A manual material handling task is defined as the moving of materials by hand by pushing, pulling, carrying, lifting, lowering, or stacking.

**Best for monotask jobs only**

Observe job being performed

Break the job into tasks.

Select one tool each from list A & List B

**LIST A - Ergonomic Checklist:**
- OSHA Screening tool
- NIOSH lifting equation
- Liberty Mutual Psychophysical Tables

**LIST B - Semi-Quantitative Tools:**
- PLIBEL: accounts for environmental factors
- OCRA
- QEC

For Manual Material Handling Tasks:

Select assessment tool based on type of manual material handling task:

- For carrying, lifting, lowering, or stacking:
  - Liberty Mutual Psychophysical Tables
  - WISHA Caution/Hazard zone

- For pushing & pulling tasks:
  - Revised NIOSH lifting equation

- For non-Manual Material Handling Tasks:
  - ACIGI TLV for lifting
  - Utah back compressive force
  - Liberty Mutual Psychophysical Tables

Select each assessment tool according to:

- Awkward whole body postures: REBA
- Awkward upper body postures: RULA
- Repetitive action primary risk
- Excessive force primary risk factor
- Vibration primary risk factor
- Hand Activity: Moores Strain index
  - ACGIH hand activity level
  - Utah Shoulder Moment Model

Select each assessment tool according to the body region affected:

- Hand and shoulder: Moores Strain index
  - ACGIH hand activity level
  - Utah Shoulder Moment Model

Select each assessment tool according to the body region affected:

- Hand Activity: Moores Strain index
  - ACGIH hand activity level
  - Utah Shoulder Moment Model

No ergonomic risk identified

Is the task acceptable?

Implement changes and re-evaluate job.

Is the task acceptable?

No corrective action necessary.

No ergonomic risk identified

No

Yes

No

Yes

No ergonomic risk identified

No

Yes

No ergonomic risk identified

* A manual material handling task is defined as the moving of materials by hand by pushing, pulling, carrying, lifting, lowering, or stacking.

** Best for monotask jobs only
Observe job been performed

Break the job into task.

For Manual Material Handling Task:

Is the task acceptable?

- Yes
  - Does task include pushing & pulling?
    - No
      - No ergonomic risk identified
        - Corrective Action Necessary
    - Yes
      - Revised NIOSH lifting equation
  
- No
  - ACGIH TCV for lifting
  - WISHA lifting Calculator
  - Utah back compressive force

For non-Manual Material Handling Tasks:

Is the task acceptable?

- Yes
  - Is awkward posture primary risk?
    - No
      - No ergonomic risk identified
        - Corrective Action Necessary
    - Yes
      - Select each assessment tool according to:
        - Awkward whole body postures: NEXA
        - Awkward upper body postures: RUULA
  
- No
  - Is repetitive action predominant risk factor?
    - No
      - No ergonomic risk identified
        - Corrective Action Necessary
    - Yes
      - Select each assessment tool according to the body region affected:
        - Hand Activity:
          - Moores Strain index
          - ACGIH hand activity level
        - Whole Body analysis:
          - Rodger's Muscle fatigue assessment
          - Estimation of metabolic rate

Is the task acceptable?

- Yes
  - Is excessive force predominant risk factor?
    - No
      - No ergonomic risk identified
        - Corrective Action Necessary
    - Yes
      - Select each assessment tool according to the body region affected:
        - Hand and shoulder:
          - ACGIH hand arm segmental vibration
        - Hand and shoulder:
          - ACGIH hand arm segmental vibration

- No
  - Is vibration predominant risk factor?
    - No
      - No ergonomic risk identified
        - Corrective Action Necessary
    - Yes
      - Select each assessment tool according to the body region affected:
        - Hand and shoulder:
          - ACGIH hand arm segmental vibration

Simple Flowchart to aide selection of ergonomic assessment tool

LIST A - Ergonomic Checklist:
- OSHA Screening tool
- WISHA: Caution/Hazard zone

LIST B - Semi-Quantitative Tools:
- PLIBEL: accounts for environmental
- OCRA
- QEC