What is the problem?
Manually loading or unloading objects onto or from pallets is a common task in many industries. Often the pallet is located on the floor; placing objects on it or taking them off involves frequent awkward postures (bending, twisting and reaching) and repetitively exerting force to lift or lower the objects.

What is the risk?
Handling items while in bent, reaching or twisted postures increases the risk of musculoskeletal injuries of the shoulder, lower back and knees. These injuries can occur suddenly when lifting heavy objects, particularly in awkward postures. They also occur over time through wear and tear on joints and other body components when doing this sort of work.

What is a solution to this problem?
Implement the following measures in the workplace:

**Equipment**
1. Provide a scissor lift with a pallet ring turntable similar to the type shown in Figure 1 overleaf.
2. If the scissor lift mechanism is pneumatically powered, ensure that the scissor mechanism is guarded against creating a shearing or crushing space. See Figure 2 overleaf.

**Systems of work**
3. Ensure that the pallet level is adjusted so that the handling of objects is set at waist height for each level of the pallet.
4. Ensure that the pallet ring turntable can rotate through 360 degrees so that employees can keep the pallet load point in closest proximity to them.
5. Locate the pallet lifter in a position that allows adequate space for the employee to place items on the pallet without twisting. It is recommended that the pallet be located at least one metre from the place the objects are located, eg conveyors, tables or other surfaces. This leads employees to turn and step with the object, eliminating back twisting and reaching movements.
6. Ensure that the appropriate load-shifting equipment is used to remove the pallet from the lifter when full.

**Access to the work area**
7. Implement a traffic management system for load shifting equipment and pedestrians to prevent vehicles or people coming into contact with the scissor lift or operator.

**Maintenance, examination and testing**
8. Develop and implement maintenance procedures that ensure the scissor lift with turntable is used, inspected and maintained in accordance with the manufacturer’s instructions.

**Training and supervision**
9. Ensure that all employees who use the scissor lift or work in the area are trained in the safe operation of the machinery and in the systems of work for its safe use, including the traffic management systems.
10. Ensure that employees understand hazards and risks in manual handling, why the risk controls are required and the company’s requirements for the use of the controls.

**Glossary**

**Load shifting equipment** – forklifts, powered pallet jacks, walk-behind stackers, etc, which are used to transport pallets.

**Pallet** – square shaped platform (approximately 1 m x 1 m) made of timber, particle board or plastic, and designed to store and transport objects using load shifting equipment.
The problem

- Repetitive twisting the back and reaching sideways.
- Frequent forward bending of the back more than 20°.
- Repetitive forward reaching more than 30 cm from the body.

The solutions

- Figure 1. Turntable with pneumatic scissor lift.
- Figure 2. Pneumatic scissor lift with accordion safety skirting.

Further Information

WorkSafe Advisory Service
Toll-free: 1800 136 089
Email: info@worksafe.vic.gov.au
worksafe.vic.gov.au

Related WorkSafe Health and Safety Solutions
- Pallets – Loading and unloading items – using automation
- Pallets – Loading and unloading items – using vacuum lifters
- Pallets – Unloading items – using a bulk delivery method
- Pallets – Handling items above shoulder height