



## **Lifting Principles**

### **Lifting Stages**

1. Preparation
2. Lifting
3. Carrying
4. Setting Down

### **1. Preparation**

Before lifting or carrying, plan out your lift. Think about:

- How heavy/awkward is the load? Should I use mechanical means (i.e., a hand truck, pushcarts) or another person to help me with this lift? Is it possible to break the load into smaller parts?
- Where am I going with the load? Is the path clear of obstructions, slippery areas, overhangs, stairs, and other uneven surfaces? Are there closed doors that need to be opened?
- Are there adequate handholds on the load? Do I need gloves or other personal protective equipment? Can I place the load in a container with better handholds? Should another person help me with the load?

### **2. Lifting**

Get as close to the load as possible. Try to keep your elbows and arms close to your body. Keep your back straight during the lift by tightening the stomach muscles, bending at the knees, keeping the load close and centered in front of you, and looking up and ahead. Get a good handhold and do not twist while lifting. Do not jerk; use a smooth motion while lifting. If the load is too heavy to allow this, find someone to help you with the lift.

### **3. Carrying**

Do not twist or turn the body; instead, move your feet to turn. Your hips, shoulders, toes, and knees should stay facing the same direction. Keep the load as close to your body as possible with your elbows close to your sides. If you feel fatigued, set the load down and rest for a few minutes. Don't let yourself get so fatigued that you cannot perform proper setting down and lifting technique for your rest.

#### **4. Setting Down**

Set the load down in the same way you picked it up, but in the reverse order. Bend at the knees, not the hips. Keep your head up, your stomach muscles tight, and do not twist your body. Keep the load as close to the body as possible. Wait until the load is secure to release your handhold.

#### **Power Zone**

Place items to be lifted within the “power zone”. The power zone is close to the body, between the mid-thigh and mid-chest of the person doing the lifting. This is the area where the arms and back can lift the most with the least amount of effort.

Information is provided by [UNC-Lifting and Material Handling](#)