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National General  
Certificate**

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**Unit 8  
Manual and  
mechanical handling  
hazards and control**

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**Manual and mechanical handling**

**Overall aims of unit**

- Hazards involved in the movement of loads by physical and mechanical effort
- Risk reduction and preventive measures available
- Risks involved in the use of lifting and moving equipment

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**Manual and mechanical handling**

**Contents of unit**

- Manual handling hazards
- Mechanical handling
- Statutory examination of lifting equipment


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**Manual and mechanical handling**

**Contents of unit**

- Manual handling hazards
- Mechanical handling
- Lifting operations and lifting equipment

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**Manual and mechanical handling**

**Manual handling hazards**

**Common types of manual handling injuries**

- Rupture of intervertebral discs
- Muscle strain and sprain
- Torn or stretched tendons / ligaments
- Rupture of the abdominal wall (hernia)
- Cuts from sharp edges
- Bruises, fractures and cuts from dropped loads

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**Manual and mechanical handling**

**Manual handling hazards**

**Common types of manual handling hazards**

- Stooping while lifting
- Holding the load away from the body
- Twisting movements
- Frequent or prolonged effort
- Heavy / bulky / unwieldy / unstable loads
- Sharp / hot / slippery surfaces of loads
- Space constraints
- Lack of capability of the individual

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**Manual and mechanical handling**

**Manual handling hazards**

**Assessment of manual handling risks**

The **L**oad


The **I**ndividual

The **T**ask

The **E**nvironment

Remember.....**LITE**

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**Manual and mechanical handling**

**Manual handling hazards**

**Assessment of manual handling risks**

**Manual handling operations include**

- Lifting
- Carrying
- Pushing and pulling
- Handling while seated
- Twisting

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**Manual and mechanical handling**


**Manual handling hazards**

**Minimising risks from manual handling**

**General approach**

<b>Load</b>	-	lighten, reduce in size, provide handles, eliminate sharp edges
<b>Individual</b>	-	address individual factors, train, provide PPE and clothing
<b>Task</b>	-	redesign tasks, reduce manual handling tasks, mechanise, team lift, rotation
<b>Environment</b>	-	improve floor conditions, temperature, lighting, space

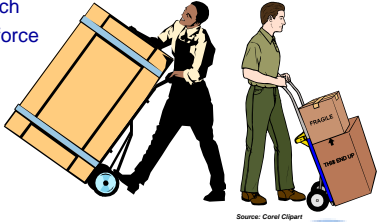
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**Manual and mechanical handling**  
Manual handling hazards  
**Minimising risks from manual handling**

**Methods used**

- Mechanical assistance
- Ergonomic approach
- Involving the workforce
- Training



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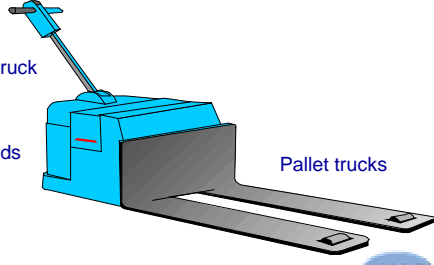
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**Manual and mechanical handling**  
Manual handling hazards  
**Minimising risks from manual handling**

**Mechanical assistance**

- Levers
- Hoists
- Trolley or truck
- Chutes
- Hooks
- Suction pads



Pallet trucks

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**Manual and mechanical handling**  
Manual handling hazards  
**Minimising risks from manual handling**

**Methods used**

- Mechanical assistance
- Ergonomic approach
- Involving the workforce
- Training



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**Manual and mechanical handling**  
Manual handling hazards  
**Minimising risks from manual handling**

**Methods used**

- Mechanical assistance
- Ergonomic approach
- Involving the workforce
- Training

**Training programme**

- Recognise the hazard
- Assess unfamiliar loads
- Correct use of handling aids
- Choice of PPE
- Environmental factors
- Housekeeping
- Individual capability
- Correct handling techniques

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**Manual and mechanical handling**

**Contents of unit**

- Manual handling hazards
- Mechanical handling
- Lifting operations and lifting equipment


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**Manual and mechanical handling**  
Mechanical handling  
**Fork lift trucks (FLT)**

**Fork lift truck hazards**  
20 deaths and 5000 injuries

- Injuries to driver 40%
- Injuries to assistant 20%
- Injuries to pedestrians 40%
- Fractures 40%
- Injury to ankle & feet 60%



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