1. Ergonomic Intervention Framework

1. Preparation

- **Scope:** Define whether risks are mainly physical, cognitive, environmental, or organizational.
- **Methods selected:**
  - **Postural:** RULA, REBA, OWAS, NIOSH Lifting Equation.
  - **Non-Postural:** NASA-TLX (workload), PMV/PPD (thermal comfort), JD-R (organizational stress balance).
- **Baseline data:** Injury records, discomfort surveys, productivity metrics, absenteeism.

2. Assessment

- **Postural tools:**
  - RULA → office posture.
  - REBA → manual handling tasks.
- **Non-postural tools:**
  - NASA-TLX → mental workload in call centers.
  - PMV/PPD → thermal comfort in offices.
  - JD-R → stress and resource balance in healthcare teams.

3. Risk Identification

- **Physical risks:** awkward postures, repetitive strain, heavy lifting.
- **Cognitive risks:** overload, poor decision support, multitasking errors.
- **Environmental risks:** noise, lighting, temperature discomfort.
- **Organizational risks:** excessive demands, low autonomy, poor scheduling.

4. Intervention Design

- **Engineering controls:**
  - Ergonomic chairs, monitor arms, lifting aids.
  - HVAC adjustments, noise reduction panels.
- **Administrative controls:**
  - Task rotation, flexible scheduling, workload redistribution.
- **Training:**
  - Posture awareness, lifting techniques, stress-management strategies.
- **Participatory ergonomics:**
  - Involve workers in identifying problems and co-designing solutions.

5. Implementation

- Pilot interventions in selected departments.
- Communicate changes clearly.
- Provide training and support.

6. Evaluation

- **Reassess with same tools:**
    - RULA/REBA → posture scores drop.
    - NASA-TLX → workload ratings improve.
    - PMV/PPD → fewer complaints about comfort.
    - JD-R → better balance between demands and resources.
- Collect worker feedback and performance data.
- **Measure outcomes:** Reduced risk scores, fewer injuries, improved efficiency.

7. Continuous Improvement

- Schedule periodic reassessments.
- Update interventions as tasks, tools, or environments evolve.
- Encourage worker participation in identifying new risks.