UNGER
CONSTRUCTION CO.

Proof of Training

Print name: _____Signature: _____ Date: _____

Material Handling, Manual Lifting and Body Mechanics

Purpose

The purpose of this program is to ensure the protection of employees and subcontractors from the hazards associated with material handling, manual lifting and body mechanics.

Scope

This policy will apply to all work performed by employees and subcontractors including, but not limited to the following activities: construction, installation, demolition, remodeling, relocation, refurbishment, testing, and servicing or maintenance of equipment or machines and at other times when material handling, manual lifting and body mechanics is required.

Responsibilities

Management (Board of Directors and Project Managers)

Management is responsible for ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this program are readily available where and when they are required. Additionally, management will monitor the effectiveness of the program, provide technical assistance as needed, and review the program bi-annually.

Program Manager

Dave Simpson is responsible for the development, documentation, training and administration of the program. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

Supervisors (Superintendents and Foreman)

Supervisors are responsible for ensuring that a task specific job hazard analysis (JHA), also known as a safe work plan, is developed. The JHA will select, implement and document the appropriate site-specific control measures as defined within this policy. Supervisors will direct the work in a manner that ensures the risk to workers is minimized, adequately controlled and that practices defined by this policy will be followed. Supervisors are responsible for ensuring Unger Construction employees and subcontractors are following expectations. Supervisors will be held accountable for enforcing the requirements of this program. Undesirable behavior will not resolve itself, therefore supervisors must be directly involved with modifying behaviors inconsistent with program expectations. Supervisors will be held accountable for enforcing Unger Construction's disciplinary program.

Workers (Employees and Subcontractors)

Unger Construction has high expectations and requires safety excellence for each employee, crew, project and for our entire company. Workers are required to follow the minimum procedures outlined in this program. Workers are responsible for knowing the hazards and the control measures established in the JHA. Workers are responsible for using the assigned PPE in an effective and safe manner. Workers are responsible for stopping unsafe acts and correcting unsafe conditions on the spot as soon as they are discovered. Any deviations from this program must be immediately brought to the attention of your supervisor. Workers that choose to conduct themselves in a manner that is inconsistent with these expectations will be held accountable for those decisions and may incur disciplinary actions.

Job Hazard Assessment (Safe Work Plan)

Unger Construction utilizes JHA's as our means of hazard assessment and establishing a safe work plan. JHA's are performed by supervisors and/or workers. Our library of hazard assessments is maintained on the "S" drive. Before beginning a new task refer to the JHA library, generally speaking all scopes of our work are covered. For situations that have not yet been covered select one that is substantially similar and use it as a baseline. JHA's on the "S" drive are organized by work area and job description. JHA's include strategies for elimination, substitution, engineering and administrative controls. After applying all appropriate reduction and elimination technique, the remaining hazards will be analyzed and the proper PPE to reduce the hazards will be selected. PPE will be identified for hazards that are in the process of being reduced or eliminated and/or when hazard-reduction efforts are not 100% effective in eliminating the hazards.

For complex or moderate to high hazard tasks, tasks where an additional level of safety planning is needed, the safety director will perform the JHA with the supervisor and workers.

Training

Before any employee is allowed to perform material handling or manual lifting, they must first receive training. Each employee must demonstrate an understanding of the required training, and the ability to properly use body mechanics and material handling aids.

Proof of training is available on the "S" drive. The training data base can be sorted by employee name or by subject. This ensures supervisors and employees are able to confirm they have the necessary training and if they don't which employees do. Employees that need training should contact their project manager or superintendent to make arrangements for them to be trained.

Retraining

The need for retraining will be indicated when: An employee's work habits or knowledge indicate a lack of necessary understanding, motivation or skills required to properly use body mechanics, Changes in the workplace make previous training obsolete, or Upon a supervisor request.

Discussion

Most people lift things of varying size and weight throughout the day without concern for injury. It is usually after an injury that folks become aware of the importance of proper posture and body mechanics when lifting. Strains and sprain injuries are a leading injury category for construction workers. At Unger Construction we are making a concerted effort to reduce these types of injuries for our employees and subcontractors that are involved with manual handing, manual lifting and tasks that would benefit from proper body mechanics. Increased awareness of the likely causes of the injuries and training in lift/handling techniques has been proven to reduce injuries in job functions similar to ours.

Good posture means the natural curves of the spine are not stressed or strained, they are in a neutral position ready to absorb and distribute loads (the weight).Bending your arms will help to distribute the weight and lessen the stress to your neck and shoulders. If the item is too heavy to bend your arms comfortably it's too heavy to lift and transport by yourself or without a carry aid. Keep the load close to your waist for as long as possible while lifting. The distance of the load from the spine to the waist is an important factor in the overall load of the spine and back muscles. Before you begin to lift something, assess the items, weight, size and the coupling forces (handles, corners, pinch or grasp) required to make the lift. If the item doesn't easily move get help or use a lifting/carrying aid.

Factors that Increase the Chance of Injuries

Factors that increase the chance of injuries include but are not limited to: Repetitive tasks (number of lifts per hour, Poor or static posture (stretch and flex before the lift), Extended reach (hands near the waist, elbows near the waist, arms fully extended), Twisting motions, Sudden changes in position, Weight (total weight, uneven distribution of weight) , Vertical Lift Distance (raise or lower knees to shoulder, raise or lower below the knees, raise or lower above the shoulder), Coupling/Grip forces (handles, corners, pinch or grasp), Frequency (number of lifts per day/week), Carry Distance (<10 steps, 11-25 steps, >25 steps).

Safe Work Practices

Plan your work such that it minimizes the risk factors mentioned above. Very often simple changes in the work plan can be employed that dramatically reduce the potential exposure to injuries. Examples include, limiting the time workers perform repetitive tasks. Rotate the workers in and out well before them become fatigued.

Plan the work to minimize the number of times an item is handled. Use just in time concepts of material delivery. Deliver only the amount that be handled safely.

Avoid twisting motions and sudden changes in position. Find a way to use push pull techniques. Design the lift to incorporate Push/Pull/Slide motions rather than lifting motions.

Break the load down or take multiple trips to reduce the weight per lift. Carry the load waist high.

Use attachments or place the item upon another item to provide your coupling forces or grip.

Stretch and Flex

Athletes stretch before and after exercise to reduce injury and increase performance. You should consider yourself an industrial athlete, few athletic events last 8 hours and occur on back to back days. Stretch and flex is more than a morning warm up program that is performed during pre-shift huddles or toolbox safety discussions. Workers are encouraged to stretch perform stretch and flex exercise for 10 minutes at the beginning of the shift and just before lifting or carrying materials. Stretch and flex exercises are none strenuous and are focused on strengthening/stretch muscles and tendons. Perform stretching or flexibility exercises for a few minutes after being in static posture or just before you attempt a lift. Workers that find themselves in poor body positions or static postures short take short and frequent stretch and flex breaks.
There are various types of injuries that can occur from lifting incorrectly. Muscle strain is the most common type of lifting injury. Usually it results from the over stretching of muscles that were not prepared for the lift. More often than not had the worker prepared for the lift by stretching the lift could have been accomplished without injury.

Plan the lift

Lift it twice. Think carefully about the movements you're going to make before you do them. Lifting twice means applying the principal of planning your movements prior to performing the lift: Your first lift is a mental lift. Think about the lift prior to actually doing it: how am I going to lift the item? Can I do it myself or should I get some help? How heavy is the item? Do I need to use mechanical assistance? Where am I taking the item being lifted? Is the area clear where I need to set it down? Is it a difficult path or a distance to go? What hazards may hamper the lift or obstruct the travel path? Eliminate those hazards before you lift the item. In other words, Plan the Lift First.

The second lift is the actual physical lift. Here is where you carry out your plan. Use proper body mechanics and techniques while going through the motions. Bend those knees. Most important: Keep the load as close to your body as possible and don't twist.

Lifting, Handling and Body Mechanics Techniques

Multi-person Lifts or Carry Aids

Generally speaking materials that weigh >61 pounds cannot be consistently handled safely by one person. Many construction workers scoff at that number thinking they can handle much more weight. They tend to overlook the reach factors, coupling factors, carry distance and frequency of the handling focusing instead purely on the weight.

Unger Construction encourages the use of transportation aids such as carts, carry devices, or multiple person handling for lifts that weigh > 61 pounds or are awkward or difficult to handle by oneself. Materials that are awkward or difficult to handle due to length, configuration or weight require an additional person.

When using the two person transport method or a cart/carrying device one person shall be in control of each end of the material being transported. Handlers must take adequate precautions: Anticipate blind corners and cross traffic to prevent collisions with other personnel; Maintain a slow pace and the ability to stop within one stride; Communicate to nearby workers, and with each other, to ensure unimpeded

safe progress; Pre-plan to inform workers of material destination, pre-approved route, any spots requiring extra attention or coordination such as door thresholds or other items that could snag or slow the wheel.

To reduce the risk of injury with these types of tasks the vertical lift distance and reach should be kept at the minimum. These items are pushed or pulled and require multiple people to properly control them. Stretching and flexibility exercises for the upper extremities neck and back should performed just prior to pushing or pulling these items.

When handling or lifting, the safe way is the best and easiest way. Don't take unnecessary risks.

Body Mechanics

Your back is in motion all day, every day, even when you sleep. It bends when you sit, twists when you turn, lifts when you stand and supports you when you walk. An injured back can be uncomfortable or it can be disabling. By learning a few back injury prevention techniques, you may be able make your work day safer. Lifting safely is one the most important things you can do to protect your back throughout your lifetime.

Proper Body Mechanics can make a substantial difference. The back and stomach muscles are easily injured and they bear most of the strain if lifting is done incorrectly. When lifting, use the large muscles of your legs, rather than the small muscles of your back. Take a firm grip, secure a good footing, place the feet a comfortable distance apart, keep the load close, set your back in its normal S curve (like a weight lifter), bend your knees, and lift with your legs. Keep one elbow tucked into your side to prevent twisting and straining your back. Keep your head up when handling the load. Look ahead, not down at the load once it has been held securely. Don't jerk or snatch the load, this increases the risk of an injury.
The general rules of safe lifting is to "Get a firm grip on the load, keep it close, bend at the knees, use your legs to lift the load, and keep your spine in the natural position (with an arch in your lower back). These principles always apply and should be incorporated into every lift.

Many people get injured trying to hand the awkward shaped, awkward sized or awkwardly weighted objects. Here are some pointers for dealing with those: Use Two-Person Lifts for Large or Awkward Loads. Decide in advance which person will direct the move. Keeping knees bent and back straight, lift and raise the load together. Move smoothly together as you carry, keeping the load at the same level. Unload at the same time, keeping knees bent.

Summary

Lifting heavy objects puts a lot of strain on your back and the joints of the knees, hips, elbows and shoulders. If you don't use safe lifting techniques you can cause painful injuries such as torn ligaments, pulled muscles and hernias. When you have to lift an object plan ahead, decide how you are going to pick up the load, carry it and set it down, then check the route for obstructions. Always get assistance if the load is too heavy or too awkward. As you lift, position your feet close to the load and squat - don't bend down. Rise to a standing position, using the strong muscles in your legs rather than the weaker ones in your back. Don't twist your body when carrying the load. Lower yourself to a squatting position as you set it down.