



Forklifts and Pedestrian Safety



Slide Show Notes

- Today we're going to talk about working safely around forklifts. Forklifts are essential pieces of equipment that help us move mountains of heavy materials. But forklifts are also dangerous—especially to employees working around them. You have to be very careful when working or walking in areas where a forklift operates. You must always keep alert and take proper precautions to protect your safety. Otherwise, you could be seriously injured or even killed by a forklift.



Session Objectives

- Identify hazards of working around forklifts
- Understand factors that contribute to accidents
- Comprehend pedestrian safety requirements
- Take precautions to prevent accidents

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The main purpose of this session is to train you to work safely around forklifts. By the time this session is over, you should be able to:

- Identify the hazards of working around forklifts;
- Understand the factors that contribute to forklift/pedestrian accidents;
- Comprehend pedestrian safety requirements; *and*
- Take proper precautions when working around forklifts to protect your safety.



Forklift/Pedestrian Accident Facts

- Forklifts are heavy and dangerous
- Thousands are injured, and some are killed
- Many of the injured are pedestrians
- Pedestrian injuries can be disabling or fatal



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- Although forklifts are so useful in moving heavy materials and we couldn't do without them, you should never forget that they are very heavy and potentially very dangerous pieces of equipment.
- Every year thousands of workers are injured, and some are even killed in forklift accidents.
- A large percentage of the injured are pedestrians—employees working or walking in areas where forklifts operate.
- Many pedestrian injuries are serious. Some are permanently disabling. And, some are fatal.



Hazards of Working Around Forklifts

- Struck by forklift
- Crushed between forklift and structure
- Struck by falling objects
- Feet run over by forklift
- Fall from forklift
- Fires associated with refueling and recharging



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One of the reasons there are so many forklift/pedestrian accidents is that there are numerous hazards faced by those who work around forklifts.

- Probably the most common type of accident is the one in which an employee is struck by a forklift. These accidents are serious, because as we said in the previous slide, forklifts are very heavy. In fact, they are much heavier than the average automobile. That's because the weight is needed to counter-balance heavy loads on the forks. So being hit by a forklift creates a huge impact. Furthermore, workers struck by forklifts can also be run over by the forklift, causing an even worse injury.
- Working around forklifts also exposes you to being caught between a forklift and a structure like a wall or column and crushed.
- You could also be struck by objects falling off the forks of a lift truck.
- And if you're too close when a forklift maneuvers, you could get your foot run over by the wheels. With all that weight, you can imagine what that could do to the bones in your feet.
- Some injuries are caused when workers ignore safety rules and hitch a ride on forklifts or stand on the forks, lose their balance, and fall to the ground.
- There is also the danger of fires associated with refueling or recharging forklifts.



Factors That Contribute to Accidents

- Visibility problems
- Workers getting too close to forklifts
- Risk-taking
- Operators not following rules
- Pedestrians not paying attention
- Lack of cooperation



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Several key factors contribute to forklift/pedestrian accidents.

- One factor is that it's often hard for forklift operators to see pedestrians. The operator enclosure creates blind spots that can limit an operator's view just long enough to lead to a collision between a forklift and a pedestrian. Other obstructions, such as pallets stacked with materials, storage structures, or columns, also contribute to the visibility problem.
- Workers getting too close to the forklift, especially out of the operator's field of vision, increases the chance of an accident as well.
- Another key factor is risk-taking by pedestrians. Workers in a hurry try to slip in front or behind a moving forklift, thinking they have time to make it, when in fact they don't.
- Forklift operators not following safety rules and driving too fast or not looking behind and sounding their horns when backing up can also be a factor in accidents.
- Pedestrians not paying attention to forklift activity around them is responsible for many accidents as well.
- Finally, lack of cooperation between operators and pedestrians is also responsible of accidents. When employees performing different tasks share the same work area, they have to cooperate to keep safe.

Can you think of other factors that could contribute to accidents?

Lead a discussion about other factors that could lead to accidents.



When and Where the Danger Is Greatest

- Working with or close to forklift
- Crossing travel lanes
- Corners and blind intersections
- Moving from one work area to another
- Beginning and end of shift
- Break times



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Another safety issue concerning forklift/pedestrian accidents is determining when and where the danger of contact between a forklift and a pedestrian is greatest.

- Obviously, if you are working with or close to a forklift, you are in greater danger than if you are a safe distance away.
- Crossing forklift travel lanes can also increase the risk of an accident.
- And corners and blind intersections are locations where pedestrians and forklifts can have dangerous encounters.
- You are also at greater risk in an area where forklifts operate when you move from one work area to another. The move may bring you closer to forklifts or require crossing travel lanes.
- Risks increase at the beginning and end of shifts as well. At these times many workers are on the move, people may not be as alert, and separation of pedestrians and forklifts may not be as clearly defined.
- The same is true at break times.

Can you think of other times during the workday when risks increase or specific locations in the workplace where the risk of forklift/pedestrian accidents could be greater?

Ask trainees to suggest other times and places when and where the risk of an accident increases.

Accident Report: Worker in a Hurry



Worker who tried to squeeze by forklift that was backing up in a narrow aisle is struck and loses her leg

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Now let's take a little time to examine some real forklift/pedestrian accident reports to give you a better idea of the kinds of things that can happen when people work around forklifts—things you don't want ever to happen to you. All the stories in this and the next few slides are reports of real accidents and real injuries.

Here's the first accident—one that unfortunately happens all too often.

- A worker in a hurry thought she could slip by a forklift that was backing up in a narrow aisle. She was wrong. The forklift hit her and crushed her leg, which was later amputated. The worker nearly lost her life gambling with her safety.

Accident Report: Innocent Bystander



An employee was injured when a speeding forklift hit a storage bin, which in turn slammed into the employee and crushed him

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- A forklift traveling too fast in reverse hit a metal scrap bin, propelling it toward a punch press, where the operator was working. The bin hit the machine and rebounded toward the forklift. The forklift hit the bin again and shoved it back against the corner of the punch press, striking and crushing the press operator against the machine.

Accident Report: Stopping Distance



*Warehouse clerk,
pinned against
storage racks by
forklift that couldn't
stop in time to
prevent a collision,
dies on way to
hospital*

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- A warehouse receiving clerk and a forklift operator were working together on a shipment that had to be divided into smaller units for storage. After their morning break at the receiving desk on the loading dock, the forklift operator drove the forklift to an aisle about 150 feet from the receiving desk to retrieve the last pallet. After loading the pallet on the forks, the operator began to back down the aisle. Because the aisle was narrow, he looked back to judge the distance between the pallet and the storage racks. He had traveled some distance before he looked forward and saw the receiving clerk walking up the aisle toward the forklift. Still moving toward the clerk, the operator shouted at the worker to get out of the way. At the same time, he hit the brakes. But by the time the operator noticed the worker, reacted, and hit the brakes, and by the time the brakes slowed the forklift, it was too late. The forklift struck the clerk and pinned him against the metal shelving. The clerk died on the way to the hospital.

Accident Report: Unauthorized Rider



Electrical technician hitching a ride on a forklift falls off and is run over and killed by forklift

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- An electrical technician was killed after falling from and being run over by a forklift. The technician was riding on the forks—something he shouldn't have been doing. As the forklift operator approached an intersection, he slowed down and turned his head to check for oncoming traffic. When he turned his head back, the operator couldn't see the technician. He stopped the forklift, dismounted, and found the technician under the forklift.

Accident Report: Wobbly Pallet on the Forks



*Warehouse worker
being raised on a
pallet on forks falls
16 feet to his death
when the pallet
becomes unstable*

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- A warehouse worker was killed while working with a forklift operator to pull tires from a storage rack. The forklift operator and the warehouse worker had placed a wooden pallet on the forks of the forklift, and the worker then stood on the pallet. The operator raised the forks and the worker 16 feet above a concrete floor to the top of the storage rack. The worker had placed a few tires on the pallet when the operator noticed that the pallet was becoming unstable. The worker on the pallet lost his balance and fell, striking his head on the floor.

Think about these accidents and how they could have been prevented.

Ask trainees to consider each of the accidents described in this and the previous slides and to explain how these accidents could have been prevented.

Forklift/Pedestrian Hazards: True or False?

- F** Few pedestrians are injured by forklifts
- T** Seeing you may be a problem for a forklift operator
- F** You can count on moving faster than a forklift
- F** Being raised on the forks of a lift truck is a good way to reach high places

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Let's take a few minutes now to try this true/false quiz about the information we've just covered. All you have to do is decide if the statements on the screen are true or false. Ready?

- Few pedestrians are injured by forklifts. True *or* false? The correct answer is **false**. A large percentage of those injured in forklift accidents are employees working or walking around forklifts.
- Seeing you may be a problem for a forklift operator. True *or* false? The correct answer is **true**. The operator enclosure and other obstructions may limit visibility. That's why you should always watch out for forklifts.
- You can count on moving faster than a forklift. True *or* false? The correct answer is **false**. Trying to beat or slip around a forklift could be fatal.
- Being raised on the forks of a lift truck is a good way to reach high places. True *or* false? The correct answer is **false**. This is very unsafe. You could fall. It's also a violation of safety rules.

How did you do? Did you get all the answers right?



Forklift/Pedestrian Hazards

Do you understand:

- Hazards of working around forklifts?
- Factors that contribute to accidents?
- When and where you are most at risk?



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Now it's time to ask yourself if you understand the information presented so far. For example, do you understand what we've said about:

- Hazards of working around forklifts?
- Factors that contribute to accidents?
- When and where you are most at risk?

It's important for you to understand all this information so that you can use it to better protect your safety when working around forklifts.

Answer any questions trainees have about the information presented in the previous slides.

Conduct an exercise, if appropriate.

Let's continue now to the next slide and talk about our pedestrian protection program.



Pedestrian Protection Program

- Signs
- Pedestrian walkways
- Barriers
- Exclusion zones
- Traffic safety plan
- Employee training



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Our pedestrian protection program uses a number of different methods to keep you safe when walking or working around forklifts.

- We use signs in key areas to warn you about forklift activity and hazards. Signs remind you to stay well clear of lift trucks when they are in motion or loading or unloading.
- We have clearly marked pedestrian walkways. You should always stay within the walkways, and forklifts must keep out of walkways.
- In some cases we may also use barriers to separate forklifts from employees working nearby.
- And in some cases we have exclusion zones—areas that are completely off-limits to pedestrians.
- In addition, we have a traffic safety plan that outlines all the methods and procedures we use to ensure your safety as well as the safety of forklift operators, other employees, and visitors to our facility.
- And, of course, we use safety training for both operators and pedestrians to teach required traffic safety rules and procedures.

Are you familiar with our traffic control plan and other forklift safety procedures?

Review your traffic control plan. Modify the information in this screen to suit your plan and the methods you use to protect pedestrians.



Safety Requirements For Forklift Operators

- Obey speed limits
- Drive in assigned lanes
- Look in the direction of travel
- Keep alert to pedestrians in the area



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To protect your safety, we require forklift operators to understand and follow all traffic safety rules and procedures.

- Among other requirements, forklift operators are required to obey speed limits and maintain a speed that will allow them to stop safely as needed. For example, this may mean driving slower than the posted speed limit when work area conditions warrant.
- Operators are also required to drive in the assigned lane or on the right. This way you know where to look for oncoming forklifts.
- Forklift operators are trained to look in the direction of the travel route and keep it clearly in view at all times. You'll remember that a contributing factor in one of the accidents we talked about earlier in which a pedestrian was killed was the fact that the driver was not looking in the direction of travel.
- Operators are also supposed to keep alert to pedestrians walking or working in the area. They should always be checking that their route is clear and be concentrating on their driving so that if they need to stop suddenly, they can react quickly and effectively.



Safety Requirements For Forklift Operators (cont.)

- Yield right-of-way to pedestrians
- Take care when passing other forklifts
- Slow and sound horn at intersections
- Give warning when workers might not be aware of forklift



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- We also require forklifts to yield right-of-way to pedestrians. But remember what we said about stopping time and limited visibility. Forklift operators may not always be able to see you. So it's your job to help by not taking risks. Yes, you have the right-of-way. But you need to exercise judgment about when it is appropriate to claim it and when it is not.
- Forklift operators must also be careful when passing other forklifts so that their view of pedestrians is not blocked.
- Operators must also slow down and sound their horn at intersections or places with poor visibility, like corners.
- Operators must sound the horn or give another appropriate warning when they believe a worker may not know that a forklift is moving in the worker's direction.



Safety Requirements For Forklift Operators (cont.)

- Avoid getting too close to pedestrians
- Slow down when making turns
- Stop and look behind before going into reverse
- Set brake and take keys when parking



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- Forklift operators are trained to avoid getting too close to pedestrians. Operators should be especially careful of getting too close to a worker standing in front of a storage structure, bench, machine, or other fixed object. You'll remember the accident report we spoke of earlier where a worker was crushed against her machine when an approaching forklift hit a scrap bin and sent it smashing into her workstation.
- Forklift operators are required to slow down when making turns. This not only helps protect them from tipovers and collisions with structures and other forklifts, it also protects you and other pedestrians.
- Operators must stop before going into reverse and look behind to make sure there is no one behind them or nearby.
- Finally, operators are required to turn off the engine, set the brake, and remove key when they park a forklift. This way you can't be struck by a runaway forklift, and unauthorized employees can't hop in the vehicle and drive it, putting you and other pedestrians at risk.



Safety Practices for Pedestrians

DO

- Keep alert for forklift activity
- Keep track of where forklifts are and what they're doing
- Stay at a safe distance
- Listen for horns, backup alarms, and other warnings

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While forklift operators have a duty to help protect pedestrians, you also have a duty to follow safe work practices when you work around forklifts. Other people can only do so much to protect you. You must do the rest.

- This means always keeping alert for forklift activity in your work area. Never take the presence of these potentially dangerous pieces of equipment for granted. If you get careless, you can easily get hurt.
- As you work, keep track of where forklifts are and what they are doing. Become familiar with the routes forklifts travel and the tasks they perform.
- Avoid coming too near forklifts. Remember that it takes quite a distance to stop a heavy forklift. By the time the operator sees you, reacts, and brakes, it could be too late to avoid hitting you. Furthermore, materials being carried by the forklift could fall and hit you if you're too close.
- Listen for and heed forklift horns, backup alarms, and other warnings.

Safety Practices for Pedestrians (cont.)



DO

- Look both ways before crossing aisles
- Obey traffic signs, use walkways,
or stay behind barriers
- Assume forklift operators *don't* see you
- Wear high-visibility clothing
- Be extra careful in noisy work areas

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- Another important safety practice for pedestrians in forklift areas is to look both ways before crossing aisles. It's the same as crossing a busy street. You wouldn't just dash out into traffic without checking to make sure the coast is clear.
- Also obey traffic signs, use pedestrian walkways, or stay behind barriers.
- Don't assume forklift operators see you or realize what you are doing or where you are going. Remember that an operator's visibility may be limited. You can't rely a hundred percent on the operator to see and avoid you. So it's up to you to watch out for forklifts and avoid them.
- Wear high-visibility clothing when working around forklifts.
- Be extra careful when working in an area that's noisy. You may not be able to hear forklifts approaching or hear their horns or other warnings.



Safety Practices for Pedestrians

DON'T

- Don't try to "beat" forklifts
- Never hitch unauthorized rides
- Never ride on the forks
- Don't distract the driver
- Don't walk or stand under raised forks

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- Here's another important safety rule. Don't take risks and try to "beat" forklifts or squeeze past them in narrow aisles. Because forklifts are rear-wheel driven, they swing wide when they maneuver. Remember the accident report we mentioned earlier in the session in which an employee tried to slip past a forklift, was struck, and lost a leg.
- Never ride on a forklift unless you are authorized and then ride only in a place where riders are permitted. Remember the accident in which a worker hitching an unauthorized ride on a forklift fell off and was run over and killed.
- Never under any circumstances ride on a forklift's forks. Even standing on a pallet can be dangerous. Remember the worker who fell 16 feet from an unstable pallet, hit the floor, and was killed.
- Never distract a forklift operator by whistling, waving, or other means while the forklift is in motion.
- Don't walk or stand under a forklift's elevated parts. Materials could fall on you. Even if the forks are empty, don't go under them. The operator might not see you and lower the forks.



Safety Practices for Pedestrians (cont.)

DON'T

- Don't operate a forklift unless trained and authorized
- Don't stand where you could be crushed
- Don't engage in horseplay
- Don't distract forklift operators
- Don't smoke in refueling or recharging areas

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Here are some more safety “don’ts” for working around forklifts.

- Don't operate a forklift unless you are both trained and authorized.
- Don't stand where you could be at risk of being pushed against a wall, storage unit, or other structure and crushed between the structure and a forklift.
- Don't engage in horseplay in areas where forklifts are operating. You could fall or get pushed into the path of a vehicle.
- Don't fool around with or distract forklift operators.
- And don't smoke in areas where forklifts are being refueled or in battery charging areas. You could start a fire or cause an explosion.

Think about all the precautions you can take to protect your safety when you work around forklifts.

Discuss other pedestrian safety rules specific to your operation.

Accident Prevention: Your Choice

1. **Before crossing aisles in forklift areas:**
 - a. Wave your arms
 - b. Look both ways
2. **Which most effectively warns you of an approaching forklift?**
 - a. Horn
 - b. Hand signals
3. **If you get too close to a forklift, you could be:**
 - a. Safer
 - b. Struck by the forklift or falling objects
4. **When you work around forklifts, wear:**
 - a. A respirator
 - b. High-visibility clothes

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It's time now for a multiple choice quiz to test your knowledge of the safety information we've discussed in the previous slides. Click the best answer— a or b—for each of the statements or questions on the screen. Go ahead and begin. [PAUSE] How did you do? Did you get all the answers right? Let's review quickly.

- Before crossing aisles in forklift areas, look both ways.
- Horns are the most effective warning of approaching forklifts, so listen for them. Also listen for backup signals and other warnings.
- If you get too close to a forklift, you could be struck by the forklift or falling objects. So stay well clear of operating forklifts.
- When you work around forklifts, wear high-visibility clothes so that it's easier for forklift operators to see you.



Accident Prevention

Do you understand:

- Pedestrian safety program?
- Safety requirements for forklift operators?
- Safety practices for pedestrians?



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Do you understand all the information presented in the previous slides? Do you understand what we've said about:

- Our pedestrian safety program?
- Safety requirements for forklift operators?
- Safety practices for pedestrians?

You need to understand all this information to keep safe when working around forklifts.

Answer any questions trainees have about the information presented in the previous slides.

Conduct an exercise, if appropriate.

Now let's conclude the session with some key points to remember.



KEY POINTS To Remember!

- Forklifts are useful but can be dangerous.
- Pedestrians can be seriously injured or killed.
- Always keep alert to forklift activity.
- Follow safe work practices and procedures to prevent accidents.

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Here are the main points to remember from this session on forklifts and pedestrian safety:

- Forklifts are extremely useful but can also be extremely dangerous to pedestrians.
- In an accident with a forklift, you could be seriously injured or killed.
- Always keep alert to forklift activity in your work area.
- Follow safe work practices and procedures to prevent accidents.

This concludes the forklifts and pedestrian safety training session.

Give trainees the quiz, if appropriate.