Ladder Safety Training





University of Chicago Reference Telephone Numbers

Emerg	ency
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Police, Fire, and Ambulance Assistance

Medical Center Environmental Services 773-702-6296

from any University phone.....123

from any Non-University phone......773-702-8181

General Information							
	elephone #	<u>Location</u> Chicago Lying-in Hospital L156, 5815 Maryland Avenue					
Mitchell Emergency Room 24 Hours	773-702-6250	Mitchell Hospital First Floor 901 East 58 th Street					
Medical Center Public Safety	773-702-6262 (24 HR) Main Office 773-702-3010	Albert Merritt Billings M016 5841 South Maryland Avenue					
	770 700 000	04st 1.D 1.055					
University of Chicago Environmental Health and Safety 8:00 a.m 4:30 p.m. (24 Hour On-Call Of	773-702-9999 fficer)	61 st and Drexel Office Building Suite 219 6054 South Drexel Avenue					
University of Chicago Medical Center Safety Office (24 Hour On-Call Officer)	773-702-1733	American School Second Floor, Suite 200 850 E. 59 th Street					
University of Chicago Radiation Safety Office 8:30 a.m 5:00 p.m. (24 Hour On-Call Health Physicist)	773-702-6299	Albert Merritt Billings Hospital M031A 5841 South Maryland Avenue					
Biological Safety Office	773-834-2707 (Main) 773-834-6756	Abbott Memorial Hall 947 E. 58 th St. Room 120					
Facilities Services Work Center	773-834-1414	Young Building Basement 5555 S. Ellis					
Medical Center Physical Plant	773-702-6295	Albert Merritt Billings M41 5841 South Maryland Avenue					

Albert Merritt Billings

5841 South Maryland Avenue

WB050

Ladder Safety Training

Environmental Health and Safety

Purpose:

To ensure that all employees are aware of the hazards and uses associated with industrial stairways, ladders and portable ladders used in the workplace.

Application:

Ladder Safety Training applies to all employees whose job classifications may involve duties requiring them to perform operations with industrial stairways, ladders and portable ladders.

Terminal Objective:

After instruction, employees will be able to recognize and avoid the hazards associated with industrial stairways, ladders and portable ladders, understand the inspection and maintenance requirements, and understand the procedures for medical assistance and reporting injuries.

Performance Objectives:

I. The OSHA Standard (29 CFR 1910.24-27, 29)

- Recognize the main requirements of OSHA's standard
- Identify the main components of the University of Chicago's Temporary Stairways, Ladders and Portable Ladders Program, Section 3.16 of the University Safety Manual

II. Ladder-Related Injury Statistics

- Understand the seriousness and consequences of ladder-related injuries
- Identify the common causes of ladder-related injuries

III. Industrial Stairways

- Define industrial stairways
- Identify common hazards associated with industrial stairways
- Identify safety requirements/guidelines for industrial stairways

IV. Fixed Ladders

- Define fixed ladders
- Identify common hazards associated with fixed ladders
- Identify safety devices required for fixed ladders

V. Portable Ladders

- Define types, ratings and materials of portable ladders
- Identify common hazards associated with portable ladders
- Identify safe work practices when working with portable ladders

Environmental Health and Safety

VI. Inspection and Maintenance

- Identify responsible party for inspecting ladders
- Identify defects commonly found during inspection and maintenance
- Understand what to do if a ladder is found defective

VII. Employees Injured on the Job

- Identify the procedure for reporting injuries
- Identify the procedure for obtaining medical assistance, when needed
- Identify the follow-up procedures for supervisors

VIII.Training Requirements

- Understand training requirements
- Identify the frequency of training

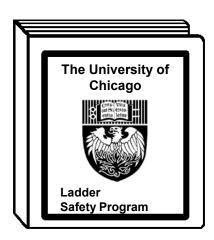
Environmental Health and Safety Issued: August 13, 2005 Revised: February 16, 2009

Industrial Stairways, Ladders and Portable Ladders Program Federal Standard 29 CFR 1910.24-27

Requirements

The requirements for this standard are mandated by the Occupational Safety and Health Administration (OSHA). The requirements apply to the types, use, inspection and maintenance of industrial stairways and ladders. When the employee uses industrial stairways or ladders in the workplace, the employer shall provide an educational program to familiarize employees with the hazards and shall train each employee in the procedures to be followed to minimize these hazards. The employer shall provide initial training and retraining when deemed necessary.

University of Chicago's Temporary Stairways, Ladders and Portable Ladders Program, Section 3.16 of the University's Safety Manual



Policy Contents:

- Policy
- Authority and Responsibility
- Egress and Access Requirements
- Stairways
- Stair rails and Handrails
- Ladders
- Safety Practices When Using Ladders
- Cages, Wells and Safety Devices for Fixed Ladders
- Inspection
- Training

Location

Environmental Health and Safety is located at:

 61st and Drexel Office Building 6054 South Drexel - 2nd Floor Phone: 702-9999

 Website Address http://safety.uchicago.edu/ University of Chicago Medical Center Safety Office is located at:

 American School Second Floor, Suite 200 850 E. 59th Street Phone: 702-1733 (5-SAFE)

Website Addresshttp://home.uchospitals.edu/policies/

Ladder-Related Injury Statistics

Ladder-Related Injuries Are Climbing!

You risk falling if ladders are not safely positioned each time they are used. While you are on a ladder, it may move and slip from its supports. You can also lose your balance while getting on or off an unsteady ladder. Falls from ladders can cause injuries ranging from sprains to death. Falls are the leading cause of death in the construction industry and account for one-third of all deaths in the construction industry.

According to the U.S. Consumer Product Safety Commission, Ladder-related injuries account for about 150 deaths and send 180,000 people to the ER each year, many serious enough to require hospitalization.

The following case report of a fall investigated by OSHA illustrates how seemingly innocent workplace activities can have deadly consequences:

An employee was climbing a 10 foot ladder to access a landing which was 9 feet above the adjacent floor. The ladder slid down, and the employee fell to the floor, sustaining fatal injuries. Although the ladder had slip-resistant feet, it was not secured, and the railings did not extend 3 feet above the landing.

FOLLOW THE RULES TO STAY SAFE.

FALLS FROM LADDERS CAN BE SERIOUS.

Environmental Health and Safety

Industrial Stairways

Definition

A series of steps leading from one level or floor to another, or leading to platforms, machines and other equipment that are used more or less continuously or routinely by employees. A series of steps and landing having three or more risers constitutes stairs or a stairway.

Common Hazards Associated with Industrial Stairways

Industrial stairways are similar to stairwells found in the home but are installed around machines and equipment. Sometimes employees do not realize there are many hazards associated with them. Some of the most common causes of accidents are:

- Cluttered stairs;
- Improper slip-resistant treads;
- Inadequate lighting; and
- Running up/down stairs.



Safety Requirements and Guidelines

When using an industrial stairway always remember to be aware of your surroundings. Always use the handrails when traveling up or down on industrial stairways.

Safety Requirements



- Stairway tread shall be slip-resistant;
- Railings are required on exposed stairways; and
- Stairways shall provide landings for a resting place.

Safety Guidelines

- Do not use stairways that do not have sufficient lighting;
- Take your time when using industrial stairways;
- Use handrails to help maintain balance and control; and
- Never store tools or materials on industrial stairways.



Fixed Ladders

Definition

A fixed ladder is a ladder that cannot be moved or carried because it is an integral part of a building or structure.

Common Hazards Associated with Fixed Ladders

Some of the most common causes of accidents with fixed ladders are:

- Grease, heavy rust or ice on rungs or rails;
- Places without plenty of clearance (e.g., pipeline);
- Improper toe clearance behind rungs; and
- Poorly secured to the structure.

Safety Devices for Fixed Ladders

All fixed ladders over twenty-four (24) feet in length shall have a safety device. These devices help protect employees when climbing fixed ladders. Some examples of safety devices are:

- Cages Guards fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space;
- Wells A permanent guard which forms a complete enclosure around a fixed ladder; and
- Fall Protection Lanyards and harnesses used together to prevent an employee from falling.



Note: Check for ice accumulation before climbing during freezing weather.

Portable Ladders

Types and Ratings of Portable Ladders

Portable ladders come in many different types and ratings. It is important to know each type and rating so that the correct ladder can be chosen for the specific job.

Types

- Stepladders Ladders that stand alone, have hinges and are not adjustable.
- Extension Ladders Adjustable in length, has two or more sections and do not stand by themselves.

Ratings

- Type III Light duty ladder capable of 200 pounds for household use.
- Type II Medium-duty ladder capable of 225 pounds for commercial use.
- Type I Heavy-duty ladder capable of 250 pounds for industrial use.
- Type IA Extra-heavy duty ladder capable of 300 pounds for industrial use.

Note: The weight limit the ladder is capable of holding is the total amount of weight which includes the weight of the employee plus any weight of materials and tools.

Materials

Portable ladders are constructed of three materials. The following chart gives the advantages and disadvantages of each type of material.

Material	Advantages	Disadvantages			
Wood	Non-Conductive Low-Price Range	Heavy, Wobbly Inconsistent Load Rating Splinters			
Aluminum	Light, Mid-Price Range	Conductive, Wobbly			
Fiberglass	Mid-Weight Non-Conductive Sturdy	High Price Range			

Warning: Use fiberglass ladders when working near electrical hazards.

Common Hazards Associated with Portable Ladders

Portable ladders have the potential to bring many hazards to the workplace. Following safe work practices will help eliminate the hazards that portable ladders pose.

Safe Work Practices When Working with Portable Ladders

To eliminate the potential of accidents from the use of portable ladders, an employee shall remember to:

- Set up portable ladders on even ground;
- Use two hands for climbing;
- Never stretch to reach for something, move the ladder to a closer position; and
- Follow all instructions and warning given by the manufacturer.

Setup and Use of Portable Ladders

The proper setup and use of portable ladders will help eliminate the risk of injuries that occur. Employees shy follow these guidelines for stepladders and extension ladders to avoid accidents.

Stepladders

The following guidelines apply to stepladders:

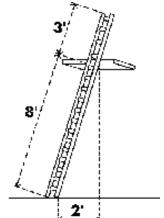
- Stepladders over 20 feet are prohibited;
- Never use as straight ladders, set up properly on even ground;
- Climb only on rung side, one rung at a time;
- Only one person on the ladder at a time;
- Spread the hinges so they are in the locked position; and
- Do not work from the top two rungs.

Note: Stepladders are actually less height than listed, they are measured in the folded position.

Extension Ladders

The following guidelines apply to extension ladders:

- Position the extension ladder with assistance of co-worker;
- Do not position in front of a door or on a window. If you are working in front of a door that opens toward the ladder, block the door, lock, have a co-worker guard it, barricade it or rope off the area;
- Raise extension ladders with the assistance of a co-worker;
- Ensure the extension ladder has the proper overlap:
 - 32 feet ladders shall have three feet of overlap;
 - 36 feet ladders shall have four feet of overlap;
 - 48 feet ladders shall have five feet of overlap;
 - Ladders over 48 ladders shall have six feet of overlap;
- Work with the ladder at least three rungs above the working surface;
- Remember the \(\frac{1}{4} \) rule:
 - For every foot of elevation the ladder goes up, the base of the ladder shall be pulled away from the structure ¼ of that distance:
- Have a co-worker hold ladder while climbing;



Environmental Health and Safety

- Only one person on the ladder at a time;
- Face towards the ladder when climbing, never face to the side or backways;
- Use a rope, belt or pocket to carry tools up and down the ladder not your hands;
- Tie the ladder off to the structure to help secure the ladder;
- Do not place on an unstable base (e.g., barrel, box) to gain additional height;
- Never reposition yourself while working on the ladder; and
- Do not work from top four rungs.

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Inspection and Maintenance

Responsibility

Inspection and maintenance on ladders will help reduce the possibility of having an accident. It is the responsibility of the department to inspect all ladders on a semi-annual basis or after any incident occurs that could affect their safe use.

Common Defects Found During Ladder Inspections

Some common defects found during ladder inspections include, but are not limited to, the following:

- Broken rungs;
- Missing rungs, cleats or steps;
- Broken or split rails;
- Frayed ropes; and
- Corroded components.

Tagging a Defective Ladder

If a ladder is found to be defective during an inspection, an employee shall:

- Tag the ladder with a "Do Not Use" or "Defective Equipment" tag;
- Contact a contractor to certify that the portable or fixed ladder meets original specifications after all repairs to the ladder have been made;
- Block fixed ladders with a plywood attachment that spans several rungs to prevent use until ladder is rendered fixed; or
- Dispose of permanently by cutting the ladder up so it cannot be used anymore.

Note: Do not attempt to fix a ladder if the manufacture states that the ladder cannot be fixed.

Ladder Inspection Checklist

When inspecting a ladder, use the Ladder Inspection Checklist and forward a copy to Environmental Health and Safety upon completion. *Note:* Painting ladders may conceal defects, therefore it is prohibited.





Ladder Inspection Checklist *Environmental Health and Safety*

Instructions: Complete this form while conducting the inspection and provide the completed form to your supervisor for necessary action. All forms shall be sent to Environmental Health and Safety.

INSPECTION	DESCRIPTION						
Date of Inspection:	Type: () Extension () Step () Fixed						
Person Performing Inspection:	Construction: () Wood () Metal () Fiberglass						
Department/Shop:	Identification	on Number:					
CHECKLIST	Yes	No	Comments				
Are rungs, cleats or steps intact and free from damage?							
2. Are rails free from cracks or splitting?							
3. Is the ladder free from the accumulation of oil, grease or other materials that may create a slipping hazard?							
4. Is the ladder free from protruding objects that could cause injury?							
5. If ladder is equipped with safety device, is the device secured and operating properly on the ladder?							
6. If ladder is equipped with locking device, is the service intact and functional?							
7. If ladder is equipped with cages, are cages intact and free from broken welds?							
8. Is the ladder fee from any other defects that may impair its safe usage?							
Date ladder was repaired and returned to service: Attach documentation from company certifying repair.							
Inspector's Signature:			Date:				

Revised: February 16, 2009

Accidents and Incidents

Reporting Injuries

Knowing what to do and who to contact in the event of an accident or injury can make it easier to get medical treatment and aid in the prevention of similar accidents.

Employees Injured on the Job

If you are a University of Chicago employee and you are injured while working on the job:

- Report the accident/injury to your Supervisor or HR Administrator immediately.
- Your Supervisor or HR Administrator will complete a "Request for Evaluation and Treatment - Work Related Illness or Injury WC Form 100" and the "Supervisor's First Report - Workers' Compensation Claim of Injury/Illness."
- Your Supervisor or HR Administrator will provide you an "Employee Statement of Injury or Illness -Workers' Compensation" to complete.
- Take the original copies of the three forms and seek medical treatment at the University
 of Chicago's Department of Occupational Medicine (UCOM) or the Adult ER at Mitchell
 Hospital depending on the time or nature of the accident or injury.
- Always use the "buddy system" when obtaining medical attention by having someone escort you to receive medical treatment.
- If you or another employee cannot escort yourself to UCOM or the Adult ER at Mitchell Hospital due to the extent of your injury, dial 123 or 702-8181 (University Police) to request an ambulance.

NOTE: There are other forms you may be required to complete during or following your medical evaluation and treatment.



• UNIVERSITY OF CHICAGO OCCUPATIONAL MEDICINE (UCOM)

Location: Chicago Lying-In Hospital, 5815 South Maryland Avenue, L156

Phone Number: 702-6757

Hours: 7:15 a.m. - 4:00 p.m. M-F



ADULT EMERGENCY ROOM

Location: Bernard Mitchell Hospital, 901 East 58th Street

Phone Number: 702-6250 Hours: Open 24 hours

Off-Site Employees Injured on the Job

If you are a University of Chicago employee and are working at a satellite location and are injured while working on the job:

- Report the accident or injury to your Supervisor or HR Administrator immediately.
- Your Supervisor or HR Administrator will complete a "Request for Evaluation and Treatment - Work Related Illness or Injury WC Form 100" and the "Supervisor's First Report - Workers' Compensation Claim of Injury/Illness."
- Your Supervisor or HR Administrator will provide you an "Employee Statement of Injury or Illness - Workers' Compensation" to complete.
- Take the original copies of the three forms and seek medical treatment at the nearest ER.
- Always use the "buddy system" when obtaining medical attention by having someone escort you to receive medical treatment.
- If you or another employee cannot escort yourself to the nearest emergency room due to the extent of your injury, contact the local emergency care provider and request an ambulance.
- Inform the ER that it is a work related accident and you are an employee at the University of Chicago so the facility bills the University of Chicago.
- If you receive any bills directly, forward them to HR-Absence Management.

NOTE: There are other forms you may be required to complete during or following your medical evaluation and treatment.

Non-University Personnel

Report all accidents/incidents involving non-university personnel to the University Police at 123 or 702-8181 and Risk Management at 702-3693.

Supervisor or HR Administrator Follow-up

If there is any suspicion of injury or illness, make sure the employee follows the procedures for employees injured on the job. If no medical treatment is required, send the original copies of all the three forms to HR - Absence Management. All forms are available on the HR website located at http://hr.uchicago.edu/forms/benefits.html under Leaves of Absence and Workers' Compensation.

Investigate the accident or incident to determine the cause and initiate any necessary corrective action to rectify the problem. Report your findings to Environmental Health and Safety. If you need assistance conducting this investigation, contact Environmental Health and Safety. HR Management shall forward copies of all WC Form 100's to Environmental Health and Safety for follow-up investigation, as deemed necessary. All corrective actions identified during the investigation shall be the responsibility of the supervisor and associated department.

If an injury or illness involving a student consists of a chemical exposure, needle stick, bloodborne pathogen exposure, or any other safety issue, Student Care Center shall report the injury/illness to Environmental Health and Safety. A safety representative shall evaluate if further investigation is necessary.

Training and Education

Requirements

All employees using or constructing ladders and stairways shall be trained by Environmental Health and Safety to recognize hazards related to ladders and stairways and the proper procedures to use in order to minimize these hazards. Employees who are trained will be able to reduce work related injuries from the use of ladders and industrial stairs.

Frequency

An initial training class shall be provided to all affected employees upon employment and a refresher class every three years.



Glossary

Cages: Guards fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

Double-Cleat Ladder: A ladder with a center rail to allow simultaneous two-way traffic for employees ascending or descending.

Fixed Ladder: A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

Midrails: A rail approximately midway between the guardrail and platform, used when required and secured to the uprights erected along the exposed sides and ends of platforms.

Permanent Structure: A permanent structure can be either a building or permanent fixture, such as a smokestack.

Platform: A working surface for persons, elevated above the surrounding floor or ground such as an extended step or landing breaking a continuous run of stairs.

Point of Access: All areas used by employees for work-related passage from one area or level to another.

Riser Height: The vertical distance from the top of a tread or platform/landing to the top of the next higher tread or platform/landing.

Rungs: Ladder cross-pieces of circular or oval cross-section on which a person may step in ascending or descending.

Stairrail: A vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels.

Stair Tread: The horizontal member of a step.

Stairways: A series of steps and landing having three or more risers constitutes stairs or stairway.

Well: A permanent complete enclosure around a fixed ladder which is attached to the inside walls of the well. Proper clearances for a well provide the person required to climb the ladder the same protection as a cage.

SUPPLEMENTAL **MATERIAL**

Environmental Health and Safety Issued: August 13, 2005 Revised: February 16, 2009

Request for Evaluation and Treatment - Work Related Illness or Injury

PLEASE PRINT

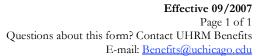
Employee Name:		Date, Time of Injury/Illness:	· · · · · · · · · · · · · · · · · · ·
SSN:	Department:	Phone:	
Brief Description Inju	ury/Illness:		
	nted to <i>University Occupational Medi</i> oyee. Please send a copy of this report		
ι	JHRM-Absence Management (Ing 10	0C) – 956 E 58 th Street – Chicago, II	_ 60637
Dept Supervisor/HR	Administrator: PRINT NAME	SIGNATUR	RE
	occupational Medicine Clinic, Room use the Adult Emergency Room at I		– 4:00 pm Mon – Fri.
	UCOM/ER Repo	ort (or attach report)	
Date, Time of Exa	m:		
Subjective:			
Objective:			Imprest here:
Impression:			
Plan:			
Return to Work/Re	estrictions:		
Ву:			



Supervisor's First Report – Workers' Compensation Claim of Injury/Illness

PLEASE PRINT

Department:	Date Notified of Injury/Illness:
Employee Name	Job Title: Union:
Date Hired to Present Position:	Last Day Worked:
Date of Injury/Illness/Accident:	Time: am/pm M-F Accident: Y / N
Specific Location of Accident: (address, buildin	g name, area in building or grounds):
How did the accident/injury/illness occur:	
What was the employee doing specifically at th	ne time:
Were the activities within the scope, responsible	ilities, duties and course of employment: Y / N
List any equipment or tools being used at the ti	me:
Identify contributing factors, if any at the time: _	
List all injuries, where on the employee's body	or nature of illness:
List witnesses and co-workers present, include	contact information:
First person notified of injury/illness/accident: _	
UC Safety/Environmental Office notified: Y / N	By: Date:
Employee sent for medical attention: Y / N	ER or UCOM Clinic:
Form completed by:	Title:
Signature:	Date:



Date:



Employee Statement of Injury or Illness - Workers' Compensation

PLEASE	PRINT													
Employ	Employee Name:						ss	N:			Today's Date:			
Employ	ee Home	Addre	ss:											
Home I	Phone Nur	mber: ˌ			I	Emerg	gency C	Contact	& Numb	er:				
Departi	ment:			Positi	ion:	Supervisor:								
Date of	Accident,	Injury	/Illness:			Time: Phys			hysical	ysical Location:				
Did you	report the	e accid	dent, inj	ury, illnes	s? YES	NO e one)	D	ate Re	ported: _					
	d you repo													
	m did you													
	ere you do													
vviiat w	ere you u	onig w	nen me	accident	, irijury,	11111688	occuii	ieu.						
What to	ools or equ	ıipmer	nt were	you using	at the t	ime?								
Describ	e the acci	dent a	ınd injur	ry/illness:										
Select	the area(s) wher	e there		ry; the ty	/pe of	injury;	and, in	dicate riç	ght, left	, front o			
		Eye	Face/ Head	Shoulder	Chest/ Ribs	Arm	Wrist	Hand	Fingers	Back	Leg	Knee	Foot/ Toes	
	Burn													
	Bruise													
	Cut													
	Gash													
	Rash													
	Scrape													
	Scratch													
	Sprain													
	Fracture													