

ERGONOMICS DEMONSTRATION PROJECT

Trucking Awareness Video

December 2002



Trucking Ergonomics Demonstration Project – Awareness Video

The trucking industry has a high overall rate of injuries, especially musculoskeletal disorders such as back and shoulder injuries. Trucking is therefore one of the first industries that must comply with the Washington State Ergonomics Rule.

Within a trucking company there are numerous job functions being performed, including:

- Driving trucks over the road;
- Loading and unloading trucks at a loading dock;
- Loading and unloading trucks at customer locations when making pick-ups and deliveries;
- Performing scheduled maintenance and repair work in the shop;
- Working in the office, including dispatching, billing, and reception.

Within each of these job functions, there are a variety of ways that a task can be accomplished. For example, freight on pallets is loaded and unloaded using a forklift, while loose freight can either be moved by hand truck or lifted and carried by hand.

Although there are a lot of different tasks, only some of them will have specific work activities, called “caution zone jobs,” that are covered by the Ergonomics Rule. Many of these caution zone jobs involve lifting, such as manually handling freight or lifting heavy parts in the shop. The other main area of concern is using hand and power tools in the shop, which can expose workers to repetitive motions, high hand forces, and vibration. Many of the other tasks do not appear to be covered by the Ergonomics Rule, including: driving trucks, operating forklifts, using pallet jacks and hand trucks, or performing office work that doesn’t require a lot of keyboard use.

To help trucking companies narrow their focus when reviewing their workplaces for caution zone jobs, the Washington Trucking Associations, along with Peninsula Truck Lines, Hogland’s Transfer, and Ludtke Pacific Trucking, worked with the Department of Labor and Industries to develop awareness materials that can be used to educate both business owners and employees. The group decided that a video would be the most convenient way to distribute the educational materials, since this was already a common method of training for the industry.

The video will show industry specific examples of caution zone jobs, but it will also give examples of common tasks that would not be covered by the Ergonomics Rule. Descriptions of all of the caution zone job categories from the rule will be included in the video, even the ones that typically do not exist in the trucking industry, so the video can also be used to provide the ergonomics awareness education that is required by the rule. The handouts that would need to be provided along with the video are included at the end of this report. The video will also provide some simple examples of how to measure exposure to the work activities that are a concern under the rule.

This script can serve as an example to other industries that are considering developing similar educational materials. In addition to a video, the same material could also be presented as a slide show, as overheads, in printed materials, or as computer-based training.

The trucking video is expected to be completed early in 2003.

Trucking Ergonomics Video

Draft Script Version 2

Begin with acknowledgements and credits. Can be just on screen text with background photos of trucks, WTA sign, etc.

Video (video clips or graphics)

Audio (voice over)

Video (video clips or graphics)	Audio (voice over)
Part 1: Introduction	
Graphics on screen	1. Ergonomics is the scientific study of people at work.
Graphics on screen	2. Ergonomics is a tool that can be used to improve jobs as well as make them safer.
Using hand truck to move stack of boxes.	3. Chances are you're already doing things at your company that are ergonomic, you just don't call them that.
Shot of rule pages.	4. In order to help ensure worker health and well-being at work, Washington State has a rule that requires some companies to implement ergonomics in their workplaces.
Shot of checklist in Appendix B	5. The purpose of the rule is to reduce employee exposure to specific workplace hazards.
Shot of checklist in Appendix B	6. The ergonomics rule is quite simple: in workplaces where these hazards exist, employers must reduce them.
Truck going down road	7. This video will help explain how the Washington State ergonomics rule applies to the trucking industry. Companies in Washington state need to comply with WISHA rules, not OSHA rules.
Shot of loading dock during busy period.	8. Trucking companies are busy places with lots of different activities. It may seem overwhelming to look at all of

	seem overwhelming to look at all of them to see if they are covered by the rule.
WTA offices	9. The WTA and L&I worked with trucking firms to look at jobs and decide which are likely to be covered and which are not.
Good news slide	10. The purpose of this video is to help save you time by pointing out those jobs that you won't need to spend a lot of time looking at, and give you some tips on how to look at jobs that are a concern for ergonomics. You may be surprised to find that you'll spend most of your time looking at freight handling and your shop crew.
Hoglands, Peninsula, Ludtke	11. We looked mostly at common jobs in the industry, so not every job that you have may be covered in this video.
Don Poole, with clipboard, watching employee working	12. If you do have a job not covered in this video, you'll need to make a point of looking at it to see if the ergonomics rule applies. There will be some information at the end of the video on resources to help you look at jobs.
Part 2: Jobs not covered by the rule.	
Graphic: "Not covered by the ergonomics rule" (Stays on screen as videos play)	13. What follows are some of the work activities that, for a typical trucking company, would not be covered under the ergonomics rule.
Truck going down road, shot of driver from inside cab.	14. Over-the-road truck driving.
Forklift driver picking up load and heading into trailer Moving load with pallet jack. Sliding boxes onto hand truck and moving them.	15. Forklift driving. 16. Using a pallet jack or hand truck to load and unload trucks.
Dispatcher, receptionist.	17. Most office work, especially if it

	involves a variety of tasks.
Someone picking up tipped over boxes.	18. You also won't need to look at work that occurs unexpectedly, such as the lifting that happens when a load falls off a pallet.
Mechanic working on infrequent repair task (spring pack?). (at Ludtke)	19. If an exposure happens infrequently, you won't need to look at that either. You only need to evaluate work activities that occur more than one day per week and in more than one week out of the year. If, for example your shop mechanic only does one or two (spring pack?)s a year, you wouldn't need to look at that activity for the purposes of the rule.
Someone talking to mechanic about work being done. (clipboard shot from #12, different angle)	20. You'll probably still want to look at these jobs to make sure there aren't any safety concerns.
Part 3: Caution zone jobs.	
Caution zone jobs as graphic on screen. "Caution zone jobs are <u>not</u> prohibited."	21. Jobs that have risks for injury are called 'caution zone jobs'.
Requirements for Caution Zone Jobs: <ul style="list-style-type: none"> • Job analysis • Ergonomics Awareness Education 	22. The ergonomics rule says that these 'caution zone jobs' require job analysis and ergonomic awareness education.
Caution zone job risk factors (bulleted list)	23. Risk factors include: working in awkward postures; using high hand force; performing repetitive motions; using your hand or knee to make repeated impacts; heavy, frequent or awkward lifting; and exposure to moderate to high levels of vibration. We'll look at each of these risk factors later when we talk about specific jobs.
Video of active, but not overly demanding work.	24. Just because a job has risk factors doesn't mean that it will result in an

	injury, though
Shot of delivery	25. In fact, a little bit of exposure to some risk factors can actually be good for you.
Reaching up (but not overstretching) to put lightweight box on top of stack	26. Occasionally moving into awkward postures like reaching or bending will help to stretch and exercise your muscles.
Picking up box on floor of trailer, using proper technique	27. Similarly, if you occasionally do some lifting, especially if you do it properly, it can help to strengthen your muscles.
Risk of injury depends upon: Duration Frequency Intensity... ...of exposure.	28. Whether or not a risk factor will result in an injury depends on the duration, the frequency and the intensity of whatever it is you're doing.
Graphic	29. How long, how often and how much.
Duration = hours of exposure Clock on screen Multiple risk factors at one time = higher risk of injury.	30. The longer you're exposed to risk factors, and here we're talking about hours per day, not just minutes, the more likely an injury will occur. Also, the more risk factors you have at once, the more likely an injury will occur.
Requirements for caution zone jobs	
Safety committee meeting discussing checklist	31. Employers need to work with employees to look more closely at caution zone jobs to see if they are hazardous.
Safety committee meeting discussing solutions	32. If jobs do have hazards, they then need to find ways to fix these jobs, like new work methods or changes to equipment so that they are no longer hazardous.
Safety committee meeting still discussing	33. Employees also must be allowed to be part of evaluating the fixes to make sure that they work.

Safety committee meeting	34. Keep employees up to date on the progress of the ergonomics activities at safety committee or other employee meetings.
Safety committee meeting, employee speaking	35. Employee input can be very helpful, since they are the experts on their jobs.
Part 4: Specific tasks covered by the rule and how to look at them.	
Trucking jobs covered by the ergonomics rule.	36. Some common activities in the trucking industry are likely to be covered by the ergonomics rule. These include...
Hand stacking of freight.	37. Freight handling, whether it's on the loading dock...
Lifting box out of trailer.	38. ...or when making deliveries to a customer.
Lifting dolly tongue and pulling it.	39. Hostlers, or anyone who has to handle dollies when hooking up a second trailer.
Mechanics handling brake drum, using impact wrench.	40. A lot of the work done by the shop crew, if you have one, when doing maintenance and repairs. This is especially true if they lift heavy parts or use a lot of vibrating tools.
Biller at keyboard.	41. Data entry, billing clerks, or anyone who does a lot of non-stop keyboard work in the office.
Freight handler.	42. Freight handlers are exposed to lifting, awkward postures, and hand force.
Heavy, awkward and frequent lifting.	43. Lifting is probably the most common risk factor, not just in trucking, but in most industries.
Picking up obviously heavy box.	44. Most people are aware that lifting heavy objects increases the risk for injury.
Awkward lift.	45. Fewer people know that repetitive lifting and lifting even moderate loads

	while bent over, or reaching out, can be just as hazardous.
Awkward lift.	46. When you bend over to pick something up from below your knees, not only does your back have to lift the object, but it also has to lift the weight of your upper body.
Lowering box.	47. Something else to keep in mind – the same stresses are there when you lower something as when you lift it.
Worker making delivery, mostly sliding loads.	48. A lot of the time, more experienced workers have come up with techniques to handle freight without a lot of lifting.
Repalletizing freight, transferring between pallets in trailer.	49. However, there may be times when lifting is unavoidable, or when lifting has to be done under less than ideal conditions.
Sorting through boxes in back of trailer	50. Working while bent over places a lot of strain on the muscles of your back.
Using hand truck for boxes on floor.	51. Avoid storing things on the floor unless you use a hand truck to move them.
Box put down on shelf or table at good height.	52. Place them on a surface between knee and waist level instead.
Carrying boxes	53. Carrying boxes also involves hand force, which can be a problem if you hold onto an object for a long period of time.
High hand force	54. There are two types of hand force that are covered by the rule.
Power grip of box underneath, alternating with pinch grip from above.	55. Gripping something with the whole hand, called a power grip, is five times stronger than gripping something with the fingertips, known as a pinch grip.
Power grip of box underneath, alternating with pinch grip from above.	56. So, picking up something that weighs 2 pounds with a pinch grip is just as stressful as picking up 10 pounds with a

	power grip.
Picking up box with pinch grip from above	57. One of the best ways to reduce grip forces is to use power grips instead of pinch grips wherever possible.
Vs. picking it up from underneath.	58. For example, picking up objects from the bottom, using your whole hand.
Use of roller conveyor, team lift.	59. Look for alternatives to lifting, including hand trucks, conveyors, carts and other mechanical assistance. Or if these aren't available, get help from a co-worker.
Pallet jack again.	60. A lot of freight handling is actually not considered lifting. We already mentioned that using forklifts and pallet jacks aren't covered.
Using hand truck to move box.	61. Similarly, if you tip a box and use a hand truck to move it, that's not considered lifting.
Sliding batteries from one pallet to another. Dragging boxes onto lift gate.	62. If you slide or drag an object, you don't need to be concerned with that either. Pushing and pulling aren't covered by the ergonomics rule, although you still need to be careful about not trying to push and pull too much weight.
Worker lifting obviously light object.	63. And there's no need to spend time looking at how very light objects are lifted. If something weighs less than 10 pounds, you don't need to consider it a lift as far as the rule is concerned.
Lifting and pulling a dolly.	64. Dollies can be heavy, so lifting and moving them is an exposure to look at.
Lifting and pulling a dolly.	65. Obviously a worker isn't lifting the entire weight of a dolly when he moves it.
Sequence showing how to weigh a dolly.	66. You can tell how much of the weight he is lifting by first weighing the worker, and then weighing him as he is

<p>Show math at bottom of screen.</p>	<p>picking up the dolly just enough to get it off the ground. The difference is the weight of the dolly at the moment he first lifts it. This is the weight you'll use to analyze the lift.</p>
<p>Shot of dollies with spare tires, more length behind the wheels.</p> <p>Shot of handles.</p>	<p>67. Dollies that are well balanced, with almost as much weight behind the wheels as in front, like these, will be easier to lift than dollies that are not balanced. Handles in good locations on the tongue can also make lifting them easier.</p>
<p>Heavy dolly with no counterbalance.</p> <p>Using the crank arm to adjust the height.</p> <p>Mechanical device?</p>	<p>68. Dollies that aren't balanced can weigh over 90 pounds, and lifting them would be considered a hazard under the ergonomics rule. These would need to be lifted using the crank arm, or using mechanical equipment.</p>
<p>Shot of shop work.</p>	<p>69. If you have your own shop, you will need to evaluate mechanics for...</p>
<p>Lifting heavy part.</p>	<p>70. heavy and awkward lifting,</p>
<p>Mechanic reaching up.</p>	<p>71. and working in awkward postures</p>
<p>Mechanic reaching up.</p>	<p>72. These include things like working with your hands over your head or your elbows above your shoulders....</p>
<p>Mechanic bending over to inspect part.</p>	<p>73. ...and bending at the back.</p>
<p>Mechanic at ground level</p>	<p>74. Squatting is a good alternative to bending at the waist, but only for short periods of time.</p>
<p>Mechanic at ground level</p>	<p>75. If you squat for too long, it builds up pressure behind the kneecap, and it can cause damage to the knee.</p>
<p>Mechanic at ground level</p>	<p>76. Kneeling is another way to get down low, but it also causes pressure to build up behind the kneecap. If possible, find a way to sit for part of the job.</p>

Highly repetitive motions.	77. You'll also need to look at hand force and repetitive motions when using hand tools.
Mechanic using hand tool.	78. Motions are considered highly repetitive when you use the same part of your body to make an identical motion over and over again without pauses.
Mechanic using hand tool.	79. Most repetitive motions involve the hand, wrist, elbow, shoulder, and neck.
Mechanic moving on to another part of the job.	80. You might see some repetitive motions in a trucking company, but rarely does someone do the same thing over and over again for a long enough time to be covered by the rule.
Using power tool.	81. Power tools help to reduce repetitive motions, but they can require hand force and expose workers to vibration.
Mechanic using impact wrench.	82. Vibration has a number of effects on the body.
Mechanic using impact wrench.	83. If you're exposed to enough vibration, it can cause damage to the nerves and blood vessels in your hands and arms.
Graphics	84. Use low vibration tools if they are available. Keep tools well maintained to keep vibration levels low and so that they work more quickly. You might consider using anti-vibration gloves. They may reduce some of the vibration to your hands, and they'll help keep your hands warm to reduce damage to blood vessels.
Wrist bending when using a tool.	85. When you bend your wrists, you actually lose a significant amount of your grip strength.
Wrist bending when using a tool, changing to a straight wrist.	86. This increases your risk of injury, especially to the wrist and elbow. It's important to try to work in positions

	that keep the wrist straight.
Using impact wrench, timer in bottom of screen starts and stops with the tool.	87. Keep in mind when looking at these activities that the duration of exposure for the ergonomics rule is the duration of the risk factor itself, not the duration of the job that the risk factor is part of. For example, duration of exposure to vibration during a wheel change is only the time that impact wrench is actually in use, not the entire time it takes to change the wheel.
Office worker at computer.	88. The same timing applies if you're looking at awkward postures or intensive keying in office jobs.
Hands on keyboard with timer on screen. Timer stops when hands stop.	89. The time of exposure is only the actual time spent in the posture or typing at the keyboard.
Billing clerk typing away.	90. Intensive keying as opposed to intermittent keying is a specific kind of repetitive motion.
Billing clerk typing away.	91. It involves highly repetitive movements of the fingers for a long duration – four or more hours a day.
Billing clerk typing away.	92. Doing tasks like data entry.
Billing clerk typing away.	93. The repetitive movements create a risk for hand or wrist injuries.
Getting up from keyboard to do something else.	94. A simple way to avoid intensive keying is to arrange jobs to provide more variety of work.
Repeated impacts	95. There are a couple of hazards listed in the ergonomics rule that you probably won't see in a trucking company.
Carpet layer clip	96. Repetitively using your knee as a hammer, such as this carpet layer is doing to stretch the carpet using a knee kicker, can damage many of the same soft tissues that kneeling damages.

Trailer, carpet appears on floor with sound effect.	97. Of course, you probably won't need to worry about this unless you decide to install wall-to-wall carpet in the floor of every trailer.
Pushing box into place	98. Similarly, there are many soft tissues in the palm of your hand that are easily damaged when using the palm as a hammer. This type of exposure almost never reaches levels where it would be covered by the ergonomics rule in a trucking company, but employees should be aware that it can cause an injury that could easily be avoided.
Part 5: Resources and summary.	
Truck on the road	99. We hope this video will help you focus on the few jobs you may have that are covered by the ergonomics rule. This video was created to help get you started in looking at your workplace with ergonomics in mind.
	100. You may find that as you start looking at jobs and applying the ergonomics rule to them, that you're going to need a little more help.
Shot of WTA offices	101. You have several resources available to you if this is the case.
Logos	102. You can work with your safety committee, contact the WTA, or contact any of the trucking companies who helped create this video.
L&I workshop information	103. L&I has no-cost ergonomics workshops available that are specifically for the trucking industry. You can also request a no-cost consultation from a local L&I office.
L&I's ergonomics web site: http://www.lni.wa.gov/wisha/ergo/	104. For more information on resources available from L&I, visit their web site: http://www.lni.wa.gov/wisha/ergo/

Points to remember: Bulletized list.	105. Here are some of the key points to remember:
Graphic	106. Washington State has an ergonomics rule that applies to most trucking companies.
Graphic	107. However, there are a lot of activities at a trucking company that are probably not covered by the rule, including driving trucks, operating forklifts, moving freight with pallet jacks and hand trucks, and most office tasks.
Graphic	108. The jobs that the rule does apply to are called caution zone jobs. Caution zone jobs may be OK with no changes. You need to do some awareness education, and work with employees to analyze the jobs to see if hazards are present.
Graphic	109. It's only if your analysis finds hazards that you'll need to make changes to the jobs to reduce those hazards.
Graphic	110. Employees will need to be involved in analyzing jobs and identifying solutions, as well as reviewing ergonomics activities annually.
Graphic	111. Ergonomics can be more than just a one-time fix. It can be an on-going process that you can use to make things better.
Worker using hand truck	112. Changing jobs so that they better fit the workers has other benefits as well.
Worker using hand truck	113. Workers are often able to do a better job because they have more energy and can concentrate on the

	work.
Sliding battery example	114. They're also less tired at the end of the day, so they can enjoy life outside of work more.
Sliding battery example	115. There are a lot of changes that you can make to the way jobs are done that will make them both safer and better.
Logos...	116. And there's nothing wrong with that.
...thank you	117. Thanks for your time and attention.

Required handouts

The following pages contain the handouts that must be provided if the video is used as part of the ergonomics awareness education for employees in caution zone jobs and their supervisors. Employers need to customize the Employee Involvement handout to include specific information on how employees will be included in their ergonomics activities related to rule compliance. The Symptoms Reporting handout needs to be customized with the employer's specific procedures for reporting WMSD symptoms (e.g., "Report any symptoms to your supervisor immediately.").

Optional handouts, including a sample training roster and certificate of completion, can be found on Labor and Industries' Ergonomics web site:

<http://www.lni.wa.gov/wisha/ollearn/ErgoAwarenessEducation/default.htm#Handouts>.



Ergonomics Awareness Education

For employees in caution zone jobs and their supervisors

Your Involvement in Ergonomics

You are an important part of our ergonomics efforts. During the coming months, we will be analyzing jobs to see if there are hazards present. If we find hazards, we'll be working together to try to find solutions, and then checking to make sure that any solutions we come up with are working.

Some of your co-workers have been asked to help with analyzing these jobs:

You are the expert in your job

They may be coming to talk to you about your job and maybe watch you work. Be sure to share any concerns or ideas for improvements you have with them. You are the expert when it comes to your job, so your input will be very valuable.

These co-workers will be helping to develop solutions for any hazards found:

Your job may not need to be changed, but if it is, you may also receive training on how best to work with the changes. If for some reason the changes aren't working for you, be sure to let your supervisor or one of the contacts listed above know about it.



Ergonomics Awareness Education

For employees in caution zone jobs and their supervisors

What are WMSDs?

Work-related musculoskeletal disorders, or WMSDs, are injuries to the soft tissues of the body - the muscles, tendons that connect muscles to bones, ligaments that connect bone to bone, nerves, arteries and veins, pretty much every part of your body that's not a bone or internal organ. Pain is the most common symptom of these injuries.

When should I report symptoms?

Of course, it wouldn't make sense to report all the little aches and pains you experience. But how do you know when symptoms are serious enough to need attention? Report your symptoms if:

- pain lasts more than 2 to 3 days in a row, severe or worsening
- pain spreads or "travels" down an arm or leg
- symptoms include numbness or tingling (hands or feet "falling asleep" or feeling of "pins and needles").
- symptoms include feelings of weakness or loss of strength
- symptoms keep you from sleeping at night.
- symptoms get worse while working.

When in doubt, it's better to report symptoms and be told there's nothing wrong than to wait too long.

What parts of the body do WMSDs affect?

WMSDs affect the parts of your body that are prone to injury when demands on them go beyond what they can handle. Typically these injuries occur in the moving parts of the body like your neck, low back, shoulder, elbow, wrist, and knee.

What are some of the symptoms of WMSDs?

WMSDs have many different symptoms, many of which you may have experienced at one time or another. These include:

- | | | |
|-------------------------|---------------------------|----------------------|
| • Discomfort | • Unusual sensations - | • Shooting or |
| • Pain | numbness, tingling, | stabbing pains in |
| • Swelling | burning, heaviness, "pins | arms or legs. |
| • Changes in skin | and needles," or "falling | • Weakness or |
| color | asleep"- of the hands or | clumsiness in hands, |
| • Stiffness, tight | feet | dropping things. |
| muscles, or loss of | | |
| flexibility in a joint. | | |

Having one or more of these symptoms doesn't necessarily mean you have an injury, though.



Ergonomics Awareness Education

For employees in caution zone jobs and their supervisors

What are some of the consequences of a WMSD?

Often these injuries start out small, as a little muscle pull or a slightly irritated tendon. It can become aggravated, especially if you keep doing the activity that caused the injury in the first place. The good news is that early treatment is often very simple and successful. Therefore, it's important for your own health to report symptoms as early as you can.



Ergonomics Awareness Education

For employees in caution zone jobs and their supervisors

Ergonomics Awareness Education

For Employees in Caution Zone Jobs and Their Supervisors

Requirements of The Ergonomics Rule

1. Employers are only covered by this rule if they have employees working in “caution zone jobs.” Caution zone jobs are typical work activities with exposure to one or more risk factors for work-related musculoskeletal disorders (WMSDs).
2. Employers covered by the rule must provide ergonomics awareness education to all employees who work in caution zone jobs and their supervisors. The video along with these handouts fulfills the requirements.
3. Employers must also work with employees to analyze caution zone jobs to see if the risk factors reach hazard levels.
4. If hazards are found, employers and employees must work together to find solutions to the risk factors, put them in place and check back to make sure they are working. This means, finding ways to reduce employee exposure below hazardous levels or to the degree feasible
5. Some solutions may require training along with their implementation.

A copy of the rule comes with this training information. You can also request a copy of the rule by calling 1-800-4BE-SAFE (1-800-423-7233), or you can download a copy from the website: www.lni.wa.gov/wisha/ergo/