## **DESIGN PRINCIPLES FOR CARRYING TASKS**

(Adapted from NIOSH Elements of Ergonomics Programs - Toolbox Tray 9-F)

1. Eliminate the need to carry by rearranging the workplace to eliminate unnecessary materials movement and using the following mechanical handling aids, when applicable:



• Conveyors (all kinds).



Tables or slides between workstations.



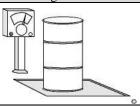


 Lift trucks and hand trucks.

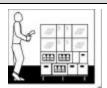


 Four wheel carts or dollies.

2. Reduce the weight that is carried by:

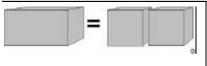


 Reducing the weight of the object and the container.



- Reducing the load in the container.
- Reducing the quantity per container to suppliers.

3. Reduce the bulk of the materials that are carried by:







- Reducing the size or shape of the object or container.
- Providing handles or hand-grips that allow materials to be held close the body.
- Assigning the job to two or more persons.

- 4. Reduce the carrying distance by:
- Moving receiving, storage or shipping areas closer to production areas.
- Using Powered and non-powered conveyors.



6. Convert carry to push or pull by:



• Using non-powered conveyors.



• Using hand trucks and push carts.