positive note... PREVENTION. The most effective way to end an interview is by discussing actions that can be taking to prevent the accident from happening again. This re-affirms the purpose of the interview in the employee's mind and will assure continued cooperation
7. Interview each witness separately.

COMPLETING THE ACCIDENT INVESTIGATION REPORT

An accident investigation report is just what its name implies, the report of an accident investigation. It is not the accident investigation, but a report of the findings from the accident investigation. While this may seem clear enough, the two are frequently confused. Filling out a form is NOT an accident investigation. The form is completed as a record of the actual investigation. In general, every report form will ask:

1. Who had the accident?
2. When did it happen?
3. Where did it happen?
4. What is the occupation of the person involved?
5. What inflicted the injury or damage?
6. Who had the most control of what inflicted the injury or damage?
7. What happened?
8. What things caused the accident?
9. How can the accident be kept from happening again?



No matter what type of accident or injury occurs, it is important that a thorough accident investigation be conducted; a review of the investigation must be completed to determine what is necessary to prevent the incident or similar incident from

happening again and that appropriate retraining or counseling be provided to the employee or employees who contributed to the incident.

SUPERVISOR SAFETY LEADERSHIP

Things are going great, all of the sudden your boss tells you safety is your responsibility. Oh no, not another job. Now you're burdened with accident reports, safety training, making sure employees follow safety rules and wear appropriate personal protective equipment when required. Wow, it's enough to make you want to cry. Let's back up a minute. Safety is your responsibility. You're a supervisor. You're responsible for everything your employees do, or fail to do, nothing new. The company safety manager or coordinator isn't responsible for safety. The supervisor is the only person having direct control over employees. Therefore the supervisor is absolutely responsible and accountable for safety.



We mentioned training, but didn't explain what specific training is required. We may leave out a few requirements, but let's concentrate on the basics of safety training requirements. First, there's a legal requirement that all employees must be trained in the general hazards to which they may be exposed. This must be done before they begin the job. General hazards may be the type of work they perform, the clothing, footwear, personal protection, the company policy on wearing rings and jewelry, machine safety and guarding, electrical safety, drug and alcohol policy, safe lifting, and many others. This training is usually provided as an employee safety orientation program provided new employees the first day on the job.



There are other training requirements, which are equally serious responsibilities of supervisors. Training in the specific hazards to which exposed. This relates basically to machinery and to certain processes. If a person is assigned to operate forklifts, this person must be trained and authorized by the company to safely operate the equipment. This means you must provide safety training to any employee who operates machinery, equipment or works with potentially hazardous processes, chemicals, or similar work. How about maintenance persons who regularly work with equipment and electricity? They too require safety training.

Another training requirement is hazard communications training. Anyone using, storing, handling, or disposing of chemicals or hazardous materials, must be provided training. Generally, hazardous communications means enforcing the company's written hazard communications plan, training employees on chemical labeling requirements, and explaining what information is contained on material safety data sheets. Additional training is required on specific chemicals, but this gives you a general idea of your hazard communications training responsibility. Keep in mind trainers or other personnel may be assigned the job of providing the training, however, you the supervisor remain responsible to see that all your employees received the training.

We discussed company safety rules, employee-training requirements; now let's review safety rule enforcement. Everyone, including us from time to time, misuses the word accident. The actual definition of accident is an unexpected, unplanned, uncontrollable, and undesirable event. If this definition is correct, there's nothing you can do. Uncontrollable means it can't be controlled. The first thing we need to do is remove the word uncontrollable from this definition because accidents can be controlled. If

an employee contributes to, or causes an accident, action must be taken to ensure the employee is educated in the what action he or she did wrong, how to correct the deficiency, and what time frame is allowed in which to correct this behavior or act. It's called safety counseling, but more important, you owe it to your employees to explain how their behavior or acts contributed to an accident or injury. How can employees be expected to correct something unless they know what it is that needs correcting?



After medical treatment is provided, the employee should receive a written counseling which explains the act or behavior that contributed to the accident. One, the employee's free hand was placed in such a manner as to be in the cutting path of the knife. The knife slipped, and cut the employee. Two, the corrective action to be taken is never place your free hand or other body parts in the cutting path of the knife, in the event the knife may slip off the material being cut. Number three; the time frame allowed to correct this deficiency is immediate. The person receiving this written safety counseling may be best employee you have, great attitude, good worker, loyal, dedicated, and safety conscious. Nothing has changed. Safety counseling is not disciplinary action, it is training. It's telling them what they did wrong, and how to correct the situation. It's a written counseling, and we'll explain why it must be written in just a few seconds.

Whether your company has safety committees, safety inspectors, audits, or other staff personnel, the supervisor remains responsible for the safety of the department. Who is better qualified to inspect the department for safety hazards than the supervisor? Employees contribute to safety by reporting hazards to their supervisors, who in turn investigate. And if it is a safety hazard, corrections are made. When do

these inspections have to be made? How about daily as you walk through the department? Weekly or monthly inspections could be a part of your schedule. Why not make up a checklist of areas of equipment to inspect and assign employees to inspect the department. This gives them an opportunity to accept safety responsibility, and helps you maintain a safe and helpful workplace. You should document these scheduled inspections and the corrections you make. This provides documentation that inspections are conducted, and that hazards identified are corrected.



How about those very minor injuries, the band-aid types? All injuries, no matter how small, must be reported. Treatment by a person trained in first-aid must be provided, and the accident investigated to determine the cause. First-aid treatment is important, especially for the band-aid injuries. Many times, a person applies a band-aid and goes back to work. That's OK, but if it's not treated properly, with minor follow up treatment, the next day or a couple days later, small minor injuries may become infected, and then you have a lost work time injury. Never allow employees to treat themselves, as this circumvents the reporting requirement and certainly doesn't ensure competent first-aid treatment.

If you haven't guessed by now, safety responsibility is a big part of your job. Without your leadership, safety could not exist. If you provide the example, enforce the rules, document counseling, and properly train your employees, safety will become second nature and part of every employee's job. Leadership is the most important part of safety. Supervisors have the legal responsibility for safety, but it really depends on your effort, knowledge, and attitude about safety that makes the program successful.

CHAPTER II GENERAL SAFETY REQUIREMENTS

EMPLOYEE SAFETY ORIENTATION



All employees must be trained in the General Safety Requirements. This is accomplished initially, by a Safety Orientation Program. Most organizations have a Safety Orientation video that is used for basic training, then Supervisors must follow up with training on the job, to reinforce the training learned from the Safety Orientation Program. All new employees and any experienced employee should be provided this training, before they are allowed to begin their jobs.

Our basic safety policy is simply this: "We don't have any job that can't be performed safely". Don't take short cuts or risks. There's only one way to perform your job - the safe way. If it can't be performed safely, we don't want you to do it. That's our policy and your obligation. We're serious about safety and expect you to perform every job, every day, safely. Ok, let's review the basics of job safety and some of the general hazards to which you may be exposed to on the job. We can't list all hazards, but you'll receive more training from your Supervisor.

The first rule is to report to work rested, alert and fit to give your full attention to the job. Of course, **alcohol and drug** use is prohibited on the premises, as are the residual results of their use. This policy is established in order to ensure all employees have a safe environment in which to work. Violation of this policy can result in termination of your employment. If you're taking drugs prescribed by a physician, report this fact to your supervisor before beginning work. Quite often, some over the counter drugs can cause drowsiness or may impair your reflexes, so report the use of these drugs before beginning work.

If you're required to operate any type of equipment, wait until you've been trained and authorized - even if you have experience on that type of equipment. We'll train you, so don't operate any equipment until you've been trained and authorized by the company.

Electrical safety is equally important. Water and other liquids are potential hazards around any electrical equipment; therefore you should be alert for any electrical hazard and never use electrical tools or equipment near water or other liquids. Even greasy, moist or sweaty hands can be hazardous around electricity. Report hazards to your supervisor, particularly damaged electrical switches, plugs, cords, receptacles or any type electrical tool. Most electrical tools and equipment have a third prong on the electrical plug. This prong is a grounding device to protect you from electrical shock in the event of a short or malfunction. Be sure this ground prong is not broken off as this could result in an injury. Some electrical equipment may not have this ground prong, as the equipment is protected by double insulation inside the tool. If the tool does not state DOUBLE INSULATED by the manufacturer, then the third prong grounded plug is required. Certainly, if you ever receive a shock from an electrical tool, appliance or piece of equipment, shut it off and report it immediately. Even a mild shock is dangerous, so report any equipment that's unsafe to use.

Dress for work. Don't wear torn or loose fitting clothing that can get caught in moving machinery. Wear serviceable, leather topped shoes. Athletic or tennis shoes shouldn't be worn, as they do not afford any type of foot protection. Rings and jewelry can also be hazardous around machinery, so follow your organization's policies and procedures relating to appropriate clothing, footwear and jewelry. Naturally, long hair around machinery can be quite dangerous. Confine long hair under a cap or net to prevent serious head injuries from moving machinery. If your job calls for handling

rough or sharp parts, wear proper hand protection, but don't wear gloves when you're using saws or other rotating equipment, as gloves can get caught in the moving parts and pull your entire hand into the machine.

When working with **chemicals** always wear proper protective clothing and eye/face protection. Chemicals are to be handled only by employees who have been trained and



authorized to do so. There are Material Safety Data Sheets available for each chemical or hazardous material used, which are available through your supervisor. These MSDS have more technical information, so if you're interested in more information, ask your supervisor for an MSDS. The time to have your

questions about hazardous chemicals is before you begin to use them. Remember, these are the basics of job safety, so if you're not sure about something, check with your supervisor.

Fire prevention is another important part of each employee's responsibility. Don't create conditions that promote fires.



Important safety guidelines include keeping aisles; corridors and walkways should have at least 44 inches of clearance for walking. There should be 18 inches of clearance below any sprinkler head to allow for sufficient water flow. All electrical panels, transformers or switchgears must have clear access, which means nothing within three feet above, behind, and on the sides or front. These areas should not be considered as storage areas. Learn where fire extinguishers are located and how to operate them. Make sure you know where the exits are located and that the exits aren't blocked. In the event of a fire, personal safety is the most important concern. Activate the nearest pull station to alert

everyone else, notify your manager or supervisor and then proceed following your company's emergency procedure plan. If time permits and you can extinguish a fire safely, that's the thing to do, however, don't take chances. If there's any doubt about your safety, leave the area and fire suppression activities to the professionals.

Ok, let's review some safety items that require your skill and expertise. These next few tips can reduce accidents if you practice them on a daily basis. Don't use chairs, boxes or Makeshift platforms to reach high places. Use a **ladder** that is specifically designed for that purpose. Never use a ladder that is broken or defective. Inspect it before you use it. Never stand on the top 2 steps of any stepladder, as you can overextend the center of gravity of the ladder and it can easily tip over. Never jump off ladders or platforms, step down easily and slowly. A sprained ankle or broken leg takes a long time to heal and taking chances isn't worth it.

Slips and falls injure more people than any other type of accident. Watch where you're walking and pay attention to potential hazards, such as wet or slippery floors, torn carpets or loose tile. Watch for a change in elevations of the floor and of course, do not run at work. It's ok to be in a hurry, but it's not ok to disregard safety and take chances. Use only authorized walkways or aisles, especially in warehouses or around machinery. When you walk up or down stairs, always hold the handrail. In the event you slip or trip, you'll have the handrails to prevent a fall.



The next safety tip is how to **prevent back injuries**. You'll receive more training from your supervisor, but these are the basics. Most back injuries are the result of

improper lifting, stretching you back muscles or twisting your back. The back is a complex and delicate part of your body. It's composed basically of vertebrae or bones, discs, ligaments and nerves. The discs act as shock absorbers between the bones and prevent the nerves from being pinched. The basic lifting technique is to keep your discs in their proper position between the bones. When you bend your back, the discs are pinched and can be damaged. You've heard it many times; bend your knees, not your back. When you lift anything... no matter how heavy or light it is, bend your legs, get a good grip and use your leg muscles to lift the load. We realize there are thousands of lifting requirements that don't always permit you to bend your legs, as if you were picking up a box. Just keep in mind how your discs protect the nerves and use your leg power, keeping your back in its natural curvature. If you can't bend your legs, use one hand to provide additional support for your back. You can also use your legs as back support for certain types of unusual lifting assignments. Stretching while lifting anything can stretch or tear ligaments. Ligaments are flexible, but if you stretch too far, they'll tear and can be quite painful and take a long time to heal. You can prevent strains by not stretching when you lift. Twisting your back while lifting can be extremely dangerous. Remember the discs and bones and nerves? Make it a rule never to twist your body while lifting. You're the only one who can prevent back Injuries. If you have the right attitude about safety and think about safety when you're lifting.... you can always prevent back injuries.

If you are injured on the job, report the **accident or injury** to your supervisor immediately. Even if you think you don't need medical attention. Report all accidents, near misses and injuries when they occur, not hours or days later. Medical treatment, if required, will be provided, however, supervision and management must be made aware when an incident does occur.

Safety is really nothing more than common sense and thinking about safety. It's called safety awareness and it does work. It takes an effort on your part to keep safety foremost in your mind when you perform any job, at work or at home. We care about all employees and want you to be successful in your job. Safety is a part of that responsibility. Take the time for safety, because it really does make a difference.

SAFE LIFTING AND BACK INJURY PREVENTION

According to the National Safety Council and medical research, twenty percent of backaches are attributed to inflammation such as arthritis, ten percent are due to actual back injuries and other miscellaneous causes, and seventy percent result from degeneration of spinal discs. That's right; aging of the spinal disc material causes the most trouble and can cause extreme pain even from routine body motions. You've all heard the routine warnings about bending your knees and lifting with your legs.

Today, we want to explain **how the back works** so you'll have enough information to make the right choices on how to lift anything safely. We'll also discuss how strains and muscles work so you can prevent these types of back injuries also. First, let's talk about the mechanics of the back. Each disc is a circular pad filled with gelatin, a substance under pressure. The disc works like a soft hockey puck with jelly on the inside. The disc looks like shock absorbers or springs that provide a linkage to the vertebrae or bones that prevents any sliding of one vertebra against another. The spinal cord is a bundle of nerves in a protective vertical passage behind the disc area. Nerve roots branch out through spaces between each vertebra and go to different parts of the body.

The normal range of spinal movement is shown here, while bending forward and backward. You can see the nerve roots are in a vulnerable position because the spinal chord must bend and flex without the vertebrae slipping out of alignment. It is quite easy to wear out a disc with normal movement. As you bend and move, your discs are working, just like the shock absorbers in your automobile. Discs can become damaged through excessive twisting, turning, bending, and when this happens the disc may spring a slow leak. Now as the fluid leaks out you can lose disc pressure. This loss of pressure in one disc can affect the entire linkage. It can happen at almost any age, you don't have to be old to wear out your disc. Back pain sufferers should pay constant attention to posture - standing, sitting, and working, even while sleeping. The lumbar flexion or dynamic posture as shown here helps widen the opening that nerve roots pass through and reduce the chance of pinches. Regular exercises encouraged which promotes flexibility of the muscles and all the other body parts to keep you healthy.

OK, let's talk about those **muscle strains**. Actually, when you stretch, ligaments in your back stretch also. Now if you stretch too far, these ligaments may tear or over stretch. They can be quite painful. Many times we must lift something over our head, so you're going to stretch your arms to reach the object. The best way would be to set the lifted object on a table or other support. Then re-position the object so your arms are doing the lifting, not your back. As a minimum, re-position your grip on the object to keep the weight centered. Arching the back during the lift makes nerve roots susceptible to pinching. Just remember how the discs protect the back and try to make the lift with your back as straight or in a normal position as possible. When you do this the discs can do their job without damage and the ligaments aren't stretched so far that they'll tear.

Naturally, medical research has provided us with some basics about your back to help you understand how the back works. The back works like any other machine on the lever principle. You have a load and a counter-load. The load you're lifting and your back, balanced on a pivot point or center of gravity. The heavier the load the more counter weight you need, or some position to help offset that load. The back has a 10 to 1 ratio to the object you're lifting. If an object you're lifting weighs 10 lbs. it's going to take 100 lbs. of pressure in your back to lift the object. This puts a lot of pressure on those delicate discs, add in more weight, more length of the lever, or an awkward position, then you're adding much more pressure on those discs and, of course, the ligaments. That's why you hear safety and medical personnel telling everyone to bend your legs and squat down near the object you're going to lift. This keeps the discs lined correctly between the bones. Get a good palm grip. Don't use your fingertips. The palm grip is designed to make sure the object you're lifting doesn't slip out of your hands. Lift the object slowly to prevent any jerking movements that can cause discs to move out of their proper alignment and bring the object close to your body. This reduces the lifting pressure based upon the 10 to 1 ratio of the lever. The closer the load, the less pressure it takes to lift. You have a good grip, the object is close to your body, now stand up. You're using your leg power to do the lifting, not your back. That's the standard method of lifting safely and it does work.

Now, how about the more **difficult lifting** situations such as trying to lift different types of objects in a less than ideal situation. Let's take a look. Did you notice how he used his free hand to provide support for some of the lifting? Anything you can use to provide additional support is great for your back.

How about trying to install a car battery into an automobile? You have to be standing to get the battery over the fender and into the battery case. Can't bend your legs on this one. The next best thing to do is move your legs against the car's fender. This provides good support and assistance to your back when the battery is lowered into the case. Use your legs whenever you can to help reduce the load or pressure on your back. Keep in mind how your discs support your back, the 10 to 1 lever ratio and that you have ligaments in your back that can stretch and possibly tear.

Whenever you have a particularly difficult load to lift, you can use your good judgment and make the right decision how to lift properly. Naturally, if the load is too awkward or heavy for one person, get some help. Safe lifting doesn't have to be perfect, but it does have to be done safely. Twisting your back while lifting is extremely dangerous. Find another way to lift because it only takes one wrong way to cause a problem. Back injuries can be prevented, but you're the only person who has control over your well being. The most important part of safe lifting, actually any type of job and home safety, is having the right attitude about safety and thinking about safety before you perform each task. Take time for safety because it's important to you, your family, and your job.

SLIPS, TRIPS AND FALLS

General Requirements for reducing slips, trips and falls:

- * All places of employment, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition.
- * The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained and gratings, mats, or raised platforms shall be provided.

* Every floor, working place and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.

LADDERS

The chief hazard when using a ladder is falling. A poorly designed, maintained, or improperly used ladder may collapse under the load placed upon it and cause the employee to fall. A ladder is an appliance consisting of two side rails joined at regular intervals by crosspieces on which a person may step to ascend or descend.

"Falling from a ladder: Little can be more frightening as you plummet to the ground, but it happens more than you can imagine. But as they say, it's not that fall that kills you, it's the sudden stop! Even a fall from a short ladder can be disastrous. People endure more than 500,000 falls - 300 deaths and an average of 165,000 trips to the emergency room every year! Here is the clincher - the vast majority of the cases are a direct result of misuse of the ladder.

There is a ladder for every application; some of the more familiar examples include:

- Step ladders
- Extension ladders
- Adjustable ladders
- Platform ladders and articulating ladders

Some examples of ladders that you may not be so familiar with might include:

- Line or cable ladders
- Telescoping ladders
- Sectional ladders
- Tripod and trestle ladders
- And ladders used for poles

LADDER CLASSIFICATION AND TYPES

- Ladders are generally manufactured using three major structural materials such as wood, aluminum, and fiberglass.
- In addition, there are three main classifications of ladders; Type I - industrial ladders that carry a heavy duty rating of 250 pounds, type II are medium duty ladders with a rating of 225 pounds, and type III are light duty household use ladders with a rating of 200 pounds, generally not suitable for commercial work.
- However, there are also extra heavy duty ladders such as: Type 1A, with a rating of 300 lbs, and type 1 AA, with a rating of 375 lbs. Some manufacturers also make ladders with a rating of 500 lbs! By the way, the classifications include the weight of the person and their tools and materials.

WOOD LADDERS

Wood ladders should be constructed of high-density wood that is free of sharp edges and splinters. When properly taken care of, wood ladders are very serviceable, but where do you see these ladders typically stored. That's right, outdoors exposed to the elements. Since wood ladders are affected by exposure to heat combined with dampness they require a dry, well-ventilated storage area.

Portable fiberglass and metal ladders must be free of sharp edges and be structurally sound. The ladders must have rungs that are knurled, dimpled, or treated to improve slip resistance. The uniform step spacing on these ladders is also 12 inches.

LADDER USE

Before working with a ladder, be sure to read the manufacturer's instructions and labels affixed to the ladder. If missing, have them replaced. Never use a ladder if drowsy or ill, taking medication, or if bad weather conditions exist.

All ladders must be thoroughly inspected prior to use to ensure that they are in good condition and no damage exists. If an inspection reveals damage, the ladder must be repaired or replaced. No ladder should ever be used with loose rungs or steps.

Do not use ladders in doorways or other high traffic areas as someone could easily bump into it, causing the ladder to fall, or an item could be dropped onto someone below. If a ladder must be used near a door, make sure the door is locked and a sign placed on the door warning of your presence.

STRAIGHT LADDER SET UP

The feet of a ladder must be level and positioned evenly on the ground. If the ground is soft or uneven, use boards or leg extensions for support. Test the ladder to verify it is secure.

For stability, both sides of a straight ladder need to be against the wall or other support. A ladder offset attachment can be used for additional wall stability as well.

HOW TO CLIMB LADDERS

Make sure hands, shoes, and ladder rungs are dry. Use a second person to hold the bottom of the ladder and to prevent others from disturbing the ladder. Keep a 3-point grip on the ladder at all times - this means two hands and one foot or one hand and two feet in contact with the ladder.

Climb slowly with your weight centered between side rails. Do not lean back on extension ladders; never stand at or above the top two rungs of any ladder. Be sure to avoid distractions that might cause you to turn away from the front of the ladder.

"Always remember the belt buckle guide - never allow your belt buckle or the center of your body to extend outside the ladder rails. In case of sudden dizziness or a panicky feeling, bow your head, drape both arms over the rung in front of you, close your eyes, and wait until the feeling passes. "

STRAIGHT AND EXTENSION LADDERS

To raise a ladder, brace the lower end against a wall and then grasp the top rung with both hands. Raise the top end and walk underneath the ladder, moving down the rungs until the ladder is vertical. Raise it to the desired height, making sure the locks engage properly on both sides of the ladder.

To position the ladder properly, remember the 4:1 Rule. Since the rungs on ladders are normally one foot apart, the approximate distance is easy to compute. If the ladder is to be used for accessing a roof, there should be at least 3 feet of ladder

or the last 3 rungs extending beyond the edge of the roof. It's best if you can secure the ladder to the roof area or have someone hold the bottom of the ladder.

The surface under the ladder must be both level and firm. Large flat wooden boards placed under the ladder can help level a ladder on uneven ground or provide better footing on soft ground.

Handling tools and other materials while on a ladder can be dangerous unless safe work practices are followed. Keeping tools in a tool belt will keep them handy and free up your hands for climbing. Be sure tools are not left in a location where they can fall on people below. Any heavy or bulky items should be brought up only after you have reached the top. Never put a screwdriver in your pocket or if you should fall, the blade may pierce a vital organ. Place signs or barricades to warn others that work is proceeding above them and that they should be aware of possible falling objects.

Safety Tips for Stepladders

Many of the suggestions for using straight and extension ladders also apply to stepladders. So when using a stepladder:

- Never use a stepladder in place of a straight or extension ladder.
- Make sure that your ladder is rated for your weight, including tools and materials. Unlike some infomercials - only one person should be on the ladder at a time.
- Erect a stepladder only on a flat level surface. Do not place it on a table or any similar platform for added height.

- Before climbing a stepladder, make sure that its legs are fully extended and that spreaders are locked. The locking device on some ladders may present a pinching hazard, so keep fingers clear when setting up the ladder.
- Do not step on the top platform or top two steps or shelf.
- Finally, no matter what kind of ladder you are using, never leave a raised ladder unattended. It could fall unexpectedly and injure someone.

Ladder Storage and Maintenance

Ladders should be stored in a sheltered area and stored horizontally on racks or hooks with support points at the top, middle, and bottom to prevent sagging and warping. Inspection is particularly important after a long period of storage or after a ladder has been dropped. Have repair work done only by a competent repair shop. If there is major damage, discard the ladder. Periodically tighten the reinforcing rods and other hardware as necessary.

What to Do If You Fall From a Ladder

- Calmly assess the situation and determine if you are hurt.
- If you feel that an injury has occurred which prevents standing or walking, do not panic. Call for assistance. If the injury is serious, call 911.
- If you are not injured, report the event to your supervisor and do not climb again until authorized.

ELECTRICAL SAFETY

Electricity has become an essential of modern life, both at home and on the job. Some employees work with electricity directly, as is the case with engineers,

electricians, or people who do wiring, such as overhead lines, cable harnesses, or circuit assemblies.

Everywhere you go, machines, computers, tools, household items, everything runs on electricity. Electrical shock injuries are less severe when the current does not pass through or near nerve centers or vital organs. The majority of electrical injuries in industry, the electrical current flows from hands to feet. Since such a path involves both the heart and the lungs and are usually very serious. Another type of injury is burns from electrical flashes. These burns are usually very deep and are slow to heal and can involve large areas of the body. Even persons at a reasonable distance from the arc can receive eye burns.

The first step is to never use damaged or defective electrical tools or equipment. Tools and equipment must be in good working condition, with proper safeguards installed and working properly. This means you must inspect your equipment before using it. Inspect it for frayed, cracked or cut cables, loose fittings on plugs and if a ground prong is required on the plug, it must be functioning properly.

Let's quickly explain what this ground prong does. On normal 110-volt equipment, there are three wires inside the cable. One is the hot wire, one is neutral and one is ground. The hot and neutral move electricity along the cable to provide the energy from the source to the tool. The third wire or ground is there in case of a short or malfunction. If this occurs, the electricity then goes to ground, which means the electricity is transferred to this ground wire back to earth or ground. If this ground wire is missing, the electricity could flow through your body. If you're using a grounded type tool and the ground prong is missing, you have no electrical protection in case

something happens. Inspect your tools and equipment to make sure all the cables are in good condition and the ground prong is in place and not missing.

Don't use damaged electrical cords, plugs or equipment until it's been replaced or repaired. Never try to repair electrical cords by wrapping electrical tape around the cord. Frayed, cut or damaged cords must be replaced or repaired by a trained and authorized electrician.

Another useful electrical tool is the DOUBLE-INSULATED tool. The words DOUBLE - INSULATED will appear on the manufacturer's identification plate and if it doesn't say double insulated, you need a ground prong on the tool's plug. Double-insulated means the inside of the tool is insulated, so if there is a short or malfunction, the double insulation will provide adequate shock protection. Everyone knows that electricity and water don't mix. Always keep your hands dry when using electrical tools because sweat is water and can create a serious unsafe condition. Don't use a metal or aluminum ladder when working around electricity because the metal ladder is a good conductor of electricity and if it contacts electricity, you can be electrocuted.

In addition to keeping your equipment in good condition, housekeeping is important. **Housekeeping** is to keep areas clear from electrical panels and other electrical equipment. Don't allow dust to accumulate near electrical equipment because there are sparks inside motors that could cause fires. The same principal applies to flammables and combustibles. Think about all the arcing and sparking that goes on inside electrical switches, motors and equipment and keep potential explosions and fires from occurring through good housekeeping. On electrical panels, be sure all circuit breakers are properly labeled. In an emergency, or in normal maintenance, it's important to know

what breaker controls what machine or other electrical equipment. It's happened many times before, but preventing accidents is the name of the game. In the hotel industry and many home swimming pools, there is a device called a GFCI, or ground fault circuit interrupter. This device acts extremely fast, so if there is a malfunction of electrical equipment, the electricity will be shut off before it can reach the equipment, thus saving someone from an electrical shock. We just mention this because in some cases, it may be advisable to use a ground fault circuit interrupter rather than relying upon other safety devices.

Electrical safety is more than just following the rules. It's also using your good judgment along with a good safety attitude to make the rules meaningful.

CONTROLLING EXPOSURES TO BLOODBORNE PATHOGENS

Although many workers have always been exposed to bloodborne and infectious diseases, treatment and infection control prevented widespread incidences. The 80's brought new conditions that were spread in alarming proportions to personnel having other than direct contact with an exposed person. Last year, several thousand workers died from Hepatitis B. New methods of infection control were established to prevent the occupational spread of AIDS and Hepatitis B virus, both very serious diseases.

Let's discuss some of these new requirements and how you can protect your health, but first let's explain bloodborne pathogens. AIDS, or acquired immunodeficiency syndrome, is a bloodborne pathogen and is in today's spotlight because contracting this virus will result in death. AIDS can be contracted through exposure of the virus by direct contact of blood and blood products. Studies have shown that the

virus can be transmitted by other body fluids, including semen, vaginal fluid, fluids of the brain, heart, back and other body fluids, saliva in dental procedures and any other body fluids or articles visibly contaminated with blood. There is no vaccination or known cure for AIDS. Exposure to blood and body fluids can also transmit other serious diseases, such as Hepatitis B, and others, however, precautions taken for HIV and Hepatitis B are satisfactory to prevent these other bloodborne pathogen diseases. Serious diseases require serious prevention. Hepatitis B is perhaps the more common disease and preventative precautionary measures should be taken by those who may be exposed to bloodborne pathogens.

Your employer will maintain a copy of these regulations. If you want or need more information on these standards, contact your supervisor and these regulations will be made available to you.

Personnel in manufacturing and the service industry, including hotels, restaurants, nursing homes, janitorial and other service personnel can be exposed while cleaning or handling blood or potentially hazardous body fluids from infected persons, or from routine first aid duties. An office worker or electrician would not have reasonable anticipation of being exposed to blood or potentially hazardous body fluids unless they are designated as first aid or CPR trained personnel. Although not everyone is exposed by their jobs, everyone should be aware of bloodborne pathogens, HIV and Hepatitis B because off the job exposure is likely in certain situations. If your job is such that you could possibly be exposed to bloodborne pathogens, then you need additional information and precautions to prevent exposure. It's important for everyone to understand these diseases and prevention techniques because you never can tell when an emergency may arise that exposes you

to these diseases. In the workplace, exposure can occur from accidental injection with contaminated needles, broken glass contaminated with blood, blood spattering and splashes to the eyes or mucous membranes. Exposure from cuts and abrasions in the skin are also possible for transmission of these pathogens. Simple first aid procedures require precaution and protection of the person providing the first aid. The diseases are not spread by linens, utensils or articles, unless they have been contaminated with fresh, whole blood. Again, it's important for you to understand the hazard, then take action to protect yourself, whether it's at work or off the job.

Let's now discuss an **Exposure Control Plan**. This is an organization's written plan to outline guidelines to reduce occupational exposure to these diseases. Some of the elements of the Exposure Control Plan include: Identification of the hazards and persons who may be exposed, training, engineering controls, administration, personal protective equipment, safe work practices, recordkeeping, good housekeeping and immunization.

Identification, in writing, tasks and procedures as well as job classifications where occupational exposure to blood occurs, without regard to personal protective equipment and clothing. It must also set forth the schedule for implementing other provisions of the standard and specify the procedure for evaluating the circumstances surrounding any exposure incidents. The plan must be accessible to employees and available to OSHA, upon inspection. Employers must review and update the plan at least annually, more often if necessary to accommodate workplace changes. Contact your supervisor for the location of the Exposure Control Plan for more information.

In addition to personal hygiene, one of the most effective means of prevention is through **engineering controls**. This means controlling or eliminating the hazards at its sources. These controls may include sharps containers for blood contaminated broken glass and approved waste containers for contaminated towels, linens, blood splattered clothing, sanitary napkins and other items that are contaminated with blood. Work practices are specific procedures that employees must follow to reduce their exposure to pathogens. These include, but are not limited to personal hygiene, and proper waste disposal. You must assume that all blood and body fluids are potentially harmful and contaminated. With this attitude, you can develop individual work practices to prevent exposure. Certainly all contaminated waste must be placed in closable, leak-proof containers and the containers must be identified as containing potentially infectious bio-hazard materials and should not be allowed to over-fill. When handling filled bio-hazard bags, use caution, as the plastic bags may contain broken glass or needles and can penetrate your skin through the plastic. When handling any sharps, such as needles or glass, they must be disposed of in proper containers. Never shear, bend, break or recap used needles by hand. All sharps, including needles, must be placed in approved and color-coded containers. Sharps containers should be installed so the shortest person in the area can see the top of the container. This prevents a blind spot at the top of the container which could have sharps sticking out of the top of the container, therefore exposing a person to cuts or needlestick injuries.

Never pick up any broken glassware with your hands. Use tongs or a broom and dust pan, never your hands. One of the most serious methods of transmission of these diseases is through skin puncture with contaminated blood or blood products. Use extreme caution when handling sharps.

Personal hygiene is more than taking a shower and washing your hands every day. It also includes prohibiting eating, smoking, drinking or applying cosmetics in areas where bloodborne pathogens may be present. Regular hand washing, particularly with an anti-bacterial soap, is mandatory immediately after removing gloves or other protective equipment after they have come in contact with blood or body fluids. You must also keep your personal protective equipment clean, sanitized, properly stored and free of contaminated products. The selection of personal protective equipment depends upon the nature of the exposure, but generally includes gloves and skin protection. Certainly good **housekeeping** is part of the exposure control plan. All potentially contaminated surfaces, equipment, personal protective equipment and other areas require cleaning and sanitizing. Let's say an employee cut himself or herself on a piece of machinery. The machine is now contaminated and must be cleaned and sanitized also. Cleaning is simply removing dirt and major residue from a surface, using soap and water. **Sanitizing** means you are killing the bacteria and harmful pathogens by using a disinfectant or other chemical sanitizer. A good disinfectant is one quarter cup of bleach in one gallon of water. Commercial disinfectants are also available. Just keep in mind that cleaning means one thing and sanitizing with a disinfectant means killing harmful bacteria, so cleaning is just one part of your job. Sanitizing is the second part of the job. Floors, carts, walls, utility closets, restrooms, all require excellent housekeeping procedures. Don't forget contaminated clothing and laundry. They too must be disinfected. Always wear gloves and other protection as necessary when handling contaminated clothing, towels, laundry and always be prepared for sharp objects to be left on clothing and laundry. An improperly discarded needle or contaminated glass could be mixed with

dirty linen and, if found, should be reported to your supervisor as this indicates a breakdown in the exposure control plan. Don't take chances.

Ok, some more rules. If you're in a job where you're routinely exposed to bloodborne pathogens your employer must make available the hepatitis B vaccine. This vaccine must also be made available to you in the event there is an exposure incident. The hepatitis B vaccine is not mandatory and you may choose to decline to have the vaccine administered. In the event you do decline to have the vaccine administered, you must sign a declination form, stating you decline the vaccine. However, at any time, if you are still exposed to bloodborne pathogens, or there is an exposure incident, you may choose to have the vaccine administered at no cost to you. There is no requirement for you to be pre-screened before taking the hepatitis B vaccine. Just a note about the vaccine itself. The vaccine is given in three injections in the arm. It is prepared from yeast cultures, rather than human blood or plasma. There is no risk of contamination from other bloodborne pathogens, nor is there any chance of developing hepatitis B from the vaccine. What is the **emergency procedure** in the event you experience an exposure incident, such as a needlestick, contamination of the mouth, eye, mucous membrane or other puncture of the skin? Basically, wash the exposed area with water, report to your supervisor immediately and seek medical attention as quickly as possible. Fast action is the key to prevention. Always report any incident or potential exposure so medical attention can be provided. Post-exposure evaluation and follow-up programs will be made available to you, should you be exposed to bloodborne pathogens.

Medical records are confidential and only certain information may be provided to your employer. At no time will the results of any testing or other medical evaluation

be reported to your employer. Your physician will discuss all pertinent medical evaluations and diagnoses with you, but will not reveal this information to your employer. Testing and treatment is completed in a clinical setting, but your employer is not entitled to this information. Your rights to confidentiality are protected.

Ok, more safety tips on preventative and precautionary measures. Generally, sharps containers and regulated waste must be identified by color coding and with appropriate labels. Warning labels include the orange or orange-red biohazard symbol affixed to containers of regulated waste, refrigerators and freezers and other containers which are used to store or transport blood or other potentially infectious materials. Red bags or containers may be used with biohazard labels and signs. Do not place "biohazards" in infectious waste containers. Infectious waste is different from biohazards, although some infectious waste, such as linen containing blood can be classified as biohazards.

We haven't discussed **Universal Precautions** because that information is contained in a manual included with your employer's program; however, Universal Precautions is simply an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infected with bloodborne pathogens. It's your responsibility to follow your employer's rules and to exercise good judgment when handling laundry, clothing or working with any contaminated work surface or area.

There are other rules and regulations that apply to preventing exposure to bloodborne pathogens. You will be provided additional information and training, to help you do a better job, safely. The most important part of prevention and controlling exposure is you. You and your attitude remain the most important part of reducing exposure to bloodborne pathogens. If you have any questions, they will be

answered by a competent person who is knowledgeable about the standard and other information discussed in this program. This information may be provided in person or by telephone.

Hotel Food Sanitation

Implementing **food sanitation** in the kitchen, inside business or homes is an act of professionalism. People today are already aware for their health and in serving food we must also be aware of their nutritional needs. Poor and unsanitary preparation of food is shame for the people who work in the kitchen. Lack of food sanitation can cause illness, food poisoning, loss of dignity of those who served and also dignity to the establishment we are working from, legal problem, loss of customers, cost a lot of money, waste of time and bad health. In this page, you will continue to learn a lot about Food Sanitation and its importance.

Food Hazards

Most of food borne diseases is the result of **food contamination**. Contaminated means that the food contains a substance which is not originally present in our food. Any food that can cause illness or injury is called hazard. Listed below are the kinds of **food hazards**.



1. Pathogens

The most important kind of biological hazards to consider are microorganisms. A **microorganism** is a tiny, usually single-celled organism that can be seen only with a microscope. A microorganism that can cause disease is called a **pathogen**. Although these organisms sometimes occur in clusters large enough to be seen with the

naked eye, they are not usually visible. This is one reason why they can be so dangerous. Just because food looks good doesn't mean it is safe.

Four kinds of microorganisms can contaminate food and cause illness:

1. Bacteria
2. Viruses
3. Fungi
4. Parasites

2. Chemical and Physical Hazards

This is another important factor for food sanitation. Some kinds of chemical poisoning are caused by the use of defective or improper equipment or equipment that has been handled improperly. The Following Toxins (except lead) create symptoms that show themselves very quickly, usually within 30 minutes of eating poisoned food. By contrast, symptoms of lead poisoning can take years to appear. To prevent these diseases, do not use materials that cause them.

1. **Antimony** - caused by storing or cooking acid foods in chipped gray enamelware.
2. **Cadmium** - caused by cadmium-plated ice cube trays or containers
3. **Cyanide** - caused by silver polish containing cyanide
4. **Lead** - caused by lead water pipes, solder containing lead, or utensils containing lead.
5. **Copper** - caused by unclean or corroded copper utensils, acid foods cooked in unlined copper utensils, or carbonated beverages in contact with copper tubing.
6. **Zinc** - caused by cooking foods in zinc-plated(galvanized) utensils



EMERGENCY PREPAREDNESS

Emergency preparedness is an important part of everyone's responsibilities, no matter where you work. Emergencies could be almost anything—fire, bomb threat, biological threat, earthquake, or other emergency to the buildings or the people who occupy these buildings. In case of an emergency, there are many things you can do to help protect your life and the lives of others and to help minimize damage to the buildings.

One of your important responsibilities is to know how to report an emergency. Every office should have appropriate telephone numbers posted near telephones. This includes fire, medical, police, the office of the building, building security and other important numbers. Don't forget the potential need for using cell phones in the event electricity is shut off during the emergency. In case of an emergency, you must know the location of all exits, not just the ones located near you. It's extremely important to know these routes and where they lead because in case of smoke from fire, you may not be able to see the exit signs. You may have to feel your way out of the building, so it's critical to know where all the different exits are located. The vast majority of deaths in fires result from smoke, not the actual fire. Smoke rises in a fire, so it's best to stay close to the floor if there is smoke in your area. Don't panic because help is on the way. We've seen examples of panic in hotel and high-rise fires, but due to today's technology, there is no need to panic. Emergency rescue is already in action.



It's difficult to envision your work area completely covered in smoke where you can't see anything, but it can happen, that's why you need to be prepared.

FIRE EXTINGUISHERS

How about those fire extinguishers and fire alarms? Again, fire extinguishers just hang around, so you might have a tendency to forget where they're located. Learn where they are located and how to use them in case of an emergency. If you haven't had Fire Extinguisher training, ask your supervisor. Proper fire fighting techniques can keep a small fire from becoming a disaster, so learn how to properly use fire extinguishers. Just remember not to risk your life or the life of others to help extinguish a fire, get out and leave the fire fighting to the professionals. Life safety is paramount in trying to fight fires, especially with fire extinguishers.



FIRE ALARMS

What's the proper procedure in the event of an alarm? If you have time, shut off electrical equipment and leave the building immediately through the emergency exits. Go to your assigned safe refuge area, for a head count, to ensure everyone is safely out of the building. This is one good reason for participating in emergency drills, to make sure you really know what to do in case of an emergency. The planning and testing phase of any emergency is critical to the successful evacuation in case of a real emergency. Don't forget assisting those visitors to the building who may not be aware of proper safeguards, exits, alarms and evacuation procedures.



IN AN EMERGENCY, AN ELEVATOR IS A VERY DANGEROUS PLACE TO BE

Never use elevators in case of an emergency, as the elevators can become stuck between floors, smoke may enter the elevator shaft and elevators may stop and open onto the fire floor and other unsafe conditions. In case of any emergency, use the

stairwells, never use the elevators. Perhaps the most important life safety feature in the building is the stairwells. Stairwells are the lifelines of any high-rise building. During an emergency, before you open any door, take the back of your hand to test if the door is hot. If the door feels hot to your skin, DO NOT OPEN THE DOOR. Use another exit. Doors should all be closed, but not locked. Doors help prevent smoke from spreading throughout the building, so doors should be closed in case of a fire or other emergency.

POTENTIAL EMERGENCIES

In today's environment, there are a variety of emergencies that can occur. Some may be natural disasters, some may be man-made. Let's begin with the potential emergencies that are man-made. Bomb threats are the most obvious, but let's also consider the new biological threats. Both of these threats should be taken seriously, but handled professionally which will minimize the effects of the threat. A bomb or biological threat to the facilities or people inside is designed to cause a reaction. The caller wants to scare, intimidate or cause anxiety, but whoever receives this type of call should not panic. Information from the caller is your first line of defense. Building security maintains Bomb Threat Checklist for this use. Everyone should have this checklist placed near each telephone. In case you receive a threatening call, use the checklist to obtain as much information from the caller as possible.

Planning and training are the most important ingredients of any emergency preparedness program. Proper housekeeping, observing no smoking rules, frequent inspections and paying attention to your surroundings help reduce potential fire hazards. Proper use, care, handling and storing of flammable liquids is another factor in reducing fire hazards. Written plans, policies, procedures and training will

go a long way in reducing the risks from emergencies. Medical training should be encouraged for all personnel. First Aid and CPR training can save lives in case of an emergency. All organizations should have properly trained First Aid and CPR personnel. Each organization should coordinate their emergency planning efforts with the Safety and Security Director, to ensure proper procedures and emergency action in case of emergency.



Overall, your responsibility includes preparation for an emergency, written policies, procedures and emergency action plans and of course, training. When you are prepared for an emergency, you can react more professionally, lessening the effects of any emergency. Preparation and training are important survival techniques.

CHAPTER III SPECIFIC HAZARDS OF THE JOB

Specific Hazards training is required for those employees who work or use specific tools and equipment. If they are not involved in any of the following job operations, training is not required. As an example, if a person was not a forklift operator, there would be no requirement to train them in forklift operations.

FORKLIFT OPERATIONS AND TRAINING

A complete forklift operator-training manual and 10 videos are available for this training and is not included in this Safety Manual Guidelines. The manual and videos can be used by Supervisors to train all forklift operators. It includes forklift operator licenses, forklift operator booklets, maintenance check lists and operator Performance Evaluation check lists.

CHEMICALS, FLAMMABLE AND COMBUSTIBLE LIQUIDS

BONDING AND GROUNDING OF FLAMMABLE LIQUIDS

Static electricity occurs when electrons are moved about on a surface, like when you comb your hair. The friction of the comb moving across hair creates static electricity. You can see it, although if you comb your hair in the dark, you might see some sparks. Static electricity can cause sparks. When the vapor of the liquid is such that it can be ignited, static electrical sparks can ignite the flammable liquid. Almost any movement can create static electricity. Liquid moving through a pipe or hose creates static electricity. What is happening is the liquid is moving different electrons from one to another. The friction of electrons creates what is called electricity - or more appropriately, static electricity. When the conditions are right, you create static electricity by walking on a carpet. If you touch something, static electricity flows through your body and accumulates at the point you touch, which gives you a little tingle. Nothing serious, but a static electricity shock is enough to let you know you've been shocked.



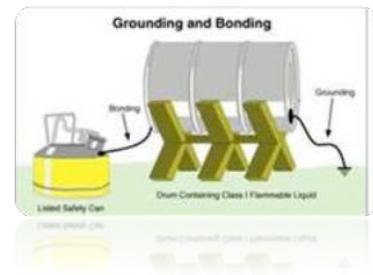
There have been many serious injuries and fatalities due to flammable liquid explosions caused by static electricity. That's what this program is all about, reducing the effects of static electricity and potential explosions when transferring flammable liquids from one container to another? We call this bonding and grounding. It's a simple procedure, but it's extremely important to understand how to properly bond and ground. We'll use the simple example of transferring gasoline from a 55-gallon drum to a five-gallon drum.

Gasoline is a flammable liquid, which has a flashpoint of approximately minus 55 degrees, depending upon the type of testing method used. Flash point means the minimum temperature at which a liquid gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid. Gasoline can be ignited at temperatures as low as minus 55 degrees and higher. An ignition source could be a spark from spark plugs, for automobiles, or a match or other ignition sources could ignite it.

Bonding and grounding is a simple process, but it takes some effort and diligence on everyone's part to make it work. It's a life saver!

HAND AND PORTABLE POWER TOOLS

Tools are such a common part of our lives that it is difficult to remember that they may pose hazards. All tools are manufactured with safety in mind but, tragically, a serious accident often occurs before steps are taken to search out and avoid or eliminate tool-related hazards.



CONTROL OF HAZARDOUS ENERGY

Control of hazardous energy source is a requirement that organizations must implement for the safety of all employees. This program is designed to explain the basic procedures and terminology used in the procedures and general requirements. Before this requirement was released in September of 1989, organizations used the lockout and tagout procedures to protect employees from **machinery and equipment hazards** during maintenance and repair. Control of hazardous energy source is the new concept with new requirements for the previous lockout/tagout program.

Let's begin with some basics as you'll need these to understand the program. What is hazardous energy sources? Electricity is used to provide power to a wide variety of machines and equipment. Locking out of electricity prevents electrical equipment from accidental release of electricity during maintenance or repair. The main problem here is locking out electricity does not guarantee that other energy sources won't be released. There may be a steam valve that requires locking out as well, or hydraulic, vacuum or pneumatic pressure, mechanical motion springs, thermal energy, such as steam, heat or extremely low temperature liquids or gases. Release of chemicals or chemical reactions are other energy sources that must be controlled, dissipated or shut off. Locking out of electricity may not provide adequate protection during maintenance and repair.



The first category is "Authorized Employees." These are maintenance personnel who actually use lockout and tagout procedures while they are repairing or maintaining equipment. The second category is "Affected Employees." This describes any employee who uses or works around equipment and machinery. It is recommended that virtually all employees be in the "Affected Employees" category.

There is one exception to the lockout rule and that's equipment **connected** only by an electrical cord and plug. You do not have to lockout this type of equipment if there are no other hazardous energy sources. The major requirement of cord and plug connected equipment is that when cleaning, maintenance or repair of such equipment is being done, the person performing the cleaning, maintenance or repair has control of the plug to prevent the equipment from becoming re-energized during the servicing operation.

How about those routine service operations maintenance persons who perform adjustments while machinery and equipment are running? You need to remember the phrases "Normal Production Operations" and "Servicing or Maintenance During Normal Production Operations." Normal production operations means operation of equipment by machine operators. From time to time, minor adjustments are made by machine operators to keep the machine operating properly. The key safety factor in normal productions is machine guarding to protect the machine operator. When employees are protected by machine guarding or similar devices, lockout and tagout is not necessary. The employee has protection.

The next part of **lockout/tagout** procedures is an inspection process. An inspection or audit to ensure employees are trained and knowledgeable on company policies and procedures. These procedures must be properly used. Documentation of audits and inspections are required. The person conducting the audit must not be the one responsible for lockout/tagout procedures. In other words, maintenance people performing lockout/tagout procedures cannot conduct the audit.

What about organizations that use only tagout without the use of lockouts. Here are some concerns about tagout. Only programs that include more durable, weather-proofed tags should be used and they must remain securely attached to the equipment during servicing. "Securely Affixed" appears to rule out flimsy or easily removed string or other attaching devices. The greatest limitation to tagout only program is that it does not secure the energy isolating device and prevent the equipment from being re-energized. Tagout is highly dependent on human factors and requires constant vigilance to ensure proper procedures are used.

Employee training must be provided to ensure **everyone** understands what tagout means is - not to remove tags without authorization and, generally, to be educated in tagout procedures. Retraining on at least an annual basis is mandatory. The one major factor that organizations must consider is how to improve your tagout program as an effective lockout/tagout program.

Each individual must accept the responsibility to be aware of the rules and follow your organization's policies and procedures exactly. The purpose of lockout/tagout is accident prevention. Safeguarding machine operators and the maintenance

employees servicing the equipment. Safety has always been a team effort and lockout/tagout is no different and the rules are very important. If you're not sure about a particular procedure, ask your supervisor. Don't take chances because failure to properly lockout and tagout when necessary can lead to potentially serious injury.



COMPRESSED GAS AND CYLINDERS

The vast majority of gases used for industrial uses, such as welding and cutting, are purchased in cylinders. These cylinders must be constructed and maintained in accordance with appropriate Federal or Government regulations. The contents in the cylinders must be marked on each cylinder in large letters.

CYLINDERS/GAS HAZARDS

Pure oxygen will not burn or explode. It supports combustion, which means it causes other substances to burn when they are raised to the kindling temperature. Combustible materials burn much more rapidly in oxygen than in air. Oxygen forms explosive mixtures in certain proportions with acetylene, hydrogen and other

combustible materials. Acetylene and oxygen are combined in welding operations, as acetylene burned with oxygen can produce a higher flame temperature of approximately 6,000 degrees Fahrenheit than any other gas used commercially. When handling or using any compressed gas cylinder, extreme caution is the basic safety rule.



LP gas is another compressed gas stored in approved cylinders. Liquefied Petroleum gases include any material, which is composed predominantly of hydrocarbons, such as propane, propylene, butane and butylenes. The gases liquefy under moderate pressure, but convert into a gaseous state upon relief of the pressure. Serious accidents may result from the misuse, abuse, or mishandling of compressed gas cylinders. Persons handling cylinders under pressure should be properly trained and follow all company policies and procedures relating to compressed gases.

SAFE HANDLING/USE OF CYLINDERS

1. Use cylinders, particularly those containing liquefied gases and acetylene, in an upright position and secure them against accidentally being knocked over.
2. Unless a recess in the head protects the cylinder valve, keep the metal cap in place to protect the valve when the cylinder is not connected for use.
3. Make sure the threads on a regulator or union correspond to those on the cylinder valve outlet.
4. Open cylinder valves slowly. A cylinder not provided with a hand wheel valve should be opened with a spindle key or a special wrench or other tool provided or approved by the gas supplier.
5. Do not use a cylinder of compressed gas without a pressure-reducing regulator attached to the cylinder valve, except where cylinders are

attached to a manifold, in which case the regulator will be attached to the manifold header.

6. Before making connection to a cylinder valve outlet, "crack" the valve for an instant to clear the opening of particles of dust or dirt.
7. Use regulators and pressure gauges only with gases for which they are designed and intended.
8. Unless the cylinder valve has first been closed tightly, do not attempt to stop a leak between the cylinder and the regulator by tightening the union nut.
9. Fuel gas cylinders in which leaks occur should be taken out of use immediately.
10. Do not permit sparks, molten metal, electrical circuits or currents, excessive heat, or flames to come into contact with the cylinder or attachments.
11. Never use oil or grease as a lubricant on valves or attachments of oxygen cylinders.
12. Never use oxygen as a substitute for compressed air in pneumatic tools, in oil pre-heating burners, to start internal combustion engines or to dust clothing. Use it only for the purpose intended.
13. Never bring cylinders into tanks or unventilated room or other close quarters.
14. Do not attempt to mix gases in a compressed gas cylinder to use it for purposes other than those intended by the supplier.
15. Before a regulator is removed from a cylinder valve, close the cylinder valve and release the gas from the regulator.
- 16.

Remember that compressed gas cylinders are difficult to handle. They are heavy, smooth, and hard to grip securely. The valves on the cylinders are easily damaged.

Handling and Storage of Cylinders:

1. Only accept cylinders with the approved markings.
2. Never accept cylinders without a valve protection cap.

3. Always transport cylinders by means of a hand truck or other mechanical means.
4. If absolutely necessary to move them by hand, roll them on the bottom edge, never drag them.
5. Do not drop cylinders or allow them to strike each other.
6. Always store cylinders secured in the upright position.
7. When a cylinder is empty, mark it to identify that it is empty, close the valve, and replace the valve protection cap.

When in doubt, always consider cylinders to be full and handle them accordingly. Many accidents occur when containers under partial pressure are thought to be empty. Treat cylinders gently. They may seem solid and strong; but if a cylinder is ruptured it can become an extremely dangerous projectile propelled at high speeds causing severe damage to anyone, or anything, in its path. If a cylinder is ruptured or leaking follow these safety procedures:

Take the cylinder outside as quickly as possible.

1. Place the cylinder as far away from flames or sparks as possible.
2. Notify a supervisor. Post warning signs.
3. It is usually safer to open the release valve a little to let out the compressed gas gradually.

Oxygen Cylinders - Pure oxygen is much more flammable than the air we breathe. It is even possible to start a fire using pure oxygen where no spark or embers exist, especially if the oxygen comes into contact with oily materials. When handling cylinders containing oxygen, **NEVER** use oil or grease to lubricate valves. **NEVER** handle with oily hands, gloves or clothing. **NEVER** store oxygen cylinders near cylinders containing flammable gas. **NEVER** attempt to use oxygen for compressed air.

HOW TO PROPERLY USE COMPRESSED GAS CYLINDERS

Oxygen is a common gas supplied in cylinders. The usual size for welding contains 244 cubic feet of oxygen under pressure of 2200 pounds per square inch, which is a lot of pressure. A protective cap is supplied with each cylinder, to protect the valve when the cylinder is not connected for use.

Acetylene for welding and cutting is usually supplied in cylinders having a capacity up to about 300 cubic feet of dissolved acetylene under pressure of 250 pounds per square inch. Acetylene cylinders should be completely filled with an approved porous material impregnated with acetone, the solvent for acetylene. Since acetylene is highly soluble in acetone at cylinder filling pressure, large quantities of acetylene can be stored in comparatively small cylinders at relatively low pressure.

Acetylene and oxygen are combined in welding operations, as acetylene burned with oxygen can produce a higher flame temperature of approximately 6,000 degrees Fahrenheit than any other gas used commercially. The hazard appears to be quite high, considering the flammable limits of acetylene, which range from 2.5 percent to 81 percent acetylene in air.

When handling or using any compressed gas cylinder, extreme caution is the basic safety rule.

LP gas is another compressed gas stored in approved cylinders. Liquefied Petroleum gases include any material, which is composed predominantly of hydrocarbons, such as propane, propylene, butane and butylenes. The gases liquefy under moderate pressure, but convert into a gaseous state upon relief of the pressure. Containers have special approval markings and pressure relief valves for safety. LP Gas is quite flammable and must be handled with extreme care.

This program is designed to explain some of the more important safety features of gas cylinders.

1. Use cylinders, particularly those containing liquefied gases and acetylene, in an upright position and secure them against accidentally being knocked over.
2. Unless a recess in the head protects the cylinder valve, keep the metal cap in place to protect the valve when the cylinder is not connected for use. A blow on an unprotected valve might cause gas under high pressure to escape.
3. Make sure the threads on a regulator or union correspond to those on the cylinder valve outlet. Do not force connections that do not fit.
4. Open cylinder valves slowly. A cylinder not provided with a hand wheel valve should be opened with a spindle key or a special wrench or other tool provided or approved by the gas supplier.
5. Do not use a cylinder of compressed gas without a pressure-reducing regulator attached to the cylinder valve, except where cylinders are attached to a manifold, in which case the regulator will be attached to the manifold header.
6. Before making connection to a cylinder valve outlet, "crack" the valve for an instant to clear the opening of particles of dust or dirt. (When we say "crack the valve", this means opening it very little, so a small portion of gas escapes). Always point the valve and opening away from the body and not toward anyone else. Never crack a fuel gas cylinder valve near other welding work or near sparks, open flames or other possible sources of ignition.
7. Use regulators and pressure gauges only with gases for which they are designed and intended. Do not attempt to repair or alter cylinders, valves or attachments. Only the manufacturer should do this work.

8. Unless the cylinder valve has first been closed tightly, do not attempt to stop a leak between the cylinder and the regulator by tightening the union nut.

9. Fuel gas cylinders in which leaks occur should be take out of use immediately and handled as follows:

Close the valve and take the cylinder outdoors well away from any source of ignition. Properly tag the cylinder, and notify the supplier. A regulator attached to the valve may be used temporarily to stop a leak through the valve seat.



If the leak occurs at a fuse plug, take the cylinder outdoors, away from possible sources of ignition and open the cylinder valve slightly, allowing the gas to escape slowly. Plainly tag the cylinder to warn others. Keep the area free of visitors or from any source of ignition. Notify the gas supplier and follow the supplier's recommendations. It would be a good idea to also notify your local fire department.

10. Do not permit sparks, molten metal, electrical circuits or currents, excessive heat, or flames to come into contact with the cylinder or attachments.

11. Never use oil or grease as a lubricant on valves or attachments of oxygen cylinders. KEEP OXYGEN AND FITTINGS AWAY FROM OIL AND GREASE AND DO NOT HANDLE SUCH CYLINDERS OR APPARATUS WITH OILY HANDS, GLOVES OR CLOTHING.

12. Never use oxygen as a substitute for compressed air in pneumatic tools, in oil pre-heating burners, to start internal combustion engines or to dust clothing. Use it only for the purpose intended.

13. Never bring cylinders into tanks or unventilated room or other close quarters.
14. Do not attempt to mix gases in a compressed gas cylinder to use it for purposes other than those intended by the supplier.
15. Before a regulator is removed from a cylinder valve, close the cylinder valve and release the gas from the regulator.

These are the basics of using compressed gas cylinders. For those persons using manifold systems and regulators, more training is required. Each organization has safety rules, procedures, and policies relating to the use of compressed gas cylinders. It's up to each and every employee to know, understand, and follow your company's rules and procedures.

OFFICE SAFETY/VIDEO DISPLAY TERMINALS FOR COMPUTER OPERATORS

Do you work with a computer? A video display terminal? Well if you do you're not alone, there are more than 115 million Video Display Terminals in use in the United States and Canada today. Ok, have you ever thought about Video Display Terminal safety? Do you know the hazards involved?

There are hazards involved in working with Video Display Terminals. You may not even realize it, but working every day at your terminal can be causing physical problems if you don't do it correctly.

Let's take a look at some basics.

1. **Back aches, neck fatigue and shoulder/arm pain.**

These discomforts are usually caused when the operator's workstation doesn't fit the operator correctly. For example, let's say that the chair is too high. You'll have to bend too far forward to see the Video Display Terminal screen properly. This can cause muscle aches



in the back, neck, shoulders and arms. Working in this position for extended periods of time can lead to numbness, stiffness or even muscle damage. Incorrect posture generally leads to back and neck pain.

2. **Hand, wrist and finger injuries.**

These are the second, and perhaps most common Video Display Terminal related injuries. Generally, muscle, nerves and tendon injuries to the hands and wrists can be directly linked to one of two causes, either improper height of the keyboard, or much of the same repetitive movements done by the Video Display Terminal operator day after day.

3. **Headaches, eyestrain, blurred vision and dizziness.**

The Video Display Terminal screen itself causes all of these problems. A screen that is too high or too low, or even tilted at the wrong angle can cause eye fatigue. Also, a screen that is too dark or does not have enough contrast will cause eyestrain, headaches and even dizziness. Most screens will have a brightness control.

4. **Radiation.** Although some computer screens do emit some electromagnetic radiation, just as your home TV set, studies by the National Institute for Occupational Safety and Health have revealed there is no cause for alarm from video display terminals.

So what can you do to work safer with more comfort? Well, the first and most important thing that you can do to prevent the injuries we've just mentioned is to properly 'fit' your workstation. The easiest way to do this is to have your workstation fit your body:

5. **Your chair.** Your work chair should be adjustable and comfortable. The adjustments that you'll have to make usually depend on your body size. If you are 6'2" you'll have a different chair height than someone who is 5'4".

Your chair should have an adjustable seat height of approximately 16 to 21 inches. Always adjust the seat for the position that is most comfortable for you. If you share a workstation, be sure to re-adjust the chair for you comfort. Don't be uncomfortable! Make sure the chair will give your back the support it needs. A well-cushioned chair with a lumbar support is an excellent idea. If a chair does not have a lumbar support or cannot be adjusted to your height - don't use it! You'll only be straining your back and neck! Ask your supervisor for another chair.

6. **Your desk and keyboard area.**

Your desk should be roomy enough for your Video Display Terminal, keyboard, computer, document holder, etc. A good desk or table will be tall enough to allow a minimum of one inch between you knee and the underside of the table. If you have more than one inch of space between your knees and the table, you may need a footrest. A table or desk that is somewhere between 23 and 28 inches tall at the tabletop is good. Your keyboard should also adjust to fit your specifications. The angle or slope of the keyboard should be adjustable so that it feels comfortable to you. You may want to use a wrist rest pad, like the one shown here.

7. **The Video Display Terminal screen.** Your screen should be just below eye level, and should be properly angled for easiest viewing, somewhere between 16 and 20 degrees. If the screen isn't high enough you can raise it up with an old telephone book or two! Be sure to keep the screen clean at all times, remember, looking at a dirty screen is looking through a dirty pair of glasses! Try not to position your Video Display Terminal screen too close to a window; you don't want to have any unnecessary glare. Now that we've properly adjusted and angled all of the fixtures and workstation furniture, it's time

to properly align the Video Display Terminal operator. Don't forget that you are the last and most important part of the equation; you have to fit properly as well!

8. Sit straight in your chair. Keep your back flat against your chair, that way you can properly support your lumbar region. Don't slouch! When you slouch over, such as in the 'praying mantis' position, you're staining your whole body!
9. Keep your upper legs parallel to the floor and keep your feet flat on the floor. If you can't reach the floor with your feet, get a footrest or re-adjust your chair.
10. Keep your elbows as high as the "home" key row. If you're sitting back in your chair and have your feet on the floor, your elbows should line up properly. Once your elbows are lined up with the "home" row, then your wrists and lower arms will be in the correct position as well.
11. Keep your head bent slightly downward, but don't be a chin-to-chest person!
12. Keep far enough away from the screen. Remember when you were reminded not to sit too close to the TV? The same thing applies with your Video Display Terminal. Try to be 20 to 26 inches away from the screen.
13. Adjust, adjust, and adjust. If you've done everything we've mentioned and still you aren't comfortable, then go back and begin the re-adjusting process. Move your chair up and down, adjust your table height, or re-angle your screen. Remember to make everything fit your specifications. You're the only one who can tell when you're comfortable!
14. Keep your computer happy! Don't allow extra papers, books and files to pile up around your computer.

15. The cooling fan needs to have access to air in order to keep your computer from overheating. Also keep coffee and other liquids away from your computer and monitor.
16. Be sure to take a break from your Video Display Terminal frequently. Take scheduled breaks or try to vary your tasks. Remember that you have to change positions every now and then. Get up and stretch, and when you return to your Video Display Terminal workstation, make sure that you follow the guidelines we've discussed in this program. Think about Video Display Terminal safety, and then act upon it. You'll find that you'll not only have fewer chances for injury, but you'll be more comfortable, productive and effective.



LANDSCAPE MAINTENANCE PERSONNEL

As landscape professionals, you have a number of responsibilities maintaining parks, highways, and other areas that provide enjoyment for a large number of people, as well as the responsibility of fire safety of these areas.

The equipment, chemicals and techniques you use can be hazardous, but being aware of the hazards and taking action to prevent accidents is what safety is all about. It's called "safety awareness." Safety is something everyone talks about, but how do you become an accident-free employee? It takes a conscious effort on your part to think safety before you decide to perform any job. Let's begin by how to properly dress for work. Always follow your company's procedures. Generally it's recommended you wear long pants, to provide some degree of skin protection from tree branches, flying objects and other hazards. Don't wear rings or bracelets, as

these items can get caught in the equipment or moving parts and cause a rather nasty accident. Eye and hearing protection are basic items that are required.



Tennis shoes should not be worn. Tennis shoes are very comfortable but they do not offer any protection from cuts, scratches, chemical spills or any other protection. Leather-topped shoes that are in serviceable condition should be worn. You may also be required to wear respiratory protection when working with chemicals, pesticides, herbicides or other types of hazardous materials. When personal protective equipment is provided, it must be worn! Let's review some equipment considerations, specifically mowers.

Never begin a day without following your company's policy for equipment maintenance. Depending upon the equipment used, your daily maintenance may include checking the oil, water, and fluid levels of the equipment. Belts for pulleys take a lot of wear and tear and should be checked daily for cracks or breaks and to make sure they are positioned properly on the equipment pulleys. When belts begin to stretch from use, it's time to replace them. You can see the difference between a new belt and a stretched belt. Check these daily.

If the equipment cuts, the blades or cutting edges must be sharp to do a good job. Dull cutting edges are also safety hazards. Be sure to check all safety devices on the equipment. Missing guards or other safety devices can result in accidents. Look under the equipment for wires or other items that may have jammed the blades or pulleys.

OK, on power equipment. There are some important safety considerations to follow. First, never refuel a hot motor. Allow it to cool before refueling. Keep a fire extinguisher close by just in case a fire starts. Use only an approved safety can for flammable liquids. An approved container is one that has a spring-loaded lid to prevent spills and it has a flame arrestor on the inside of the can. There are millions of **unapproved** gas cans, which can be purchased anywhere.

The unapproved gas can is extremely dangerous because it has not flame arrestor. If you were using this can and a spark or some source of ignition caused the gas to burn, the flame would go into the can and build up pressure and then explode. An almost empty can is more dangerous than a full container. Never use a flammable container that doesn't have a flame arrestor on the inside of the container. Another important consideration is a metal funnel. A metal funnel serves two purposes. One is to prevent fuel spills and second, to bond the container to the metal fuel spout on your equipment.

In addition to mowers, string trimmers are very useful in trimming grass, weeds and brush in hard to reach areas and places powers cannot reach. String trimmers also cause many injuries every year.



Eye injuries are the most common, so eye protection is essential. Full-face shields, such as the type shown here are recommended due to the flying dirt, stones and debris made by trimmers. The trimmers make a lot of noise so hearing protection is also mandatory.

Trimmers require daily maintenance also. Fuel, oil and other fluid levels must be checked as required. Be sure you know the proper mix of fuel and oil if your trimmer requires oil in the fuel system.

Check to make sure the guards are in place and never remove them. Check to see if the recommended trimming line is on the spool or you have replacement spools with you on the job. When starting the trimmer, be sure no one is nearby and holding the trimmer with the trimming spool near the ground. Also, when you work on steep slopes such as seen here, leather-topped shoes provide better support and may prevent an ankle strain. Don't forget about the possibility of snakes. In many areas of the country, snakes are a potential hazard, so be on the lookout for snakes in brush, high grass or other areas.

Your job may require the use of chemicals, herbicides, fertilizers, vegetation killers and a variety of other chemicals. Carefully follow the directions on the chemical label. Your employer maintains a list of material safety data sheets on all the chemicals used.

HOUSEKEEPING SAFETY

Housekeeping in a hotel/motel environment is an important and responsible position. It takes a lot of hard work to meet your schedules, but that's what our business is all about---providing service to guests. Your work in housekeeping requires you to make use of many different tools, equipment and have course, a variety of chemicals. This program is about safety. Your



safety and the safety of others. We certainly can't list all the safety rules and procedures needed to prevent accidents, but we would like to review some important points about housekeeping safety.

The very first rule is to follow your department's policies and procedures. Ammonia is a good cleaner, so are chlorine products. If both are good, shouldn't they be better mixed together? Ammonia, when mixed with chlorine products, can form a very toxic combination of gas called chloramine. Chloramine can be fatal. That's just one reason why following policies and procedures are extremely important.

Certainly, everyone knows how to lift safely. You lift at work, at home and everywhere in between. You've seen people picking up boxes safely by bending their legs and keeping their back straight. You've also heard it many times; bend your legs, not your back. That's good advice, but you don't always have a nice box to lift. There are probably hundreds of jobs you perform where you can't always bend your legs, so let's quickly review some information, so you'll understand how your back works, then you can adapt your lifting technique to any situation. Your back is composed of bones, discs and nerves. The discs act as shock absorbers and prevent the bones from pinching nerves. The main point to remember is the discs. These discs are delicate and look like soft hockey pucks. You can also compare them to a jelly donut. They have fluid in them and if they're damaged, the fluid leaks out, causing the bones to come closer together and then the nerves can become pinched. If you don't take care of your discs, they'll wear out. Every time you bend your back, you're putting tremendous pressure on one part of side of the discs. The idea of keeping your back straight is to have the pressure spread evenly across the surface of the disc and not only on one side of the disc. Ok, with the disc on your mind, let's mention ligaments.

These basically support your back and when you stretch or twist, these tissues can tear and cause back pain. That's why you're asked not to stretch and twist. Ligaments can tear and discs can be damaged. How about those awkward positions that have a tendency to give you back problems?

A good example is the auto mechanic trying to install a battery in an automobile. Can't bend your legs and get the job done. The correct method is to use your legs against the fender, to provide some support for your back.

What about broken glass or razor blades? Never pick up glass or razor blades with your hands. That's a job for a dustpan and small broom. Due to the risk of AIDS, you should always pay particular attention to any object with blood on it. Always wear rubber gloves when removing or cleaning anything with blood on it. It's like reaching into a waste can with your hands. You never know what's in there. Never put unprotected hands into wastebaskets. You need to know and follow housekeeping procedures to protect yourself and guests. As safety inspectors, there are a few more items to look for, such as broken or leaky faucets, defective handles, grab bars, soap dishes and don't forget about toilet seats that may have become loose at the hinges. Safety is all these things and more, but the only person who can make safety happen is YOU. Taking the responsibility to work and act safely... that's what safety is all about. You make a big difference in safety, at work, at home and everywhere.

LAUNDRY ROOM SAFETY BASICS

Safety is everyone's responsibility. Regardless of what part of the facility you work in. The laundry facility is no different.

There are potential safety hazards and concerns that you need to be aware of.



Everybody wants and deserves a safe and accident free work environment but it takes teamwork and paying attention to safety to reach this goal. Regardless of how busy you are, you cannot afford to disregard safety rules. They're there for *your* protection.

You may notice a safety hazard in your workplace and think it's no big deal because someone else will report it. Not true. It's your responsibility to report hazards immediately to your supervisor so corrective action may be taken *before* an accident or injury occurs.

Chemicals are a vital part of any laundry operation. Without them we couldn't clean the clothes. But with them, we need to take precautions. If you follow these precautions, the chemicals you work with are safe. But you may need to wear personal protective equipment such as gloves in order to ensure your safety. How do you know what kind of protection is required for each chemical?

The answer is Material safety Data Sheets or MSDS. The MSDS contains all the information you need to know about any chemical you work with such as Ingredients, Hazards, First Aid, Personal Protective equipment and more. If you're unsure about a chemical ask your supervisor for the MSDS. You can never be too safe or too informed about the chemicals that you work with.

Another important safety consideration is proper ventilation. There is a lot of heat and humidity in the laundry room and without proper ventilation mold and mildew can accumulate. Ventilation also keeps the heat down and makes your facility a more comfortable place to work.

We couldn't possibly cover every safety hazard you may encounter on the job. That's why it's up to you to pay attention to safety and do your part to reduce accidents and injuries. You work in the facility every day and no one knows your job better than you. The training you've received should help you perform your job in a safe manner. But it's really up to you. Obey all posted warning signs. Read and follow all instructions on chemical labels and MSDS sheets. Lift safely. Report hazardous conditions to your supervisor so they can be corrected. But most of all use your common sense and good judgment and make yourself personally responsible for a safe and accident free workplace. Take pride in your job and in safety. Nobody can do it for you.

