

# School Library Ergonomics



# Introduction

People working in libraries perform numerous manual handling tasks, such as shelving books and maneuvering book carts. These tasks can put stress on the back, shoulders, arms, hands and wrists, and can increase the risk of repetitive stress injuries.

Shelving

# Risk Factors for Shelving Tasks

- 📖 Weight of books
- 📖 Reaching and bending
- 📖 High repetition rate of tasks



# Tips for Safe Shelving

- 📖 Reaching overhead puts stress on your shoulders, arms and upper back
- 📖 Use foot stool when shelving books on high shelves



INCORRECT



CORRECT

# Tips for Safe Shelving

- ❌ Carrying too many books while shelving can put stress on your arms and shoulders
- ✅ Carry only the book being shelved



INCORRECT



CORRECT

# Tips for Safe Shelving

 Bending at the waist puts stress on your back

 Squat when shelving books on low shelves

 Keep your back straight



INCORRECT



CORRECT



CORRECT

# Tips for Safe Shelving

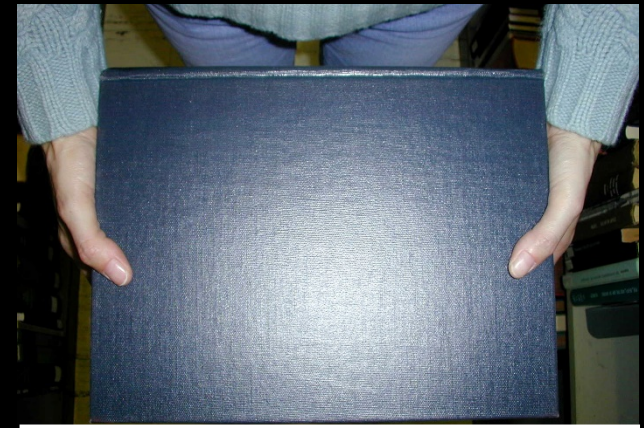
- 📖 Lifting heavy books can put stress on your wrists, arms and shoulders
- 📖 Use two hands to lift heavy books, such as bound volumes of serials
- 📖 Use two-handed power grip to disperse load and maintain neutral hand positions while shelving



INCORRECT



CORRECT



POWER GRIP



# Tips for Safe Shelving

- 📖 Pinch grip strength is approximately 25% of the strength of using the whole hand, increasing the risk of wrist injury
- 📖 Avoid use of a pinch grip when shelving




INCORRECT



CORRECT

# Tips for Safe Shelving

 Switch back and forth between using your left and right arms for shelving to lessen the weight and strain on your dominant arm, hand and wrist

 If practical, locate heavy books at waist height

# Recommended Maximum Weights for Shelving Tasks

Lifting from waist level to top shelf	17.5 pounds*
Lifting from floor to top shelf	11 pounds*
Stand from squat with armload of books	17 pounds*
Lifting from bottom row on cart to top row	17 pounds*

\*These weights are approximate. Individual factors such as age, size and level of physical fitness will affect the amount you can lift.




# Book Carts

# Risk Factors for Book Carts



- 📖 Awkward wrist, hand and arm postures
- 📖 Strain on shoulder and back muscles
- 📖 Collisions



# Tips to Prevent Accidents While Using Book Carts

-  Walk at a normal or slow pace while pushing a cart
-  Ensure that the book cart allows sufficient foot space for your natural gait
-  Keep the book cart close to your body

# Tips to Prevent Accidents While Using Book Carts

-  *DO NOT* use a damaged cart, particularly one with faulty wheels
-  *DO NOT* use a cart in which your vision is obstructed, whenever possible

# Tips for Maneuvering Book Carts Safely

- 📖 Push rather than pull the book cart
- 📖 Pull book carts when exiting elevators
- 📖 Pull carts through swinging doors
- 📖 Push from the end, not the sides



**INCORRECT**



**CORRECT**



# Tips for Maneuvering Book Carts Safely

📖 Get help when moving a large or fully loaded cart



# Tips for Maneuvering Book Carts Safely

📖 Use carts with handles, whenever possible



# Inspecting Book Carts

 Prior to using a book cart, check for the following

 Loose and/or worn out wheels

 Stability

 Ease of movement

 Ease of maneuverability

It is important to maintain all book carts, paying particular attention to the wheels

# Lifting and Carrying

# Lifting and Carrying

 Bend at the knees and keep your back straight

 Pull the load close to you and lift with your legs

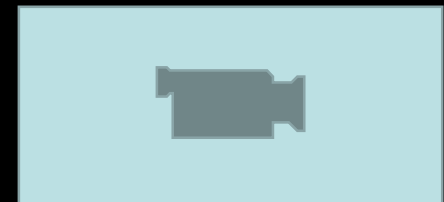


# Lifting and Carrying

- 📖 Get help when lifting large, heavy or awkward loads
- 📖 Carry loads close to the body
- 📖 Place heavy loads at waist level, whenever possible
- 📖 Take a step and turn rather than twisting

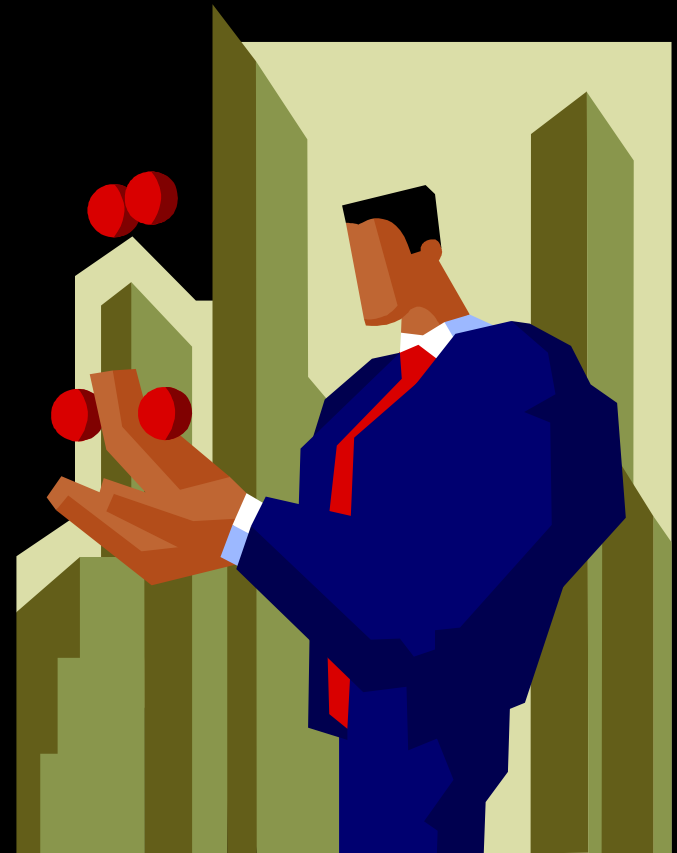
# Lifting and Carrying

 Do not carry too many books at one time




# Organize Work Tasks

📖 This clip art is supposed to be a guy juggling priorities...well, anyway, you get the point.





# Limit time spent seated

 Take a mini-break to stretch every hour.

