Work Safely in a Warehouse



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Introduction

This publication is intended to support the induction and work guidance of an employee in a retailer warehouse.

A safe and healthy workplace benefits everyone. It means the staff feels well and work flows smoothly. Occupational Health and Safety work means cooperation around safety and health issues and concerns everyone in the workplace. Supervisors carry the financial and operational responsibility for safety and health in the workplace. Each employee is obliged to take reasonable care of their own and their colleagues' health and safety and to inform the supervisor and the OHS representative about the defects and deficiencies causing hazards in the workplace. Induction and work guidance play an important part in ensuring safety at work.

Induction means all the actions taken to familiarise a new employee with the work place, its customs and people as well as the job itself and the expectations relating to it.

Work guidance includes everything relating to performing the job itself, such as the task itself, the parts and stages of the task as well as the knowledge and competence required by the job.

Task: Do you know the main safety risks at your workplace and how they are reduced? Have you been inducted on safe ways to work?

Working environment and work habits

Rules, instructions and risk taking

Based on accident statistics alone, warehouse work is risky work. It is the employer's duty to draw instructions and rules for, for example, internal traffic and the use of personal protective equipment (PPE). It is your duty as an employee to follow those instructions carefully – provided that you know them. If a rule or instruction feels improper or ill-suited to the job, discuss it with your supervisor and suggest changes. Not following the instructions is not the right course of action – besides, it is against the Occupational Safety and Health Act (18§).

There may be several reasons for taking a risk: not recognizing the risk, believing in good luck time after time, or succumbing to factors competing with safety. These factors include convenience, rush, deep-rooted wrong practise, etc. You should work to recognize these competing factors in your own way of working and then aim to remove them. You should aim to strengthen the motivational factors leading to the desired behaviour (eg. safe way of working). For example, ask your supervisor for better-suited or more appropriate protective gloves when you notice that the ones you have are not good enough for the job. Sometimes changing a deep-rooted



Clear written instructions are often needed to ensure safe behaviour.

wrong behaviour might take a good while of consciously doing the thing differently. You might, for example, make it a habit to replace an empty pallet in its assigned place right away when you notice it leaning on a shelf – quite soon you will do it without thinking.

General rules and instructions for warehouse work:

- Operate a forklift or aerial work platform only if you are licensed to do so and have been inducted on how to do it.
- Obey traffic signs and use designated routes to drive and walk in the warehouse.
- When driving a forklift, wear a seatbelt (if there is one). Also, keep the cabin door shut when driving a forklift.
- Use all the tools and machines as instructed, including their safety devices.
- Always wear the appropriate protective equipment and use the proper tools.

- Do your own part to make sure that customers do not use tools or machinery that can cause hazards or move around in unsafe areas.
- When starting conveyors or other machinery make sure no-one is in the operating area. Make sure you know where the emergency switch is. When you need to clear a jam, disconnect the machine from the power source before attempting to do it or call for maintenance and make sure the machine is tagged out of use until it has been serviced.

Task: Find out where the rules and instructions are in your workplace.

Good housekeeping

Disorder and untidiness cause many accidents, material damages and fires as well as make the place less pleasant to work in. Good order means that there is an assigned place for everything and that items are replaced in their place after use.

You can do your share to maintain order and tidiness:

- Don't leave items or the forklift in intersections or their vicinity or along aisles – not even for a short while.
- Discard wrapping and packing plastics after removing them.



- Clear the forklift cabin from all extra items (sticker sheets, tape rolls, etc) at the latest at the end of your shift.
- Keep exits, the vicinity of electric switchboards, first aid and fire safety areas and stairwells clear of clutter.
- Clean spilled materials right away if it can be done safely – if not, isolate the area and notify the appropriate person.
- Remove snow, ice and dirt from pallets and other such units before bringing them indoors.
- Keep the break room tidy: throw used paper cups in the bin, put magazines on the shelves, wipe coffee stains off the table, etc.

Task: Learn about the recycling principles in your workplace. Find out what the assigned places are for the tools and machinery you use.

Handling loads

Many of the warehouse accidents happen when handling loads; moving, lifting, unloading or loading. You can do all this safely if you use the right methods and devices. It is always essential to concentrate on the task at hand.

Before doing something, stop and think ahead and prepare for the task:



Stay alert and focus on the task at hand

From 3T Results Ltd Learning Multimedia on "The Human Risk Factor" (in Finnisb)

When you pile loads for example by stacking boxes on a pallet, follow these steps and assess:

- if the stack will stand when moving it by the forklift or when lifting is onto a shelf
- if the stack can be loaded onto a truck in such a way that it can also be unloaded safely
- if the load is supposed to be movable by a pallet jack.

The main idea is to place the heaviest items on the bottom. Consider also the packing material – for example, a collapsing cardboard box can make the whole stack collapse. When necessary, use shelves in roll containers and do not exceed



the maximum carrying capacity of the roll container. You may need to secure the load by strapping or wrapping it. The load should be low enough so you can see over the load when moving the container and so that also unloading can be done safely.

Manual handling and lifting

Manual lifting and moving of items pose a safety risk and may cause for example back injuries. A falling load may cause an accident or the person carrying the load may lose his/her balance and fall or trip. Lifting wrong (eg. jerking) may cause a permanent injury. Repetitive or constant lifting leads to fatigue and increases the accident risk. Besides the weight of the load also individual features and the working conditions influence the total strain and the size of the risk. The relationship between the demand and the individual's capacity affects how safe the lift is.

Loading as such poses no risk to the back. It becomes risky when the load is heavy and the physical condition of the worker is weak. Working in the warehouse does not improve your physical condition, you should take care of your fitness and condition on your own outside work.

NB!

- Do not attempt to lift more than you can. Get help!
- Stay in good shape.
- Inform your supervisor about every accident and risky situation.



When lifting or moving a heavy or a large item, move the load by shifting your weight to protect your back. Turn your feet forward with one foot slightly ahead of the other, this way your spine will be in a good position. The further the load is from your body, the greater the accident risk and harmful loading.

When possible, place heavy items that need to be moved manually at the waist height and light items at higher and lower levels. The heaviest items should be placed about 50 cm's above ground. Slippery and uneven surface is an increased strain and risk factor.

Wide and low ramps ease the transport of loads.

NB!

- Avoid carrying heavy loads in the stairs.
- Use ramps whenever possible.
- If the pallet is stored high up, lower it down for handling items on it.

Did you know?

- Work should be organised so that you can avoid manual lifting and use powered equipment instead.
- Workers should be provided with appropriate aids for lifting and material handling.
- Workers should use all available tools and make the tasks less load-ing and lighter.
- In order to reduce or remove risk factors, work stations must be organised so that the physical strain remains reasonable compared to the worker's capacity.

Lifting aids and equipment



Using aids and equipment reduces the physical strain, the risk of strain injuries and the accident risk. The equipment should be suited for the task and to the worker. Make use of the available aids. Belt and roller conveyors and



other conveyors help with moving items. Other such aids are different forklifts and electrically operated or manual lifting jacks and trolleys.

Notice that it is safer to push than to pull.

Proper lifting technique:

- Check the weight, the balance and the content of the item.
- Plan your route, the location and the use of the lifting aids and consider doing the lifting together with a colleague.
- Plan the lift, prepare for it and concentrate on it.
- Activate your core muscles, get a good grip of the load, turn your

feet forward and slide the item close to your body.

- Avoid twisting and bending while lifting.
- Don't yank on the object or jerk upright.
- Lift with your legs.
- When removing items from shelves that are above shoulder height, first bring the load down to your chest and then bring it down.

Task: Find out what kind of aids and devices there are in your workplace to help you with manual lifting. How could you utilise them more?



Mechanical lifting

Always follow all the instructions in your workplace concerning mechanical lifting and load handling. Bear in mind the following principles:

- Only drive the forklift if you can see in the direction you are driving and can see all the other traffic. If necessary, lower the load, drive in reverse and stop at intersections.
- Lifting a load onto a shelf or from the shelf:
 - drive into the loading position and only lift or lower the load when the forklift is in complete standstill (a forklift can tip over easily when the load is elevated)
 - start the lift carefully to assess whether the load is stable
 - lower the load onto its place, don't slide it or push it with the tips of the forks
 - look back before reversing, lower the forks and only then back up from the shelf
 - never raise a load over other workers.
- Do not climb on shelves. Use a stable step ladder or a separate or forklift compatible personnel lift. Extension ladders must not be used at all for getting items from shelves.

- When loading or unloading from dock to truck or container,
 - 1. make sure the truck or container doesn't move (chock the wheels)
 - 2. make sure the dock plate is secured and
 - 3. make sure the floors can support the combined weight of the forklift and the load.
- When operating the forklift on a ramp, the load should always be on the uphill side of the ramp. Drive forward going up the ramp. Drive backward going down the ramp.Travel straight up or down.
- When travelling with or without a load on the forks, keep the forks approximately 10–20 cm off the floor.
- Only exit the forklift after it has come a complete standstill. Do not jump down.

Working areas should be separated from the forklift traffic. This is, however, not always feasible. For example, when wrapping a roll container or pallet in the dispatch areas, you might have to work amidst forklifts. Be aware of the risks connected to this and constantly observe your surroundings. You may also suggest your supervisor to appoint a more suited place for the task. Pay particular attention if you have to operate a machine in the customer areas. Customers are not aware of the risks related to your work. You may also isolate the working area or work in the customer areas after opening hours.

Task: Learn to interpret and understand the sign on pallet shelves.

Lifting and moving personnel

You should only lift personnel by lifts designed for that purpose (aerial work platforms, scissor lifts, vertical personnel lifts). These devices must be safety inspected annually and marked properly for personnel lifting. You must have a minimum of one year experience operating such a lift before lifting personnel on it. This means you must be at least 19 years old. Also, the person being lifted must be at least 18. Before attempting the lift, make sure you cause no danger to yourself or anybody else. If necessary, isolate the area from other traffic. (Decree 403/2008, Chapters 3 and 3a, 25§).

You mustn't transport another person in the forklift cabin unless there is an extra seat in the cabin. Also, forklift forks must not be used for transporting personnel, not even on pallets. This applies to manual jacks as well.



Task: Make sure you know the instructions in your workplace concerning lifting personnel.

Suitability and condition of forklifts and other machinery

Only use machinery and devices that are in good working order and suited for the job. When starting to use a device, consider the weight, size and shape of the load, also how high you have to lift it and if the environment poses limitations (e.g. aisle width). The load you are handling may require using some type of accessories (slings, chains, booms), fork extensions, drum grippers, booms for reels, carpet poles, etc. Make sure the accessories are compatible with the forklift or machine.

Do not use machines, devices or lifting aids that are not in good condition or lack safety equipment. Report, tag and remove defective forklifts from service until they have been repaired and notify your supervisor.

It is the employer's responsibility to organise the maintenance and repairs of the machinery. However, you should also carry out daily checks before operating the machine (e.g. forklift):

- make sure the cables and chains are intact and that there are no spills
- check the tires and air pressure
- make sure there are no visible fractures
- make sure the machine is tidy enough (consider fire safety)
- make sure the controls and other functionalities are in proper working order – test them!

After your shift, park the machine in an appropriate place and leave it in good condition. Remove all trash (sticker sheets, tape rolls, wrapping material, coffee cups, etc).

The employer is advised to listen to the opinions of the personnel before acquiring machinery and devices. You can tell your supervisor what you think of the current devices and if necessary, suggest bettersuited solutions.

Task: Find out what accessories are needed in working with a forklift in your workplace.

Personal Protective Equipment (PPE) and work wear

A worker must wear the personal protective equipment and working clothes provided by the employer for a particular job (OSH Act 20§). If you have a problem with the suitability of the PPE or work wear, discuss it with your supervisor.

The appropriate PPE and work wear are assigned based on the tasks. Typically, in retailers' warehouses, protective shoes, gloves and reflective vest (or other work wear ensuring visibility) are needed. When necessary, also the following will be used: hearing protection (consider also impulse noise from collapsing and stacking roll containers), goggles (glass crushing), respiratory protection (dust, bacteria, chemicals), hard hat and clothes appropriate for the season or different temperatures.

The obligation to wear PPE also applies to subcontractors and truck drivers who need to move around in the warehouse environment. If you notice negligence, please point it out.

Task: Find out what tasks require the use of PPE and where the PPE can be found.

Fire safety and emergency preparedness

Warehouses always have fire hazards. Defective electrical equipment, forklift battery and engine defects, chemicals and smoking are the most common causes of fires but you should also recognise the possible risk of arson. Pallets and stored goods are fuel for fire.

You can do your part in reducing the fire hazard and helping the rescue work. Good housekeeping plays an important role in this:

- keep trash and other flammable material out of the machinery and equipment and their vicinity
- do not store items along the walls; fire spreads quickly through voids, roof structures and attic spaces
- obey the fire and safety instructions around the forklift recharging stations
- if you smoke, only do it designated areas and make sure you discard the butts in proper containers
- if the bin has a lid, make sure you close it after use.

Never prevent fire doors from closing (by wedging them open) even for a short while. Make sure you do not damage fire detectors by forklifts or loads. If you suspect



Storage instructions for fireworks.

damage, notify your supervisor. Obey instructions on how to handle, package and store chemicals and study the safety regulations of EX and ATEX classified spaces.

Tasks: Make sure you know where the emergency exits are: can you see the green exit sign from where you work? If you handle chemicals, learn the safety instructions.

Loading, health and work ability

Physical strain

Typical loading factors in warehouses are lifting and moving of loads, fixed and awkward postures, repetitive work as well as some environment related factors, such as temperature, draft, noise and air quality. Harmful loading can, however, be prevented and reduced in many ways. Reasonable, steady pace of work helps. Rushing exposes you to accidents!



Temperature

Our thermal balance is affected by the environment and the clothing and how loading the work is. Environmental factors affecting the body temperature are:

- air temperature
- radiant heat
- wind / air movement
- humidity.

Warehouse work can generally be classified as moderately strenuous work and the recommended temperature for that kind of work is 19–23 degrees Celsius. Temperature that significantly deviates from that is a loading factor and affects workers' performance adversely, leading to more mistakes and lessened productivity.

The more strenuous the work and the hotter the environment, the higher the physical loading. It is therefore very important to take care of the fluid and electrolyte (salt) balance. Working in hot environments entails adequate breaks, fluids and skin protection. Heat exposure can be diminished by improving air conditioning and ventilation, by local cooling systems, fans or shades. It is advisable to turn off all heat generating machinery when not in use. When the temperature is high:

- drink plenty
- eat healthily
- take breaks
- use cooling methods appropriate for you task. Heat exposure can be lowered by fans and air conditioners, draft, or by taking a cool shower.

Outdoors work is performed in many warehouses, and storage freezers are an indoors cold working area. Going back and forth between a warm and a cold working area puts an extra burden on the body. Work is defined "cold work" if it is performed in temperatures below +15 degrees Celsius. In practise, coldinduced health problems occur in people who work in temperatures below +10 degrees Celsius. "Cold work" entails that the worker has a sensation of cold. Besides temperature, these sensations are caused by wind, humidity, cold liquids and cold surfaces and platforms.

Cold is known to impair one's performance and to increase the loading. Good physical condition improves the tolerance of cold because fit muscles generate more heat and their blood circulation is better.



Prevent cold hazards:

- Keep doors shut.
- Stay dry (including your feet).
- Wear layered clothing.
- Warm-up before starting the actual work.

If you work in irregular temperatures, contact your occupational health care for instructions and recommendations on breaks, protective clothing and hazard prevention.

Repetitive work

Repetitive work means work where similar, short tasks are performed repeatedly. In repetitive work, work cycles resemble each other in their duration, use of force and movement. According to the exact definition, repetitive work is such that one phase lasts less than 30 seconds or that more than half of the work phase is spent repeating the same movement, regardless of the length of the phase. The difference between repetitive and non-repetitive work is quite theoretical. Also tasks that include longer work phases or more versatile movement may cause upper limb pain.



In the warehouse, for example loading and unloading goods and forklift driving may classify as repetitive work.

Simultaneous repetition and excessive use of force cause a multiplied risk.

Breaks and energy intake

Breaks lessen the physical loading of work. Taking breaks is particularly important in jobs that include constant repetition, lifting and carrying. Static muscle exertion pauses during breaks and that enables the muscles to recover.

Regular break-time exercise, done on your own or instructed, is an effective and inexpensive way to prevent musculoskeletal problems.



Physically strenuous work requires sufficient energy intake. Eat well and time your meals right and you will have energy to work the entire shift.

Tips for recovery:

- Take several short breaks instead of one long one. Eat healthy snacks.
- Make it a regular habit to stretch your muscles for a few minutes every once in a while.

Work postures and movements

It is critical that the workstation arrangements and design and the use of machinery, equipment and tools make it possible for you to work in a good posture, to change positions and postures and to move around freely. You shouldn't have to bend over or twist to reach the workstation, nor reach excessively or sustain arm extension.

Use both hands when shelving or picking items or lifting loads. That way you can keep your wrists in a natural position and won't need to grip forcefully or hold wrists in extreme positions.







Working at your workstation

Adjust the height of your workstation. If your task requires visual precision, position the task close and above elbow height. If your task requires moving your hands, position the task below elbow height.

Large or heavy loads are best handled standing. Adjustable work surfaces are recommended in particular for workstations where people of different heights work or goods of different sizes are handled.



Tool trolleys can be used as a moving workstation. A rubber mat provides good support if you have to stand a lot.

Manual work puts a burden on the upper body joints. Prolonged, unchanged posture – be it sitting or standing – may cause static muscle tension and lead to different symptoms and pains. Other joints and lumbar discs may also get burdened.



Standing work

Warehouse jobs are often jobs that include a lot of standing and moving, which burdens the lower body. Standing still strains the muscles and blood circulation considerably more than walking or moving around. Constant standing consumes energy and you get tired.

Standing posture makes it easier to reach further and also use force better than in a sitting posture. It is also easier to change postures and move around more easily and freely when standing.

For the best results, sit, stand and walk and adjust your own postures.



Tips:

- Occasionally, sit down to work or sit during breaks.
- Use a sit-stand stool.
- Leaning and finding support ease the pressure on your back.
- A rubber mat placed on the floor will ease the pressure on the back and lower body.

Sedentary work

Some warehouse jobs are done sitting, eg. office work, goods receiving, and handling of smaller items. Also, driving a forklift can be sedentary work. Sedentary work poses too little and too monotonous demands on the body. Combined with standing and moving around, sitting provides much needed change.

Appropriate workstation, suitable tools and furniture (such as adjustable desk and chair) are particularly important in sedentary work.

Adjust your workstation to fit you:

Desk:

- adjust the height
- shoulders relaxed and neck straight
- elbows supported
- room for materials

Display:

- optimal distance
- straight in front of you, below eye level



Chair

- height, feet on the floor or on a foot rest
- back rest provides lumbar support
- arm rests if needed

Mouse and keyboard

- same level, near each other
- alternate using them
- use an ergonomic mouse

Foot space

- feet on the floor or on a foot rest
- no electrical wiring in the foot space

Breaks

• even good ergonomics will not prevent injuries if you don't take frequent breaks.



Task:

Make sure your workstation complies with the recommendations above.

Stress management

Typical challenges in warehouse work include rush, constant state of alertness required by internal traffic, non-functioning machinery for example in voice activated picking, and maintaining competence to use new and constantly developing systems. Recovery is essential for managing stress. If you don't have enough opportunities to recover from work, this will lead to fatigue and lapsing alertness. And this in turn increases accident risk. Stress symptoms and effects of stress are different on different people.

Learn to recognise harmful stress in time. The symptoms could be:

- impaired performance
- increased mistakes
- aches and pains
- concentration and memory problems
- sleeping problems
- irritability, conflicts
- increased smoking and alcohol consumption.

Warehouse work is often shift work, with occasional night shifts. The Working Hours Act defines night work as work that is performed between 11 pm and 6 am. Night work is both physically and mentally more loading than regular day work. There are considerable individual differences as to how people react to shift work.

Prevent harmful stress:

- recognise the symptoms early
- discuss stress inducing matters with your supervisor

- embrace the challenges provided by your work. Make suggestions to develop your job description.
- Occupational health care services can help you assess your work load
- get enough sleep
- take care of your social contacts
- don't think about work in your free time
- lead active free time (social contacts, hobbies)
- relax in your preferred way; listening to music, reading, walking in the nature.

Well-functioning working community and atmosphere



Everyone has the right to be treated properly and respectfully at work. Do your part to maintain a positive atmosphere in your workplace.

Conflicts need to be solved promptly and problems solved before they become personalized. Occupational Safety and Health Act prohibits harassment and inappropriate treatment of other workers in the workplace. This includes harassment and threatening behaviour by customers as well.

Inappropriate treatment means objectionable or disturbing behaviour. Harassment and inappropriate behaviour may mean for example bullying or psychological abuse, including oppression, insulting comments, shunning/excluding or namecalling.

The following do not constitute inappropriate treatment:

- conflicts arising from work related decisions or interpretations
- handling of task or work related problems among the working community
- justified disciplinary actions
- referral to work ability assessment after the performance-related problems have been discussed with the employee.

Inappropriate treatment may include discrimination based on colour, gender, age or opinion. Also, unjustified removal of work tasks or employment benefits and not granting benefits may constitute harassment.

Also, sexual harassment or abuse count as inappropriate behaviour. They can be physical or verbal. Insinuations, gestures, offensive pictures or rude remarks can all be just as abusive as physical touching.

If you experience or observe inappropriate behaviour or harassment:

- make it known to the person harassing you that you find their behaviour inappropriate and if this does not help, ask the employer to intervene
- if needed, ask your Occupational Health and Safety Representative or shop steward or a colleague to accompany you to the meeting where the issue is handled.

If the situation doesn't improve, notify your supervisor.

Violence or threat of violence requires preventive measures and sufficient safety measures. In threatening or danger situations, always follow the given safety instructions.

Working alone

If a person works alone, the employer is obliged, considering the nature of the work, the circumstances and the location of the work, to arrange an opportunity for the employee to stay in contact with the employer and other employees. The employer must also ensure the means for calling for help to the person working alone. Working alone can be considered a hazard factor in itself. It is quite common that in smaller working communities workers work at least some part of the day alone or without visual contact to their colleagues.

Task:

Find out if your workplace has guidelines for the situations of harassment or violence.

Revision

- Make sure you have received thorough induction.
- Familiarise yourself with:
 - OHS policy in your workplace
 - risk assessment in your workplace
 - previous accidents and near misses in your workplace
 - the safety plan of your workplace
- In case of an accident, contact your supervisor.
- Plan the risky or heavy tasks in advance.
- Notify your supervisor of any defects and hazards you notice.
- Assess the need for tools and auxiliary devices and accessories.
- Learn and use the proper lifting technique.

- Take breaks.
- Stay in shape and lead a healthy life.
- Eat regularly.
- Learn about your occupational health care plan.
- Notify your supervisor when you are sick.
- Intoxicants are to be kept away from work: if you are drunk or hung-over, you endanger your own and your colleagues' safety; if you suspect a colleague of being drunk, discuss it with him/her.
- Take initiative to improve your workplace safety.
- Keep you first aid skills up-to-date.



The Centre for Occupational Safety, tel. +358 9 616 261, www.ttk.fi

Work Safely in a Warehouse

A safe and healthy workplace benefits everyone. It means the staff feels well and work flows smoothly. Induction and work guidance play an important part in ensuring safety at work. This publication is intended to support the induction and work guidance of employees in retailers' warehouses.



Better work