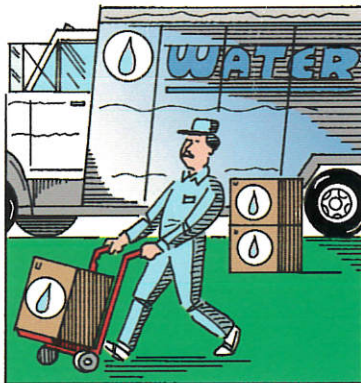
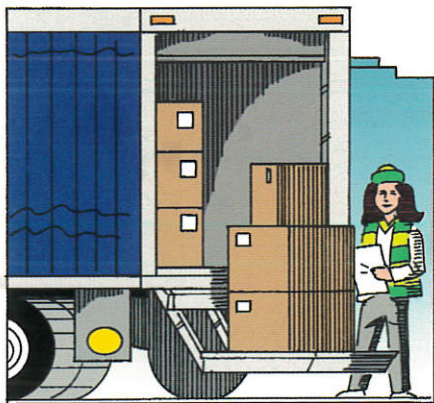
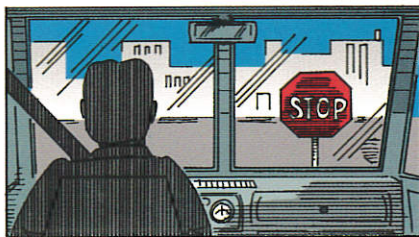


# Keller's Route and Delivery Driver's Safety Handbook



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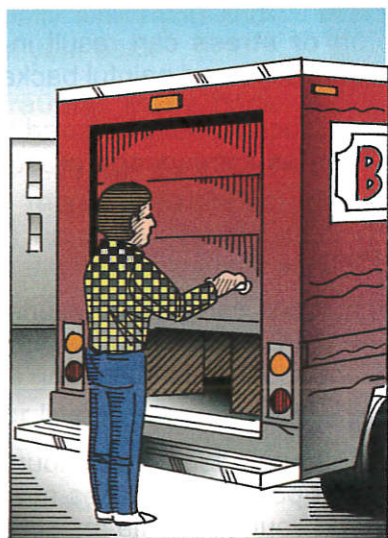
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# Personal Safety

As a delivery driver, your health and safety are important to your livelihood. At the very least, an injury can impair your ability to effectively do your job. If the injury is serious, it could put you out of work, affecting your income and lifestyle.

In most cases, injuries caused by improper lifting, repetitive motion, and slips, trips, and falls can be prevented. This chapter will focus on the steps you can take to remain safe on the job.



## Back Safety and Safe Lifting

Sprains and strains are the most common causes of lower back pain. Lifting improperly is the largest single cause of back pain and injury. The use of proper lifting techniques can help prevent back pain and injury.

Lower back problems are a frequent cause of lost work time and worker's compensation claims. Each year, just under 312,000 injuries are attributed to overexertion. That represents 16.5 percent of all occupational injuries or illnesses.



## Conditions that Lead to Pain

Common conditions that can lead to back pain include sprains and strains, a ruptured or slipped disk, chronic tension or stress, and other conditions.

1. **Sprains and strains** can result from injury to muscles and ligaments that support the back. A torn ligament will result in severe back pain.
2. **A ruptured or slipped disk** is a common condition. It occurs when the disk (vertebral cushion) presses on a nerve.
3. **Chronic tension or stress** can result in muscle spasms and aggravate persistent and painful backache.
4. **Other conditions** such as pain "referred to the back" from other organs, such as kidneys and prostate, can result in nagging back pain.

## Causes of Back Pain

Improper lifting techniques can lead to injuries, but other factors can also play a part in back injuries. Poor posture, poor physical condition, and repetitive trauma can contribute to back injuries.

1. **Poor posture.** Posture affects the amount of strain put on the back. Incorrect posture increases strain on back muscles and may bend your spine into an incorrect position.

When standing correctly, your spine has a natural "S" curve. The shoulders are back and the "S" curve is directly over your pelvis.

Proper sitting posture places your knees slightly higher than your hips with your hips placed at the rear of your chair or seat. Your lower back shouldn't be overly arched and your shoulders and upper back shouldn't be rounded.

2. **Poor physical condition.** Proper diet and exercise can help in avoiding back problems. Extra weight, especially in your stomach, can put extra strain on your back. Every extra pound you have up front puts an additional 10 pounds of strain on your back.

Infrequent exercise is also a major factor. A sudden strain on generally unused back muscles can cause problems, especially when you suddenly twist or turn your back.

3. **Repetitive trauma.** Many back injuries are the result of several minor strains over a period of time. As you repeat a particular irritating movement, the minor injuries begin to accumulate and weaken effected muscles or ligaments. Eventually a more serious injury may occur.



## Proper Lifting Techniques

The use of proper lifting techniques can help in avoiding back injuries.

1. **Size up the load before trying to lift it.** Test the weight by lifting one of the corners. If the load is too heavy or an awkward shape, get help or use a mechanical lifting device.

2. **Bend your knees.** This is by far the most important rule when lifting objects. Bending at the knees causes your legs to take the largest amount of strain in the lifting process. When lifting an object, position your





feet close to the object. Your body should be centered over the load. Bend at the knees and get a good hand hold. Lift straight up, smoothly, and allow your legs (not your back) to do the work.

3. **Don't twist or turn once the load has been lifted.** Keep the load close to your body. Any sudden twisting or turning could cause a back injury. Twisting or turning while lifting is one of the leading causes of disk injuries.
4. **Make sure there is a clear path before attempting to move the load.** Your path should be clear of any obstacles, as well as other hazards like spilled grease or oil.
5. **Set the load down properly.** Setting the load down is just as important as lifting it. Lower the load slowly by bending your knees, letting your legs do most of the work. Don't let go of the load until it is securely on the ground.
6. **If at all possible, push (don't pull) the load.** Pushing puts less stress on your back. It is also safer should the object tip.

### Treatment of Back Pain

Treatment for back pain depends on the severity of the injury. Treatment may consist of bed rest, cold or hot packs, traction, physical therapy, or muscle-relaxing drugs. Some treatment requires injections around the spinal nerves and, in some cases, surgery may be necessary.



Pain that doesn't go away or becomes greater as time goes on may signal serious problems that need professional attention.

For minor back pain there are several simple modifications in behavior that may help relieve the pain. One of the biggest problems drivers have is sitting for long periods of time. A short stretching

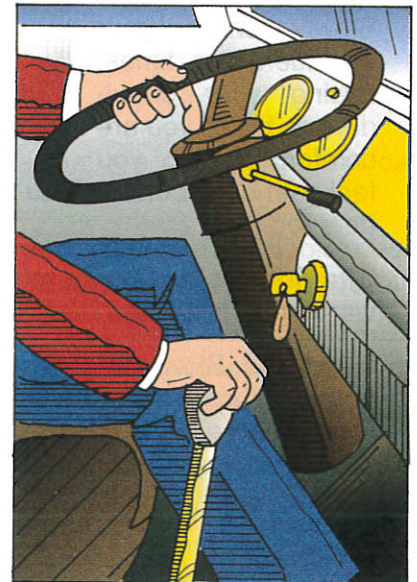
routine and walking around will help alleviate some of the discomfort. Warehouse and dock workers often have the opposite problem — standing for extended periods of time. Changing foot position, but not leaning can help ease back strain.

### Cumulative Trauma Disorders

Cumulative trauma disorders (CTDs) are disorders of the musculoskeletal and nervous systems which are caused by or made worse by:

- Repetitive motions;
- Forceful exertions;
- Vibration;
- Hard and sharp edges;
- Sustained awkward positions; or
- Exposure to noise over extended periods of time.

CTDs affect the nerves, tendons, and muscles. Hands, wrists, elbows, and shoulders are most frequently affected. These injuries develop gradually and result from repeated, forceful actions, such as twisting and bending of the hands, arms, wrists, and fingers.



## Cumulative Trauma Disorder Exercises

The following are some simple stretching exercises that can help in preventing CTDs.

1. **Body stretch.** Stand up, raise your arms over your head, your hands close together, and reach for the ceiling.
2. **Shoulder blade stretch.** Clasp your hands behind your head and try to pinch your shoulder blades together.
3. **Shoulder shrugs.** Slowly shrug your shoulders five times, raising your shoulders as far as you are comfortable. If you feel pain or discomfort, you are probably raising your shoulders too high.
4. **Shoulder rolls.** Slowly roll your shoulders five times forward, then five times backward.
5. **Head tilts.** Slowly tilt your head to the right, stopping when you feel the stretch. Then slowly tilt your head to the left. Repeat twice.



## Carpal Tunnel Syndrome

Carpal Tunnel Syndrome (CTS) is probably the best known of the cumulative trauma disorders. Though it is most often associated with office workers who spend long hours at a computer, it can also affect the delivery driver.

CTS develops in the hands and wrists when repetitive or forceful tasks are performed over a period of time. This causes tingling, numbness, or severe pain in the wrist and hand. The pressure of repetitive motion also results in a lack of strength in the hand as well as an inability to make a fist, hold objects, or perform other manual tasks. If the pressure continues, it can cause permanent loss of sensation or even partial paralysis.

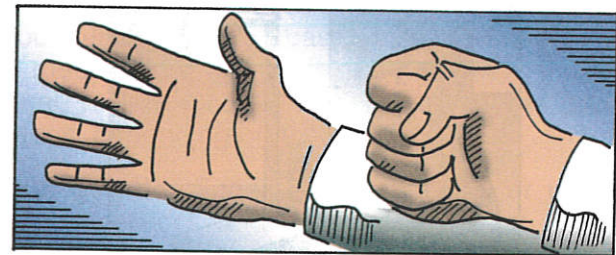
Grasping the steering wheel and loading and unloading cargo are two of the most common ways delivery drivers can develop CTS.

The vibration of your vehicle's steering wheel causes you to place a stronger grip on the steering wheel than the grip you place on a car's steering wheel. Over a period of time, this can lead to CTS. Repetitive motion when loading and unloading freight can also contribute to CTS.

## Carpal Tunnel Syndrome Prevention

The following are two exercises that are easy to do and can help prevent CTS.

1. Rest your forearm on the edge of a flat surface (table, desk, etc.) and gently bend back your wrist by grasping your fingers with the other hand. Hold for 5 seconds.
2. Clench your hand into a tight fist, then slowly release until your fingers are fanned out. Repeat five times.





## Personal Protective Equipment (PPE)

### Foot Protection

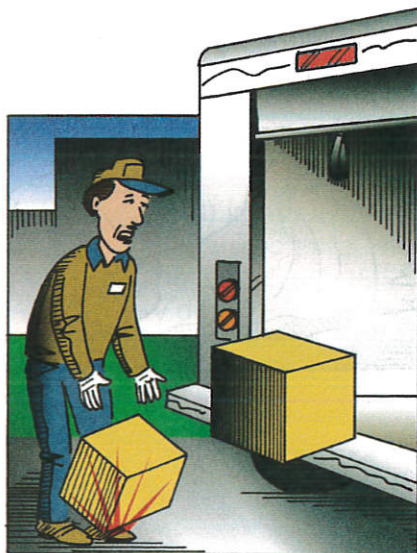
According to a Bureau of Labor Statistics (BLS) study, the majority of workers who suffer foot injuries do not wear protective footwear. In many of those cases, employers don't require the use of protective footwear (safety shoes, etc.).

The Occupational Safety and Health Administration (OSHA) has developed regulations that address foot safety in the workplace. This includes warehouses, loading docks, and other workplaces where you may be making a delivery or loading your vehicle.

OSHA requires that safety shoes meet the requirements of the American National Standards Institute (ANSI).

### Types of Foot Injuries

The feet are vulnerable to many types of cuts, sprains, and fractures, but sharp or heavy objects falling on the foot are the primary source of injury. According to the BLS survey, the typical foot injury is caused by objects with a median weight of about 65 pounds falling less than four feet.



Other causes of injury include:

**Compression.** The foot or toe is squeezed between two objects or rolled over.

**Puncture.** A sharp object (nail, screw, etc.) breaks through the sole of the shoe.

**Electricity.** This is a hazard for workers who use power tools or electrical equipment.

**Slipping.** Contact with surface hazards like oil, water, or chemicals causes a fall.

**Chemicals.** Certain chemicals and solvents can corrode ordinary safety shoes and harm the feet.

**Extreme heat or cold.** Insulation or ventilation is required depending on the climate.

**Wetness.** The primary hazard may be slipping, but others include discomfort and possibly infection if the feet are wet for long periods of time.

### Injury Prevention

Put simply, foot protection is guarding toes, ankles, and feet from injury. A variety of protective devices are available for specific hazards in specific industries.

**Safety shoes.** Safety shoes are the most common form of foot protection. Their design makes them different from the average shoe or boot used on a daily basis. Standard safety shoes have toes that meet the testing requirements found in the ANSI standard. Steel, reinforced plastic, and hard rubber are used for safety shoes, depending on their intended use.

**Metatarsal guards.** Shoes with metatarsal or instep guards protect the upper foot from impact. In this type of shoe, metal guards extend over the foot, not just the toes.



**Safety boots.** Rubber or plastic safety boots offer protection against oil, water, acids, corrosives, and other industrial chemicals. Some are made to pull over regular safety shoes while others are available with features like steel-toe caps and metatarsal guards.

### Hand Protection

Though it's a topic that doesn't receive much attention, hand protection is an important issue that should be addressed. Our hands are exposed to hazards in the workplace on a daily basis.

OSHA regulates hand protection. OSHA requires an employer to select and provide employees with hand protection when an employee is exposed to hazards such as:

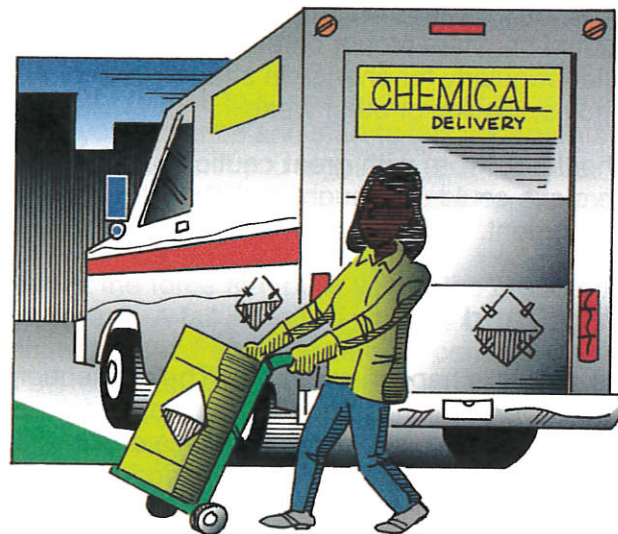
- Skin absorption of harmful substances;
- Severe cuts or lacerations;
- Severe abrasions;
- Punctures;
- Chemical burns; or
- Harmful temperature extremes.

### Types of Hazards

At work, hands are exposed to three basic kinds of hazards: mechanical, environmental, and irritating substances.

1. **Mechanical hazards.** These are present wherever machinery is used. Injuries resulting from machinery might include cuts, punctures, abrasions, or crushing.
2. **Environmental hazards.** Factors like extreme heat or cold, electricity and materials handling have the potential to injure your hands.

3. **Irritating substances.** Skin conditions such as dermatitis can be caused by contact with chemicals and biological agents (bacteria, fungi, and viruses). Chemicals and toxic substances can also enter the blood stream through abrasions and cuts.



### Gloves

Gloves are the most commonly used type of personal protective equipment (PPE). They protect fingers, hands, and sometimes wrists and forearms. Gloves should be designed to protect against specific hazards of a job being performed. Types of gloves range from common canvas work gloves to highly specialized gloves used in specific industries.

When selecting appropriate hand protection, certain properties should be considered.

1. **Size.** Gloves should fit your hands. If they are too small they can tire the hands. If they are too big they may be clumsy to work with.
2. **Length.** If your wrists or arms are exposed, the glove length must match the amount of exposure.

3. **Dexterity.** The glove should be flexible, but provide proper support.
4. **Breakthrough.** You should also consider how fast a glove will breakdown and allow chemicals to seep through.

### Safe Glove Use

Gloves should be given proper care and cleaning. They should be inspected regularly for change in shape, hardening, stretching, rips, holes, cracks, or other wear.

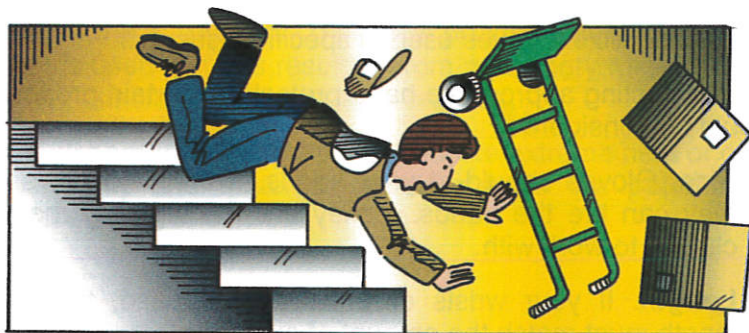
Gloves should be worn with great caution near moving equipment. The glove could get caught and pull your fingers or hand into the equipment.

## Slips, Trips, and Falls

Slips, trips, and falls happen every day. The consequences can be slight to severe. Injuries from a slip, trip, or fall can range from minor cuts and bruises to back injuries and broken bones that can put you out of work for a long period of time, possibly forever.

According to Bureau of Labor Statistics information, falls cause about 680 workplace deaths and 318,000 injuries each year. Slips and trips account for 59,300 workplace injuries.

Workers involved in falls lost a median of 8.5 work days due to their accidents.



## Friction/Momentum/Gravity

There are three forces at work when someone slips, trips, or falls. They are friction, momentum, and gravity.

1. **Friction** is resistance between objects, such as your shoe sole and the surface you are walking on. If your shoes cannot grip the surface you are walking on (ice, a wet floor), you lose traction and fall.
2. **Momentum** relates to speed and size of a moving object. If you lose your balance and start to fall, your momentum and size will work against you regaining your balance. The more you weigh and the faster you move, the harder you will fall if you trip.
3. **Gravity** is the force that pulls you to the ground once a fall is in progress. A fall is likely if your center of balance (gravity) shifts too far from your natural center of balance and can't be restored.

### What is a Slip, Trip, or Fall?

There are differences in what constitutes a slip, trip, or fall.

1. **Slips** occur when there is an immediate loss of grip between your shoes and the surface you are walking on. Slips result when there is material such as ice, oil, grease, or water on a surface which can create a loss of traction.

Proper footwear can help prevent slips. Check for soles or treads that have worn smooth. Check for gum, dirt, or other debris that could cause you to slip or trip. Also, be aware of your surroundings, especially when:

- Entering and exiting your vehicle;
- Inspecting your vehicle;
- Checking cargo on your vehicle; or
- Delivering your cargo.

2. **Trips** occur when your foot hits or stubs another object. When you trip, you may be thrown off balance or you may fall and could injure yourself.



Trips usually result from not paying attention when walking. Trips can be prevented by watching where you're going, picking up debris in your way, and taking time to make sure nothing is in your path.

3. **Falls** happen when you've lost your footing and center of balance. Most falls are at ground level, but falls from greater heights pose a higher risk of serious injury.

You should always be aware of your footing. Be sure of where you are stepping and certain the surface you are walking on is safe, firm, and free of slippery substances.

### Entering and Exiting Your Vehicle

Getting in and out of your vehicle is a common action, but it can be hazardous. It is easy to forget to be careful when performing this routine activity.

Section 399.207 of the Federal Motor Carrier Safety Regulations (FMCSRs) requires that all trucks and truck tractors have sufficient steps and handholds and/or deck plates to allow the user to have at least three limbs in contact with the truck or truck tractor at all times.

Having three limbs in contact with a vehicle when entering or exiting is called the three-point rule. Three-point contact gives you the best balance and least chance of slipping, tripping, or falling, as well as the best chance to catch yourself if you do slip, trip, or fall.

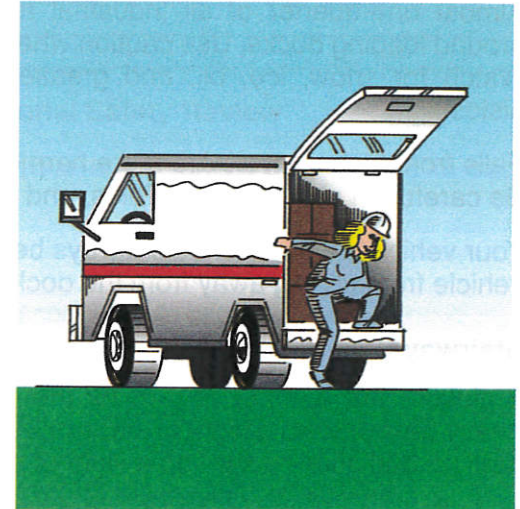
When entering your vehicle, both hands should be free. Never try to carry something and enter the cab at the same time. The three-point rule should always be observed.

Never jump when exiting your vehicle. Your body should face the vehicle and the three-point rule should be followed.

### Climbing On and Off the Cargo Box

You should always be careful when climbing on and off the cargo box. As well as the cargo box's height, weather and traffic can play a role in your safety.

When on the cargo box, watch for slippery and/or wet areas caused by weather or cargo. Clean up any slippery and/or wet areas as soon as possible.



Pay additional attention when making deliveries in areas of heavy traffic. Drivers may not see you loading or unloading your vehicle.

Never jump off of the cargo box. You run the same risk of injury as you would jumping out of the driver's side of your vehicle.

### Coupling and Uncoupling

When operating a combination vehicle, coupling and uncoupling can be dangerous. Grease, oil, and snow around your vehicle can pose hazards. The following are a few tips to help prevent slips, trips, and falls.

- Never step over air or electrical lines. Climb down and walk to the other side.
- Always have firm footing when pulling the release handle.
- Always chock the vehicle's wheels. A tractor or trailer can move with the brake on.

## **Loading Docks**

Almost one-quarter of all industrial accidents happen on or around loading docks. Use caution when around loading docks. Watch for snow, ice, oil, and grease on ramps, stairs, and aisles.

Falls from higher levels are more harmful than same level falls. Be careful on platforms, scaffolds, and elevated areas.

Your vehicle's wheels should always be chocked to prevent the vehicle from sliding away from the dock.

## **Stairways**

Stairwells are another hazard for the delivery driver. Carrying heavy boxes down a flight of steps or using a two-wheel dolly to haul an odd shaped item up a flight of steps is dangerous.

Before you begin this type of task, inspect the stairway for any thing that may cause you to slip, trip, or fall. Watch for water, snow, ice, oil, or grease.

Also look for any obstacles or debris. As well as the stairs, this includes a check of your overhead clearance so you don't hit your head on a low ceiling or pipes.



Driver \_\_\_\_\_  
Instructor \_\_\_\_\_  
Date \_\_\_\_\_  
Location \_\_\_\_\_

### **Personal Safety Review**

1. Improper lifting technique is the largest single cause of back pain.
  - a. True
  - b. False
2. Which of the following contribute to back injuries?
  - a. Poor posture
  - b. Poor physical condition
  - c. Repetitive trauma
  - d. All of the above
3. Bending your knees is an improper way to lift an object.
  - a. True
  - b. False
4. Grasping the steering wheel is one of the common ways you can develop Carpal Tunnel Syndrome.
  - a. True
  - b. False
5. Having three limbs in contact with a vehicle when entering or exiting is called:
  - a. The three-limb rule
  - b. Repetitive trauma
  - c. The three-point rule
  - d. Not recommended

6. It is ok to jump off of a cargo box because your vehicle is smaller than a semi.
  - a. True
  - b. False
7. A slip occurs when:
  - a. Your foot hits or stubs another object
  - b. You lose your center of balance
  - c. There is an immediate loss of grip between your shoes and the surface you are walking on
  - d. All of the above
8. Almost one quarter of all industrial accidents happen on or around loading docks.
  - a. True
  - b. False
9. When using a stairwell to make a delivery you should:
  - a. Look for obstacles and debris that may be in your way
  - b. Check your overhead clearance
  - c. Both a. and b.
  - d. None of the above
10. Selecting proper footwear is one of the keys to preventing slips, trips, and falls.
  - a. True
  - b. False