Occupational Health Clinics for Ontario Workers Inc.

Centres de santé des travailleurs (ses) de l'Ontario Inc.

GLOBAL ERGONOMICS MONTH

Developing Procedures for MSD Prevention

November 1, 2016

Brenda Mallat, BHK, CCPE

Presentation Overview

- **Company Profile**
- **Proactive versus Reactive Approached**
- **MSD Prevention in the Workplace: Are you ready?**
- **Developing Procedures:**
  - **Assigning responsibility**
  - **Workstation design**
  - **Manual Materials Handling**
  - **Tools and Equipment**
  - **Training**
  - **Evaluation**
- **Discussion**

Our Services

Multidisciplinary Team

Physicians
Nurses
Occupational Hygienists
Ergonomists
Administration

INDIVIDUAL WORKERS

GROUP EVALUATIONS

INQUIRIES

EDUCATION

RESEARCH

Teamwork Throughout Ontario

Clinics:

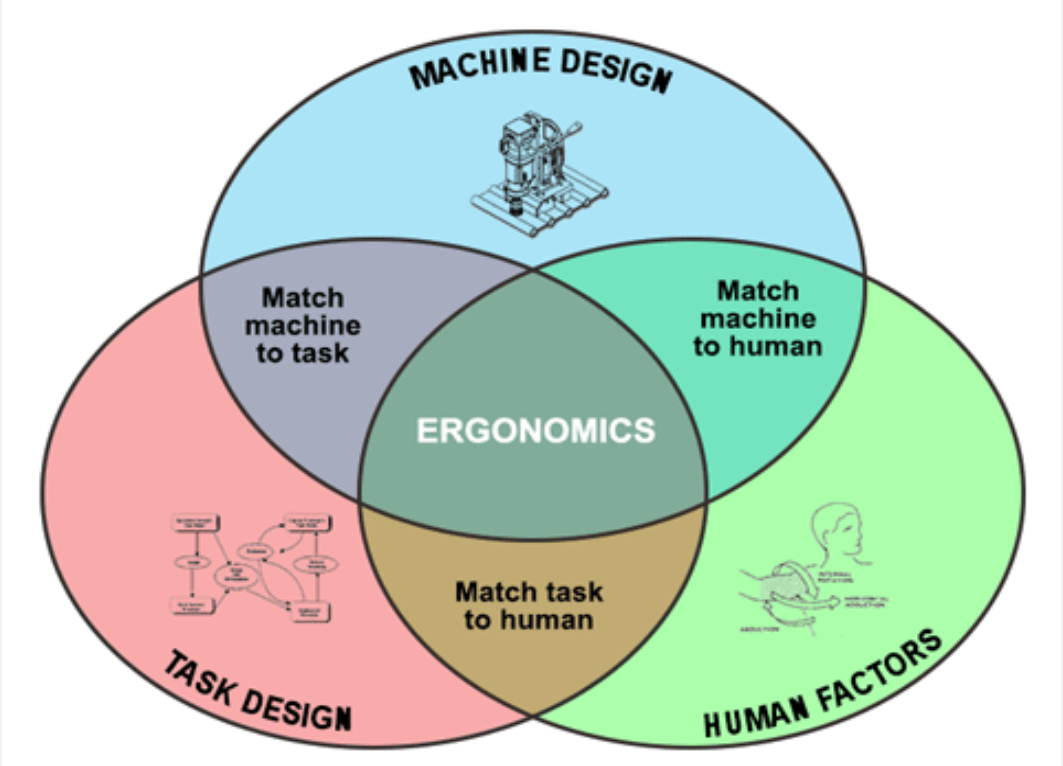
- Ottawa
- Thunder Bay
- Sudbury
- Toronto
- Hamilton
- Sarnia
- Windsor

Ergonomics

Matching job design, equipment, and workstations to workers

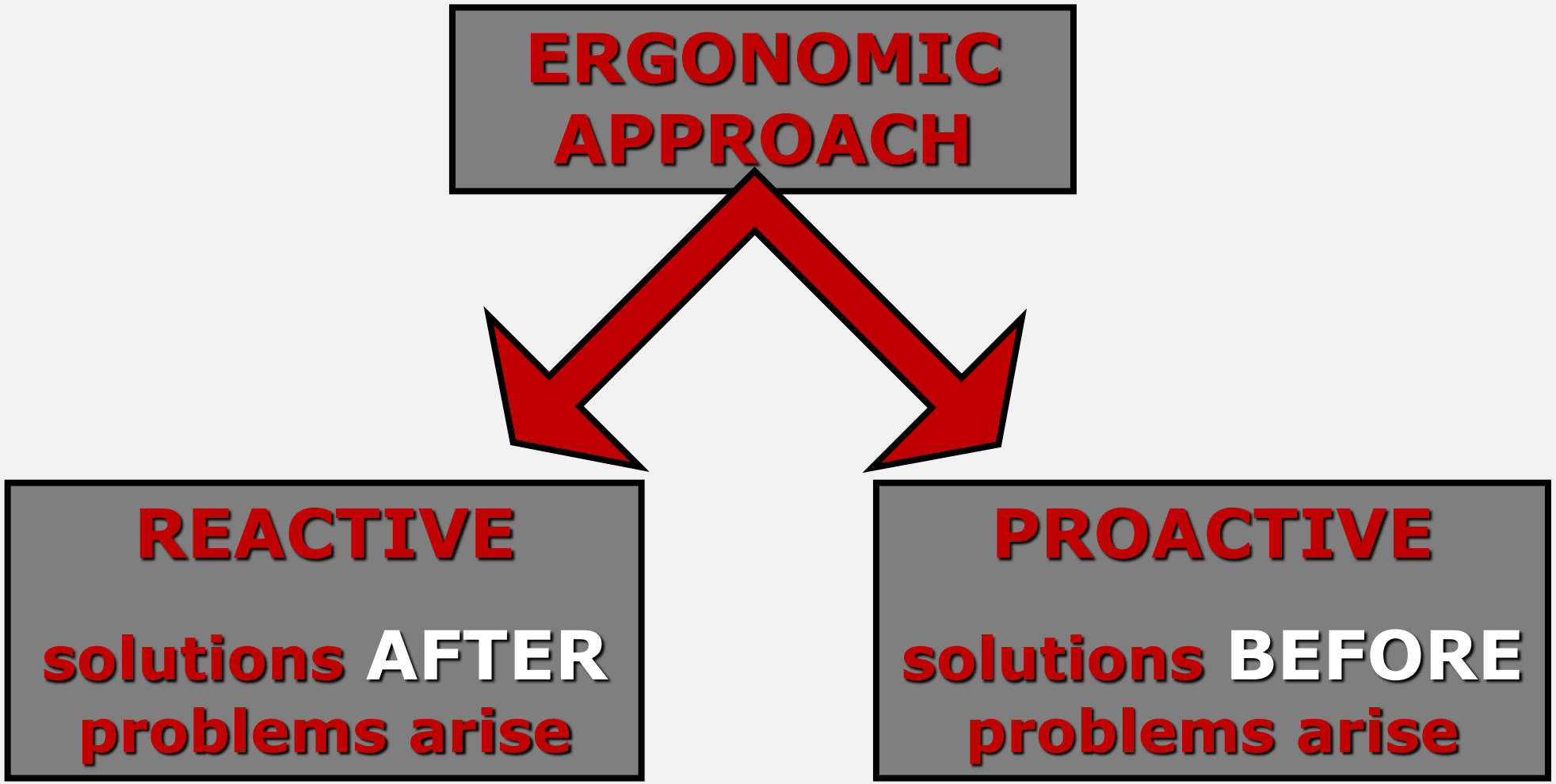
Encompassing the fields of:

- Biomechanics
- Engineering
- Biology
- Psychology



"Working smarter *not* harder"

Reactive vs. Proactive



MSD Hazards

REPETITION

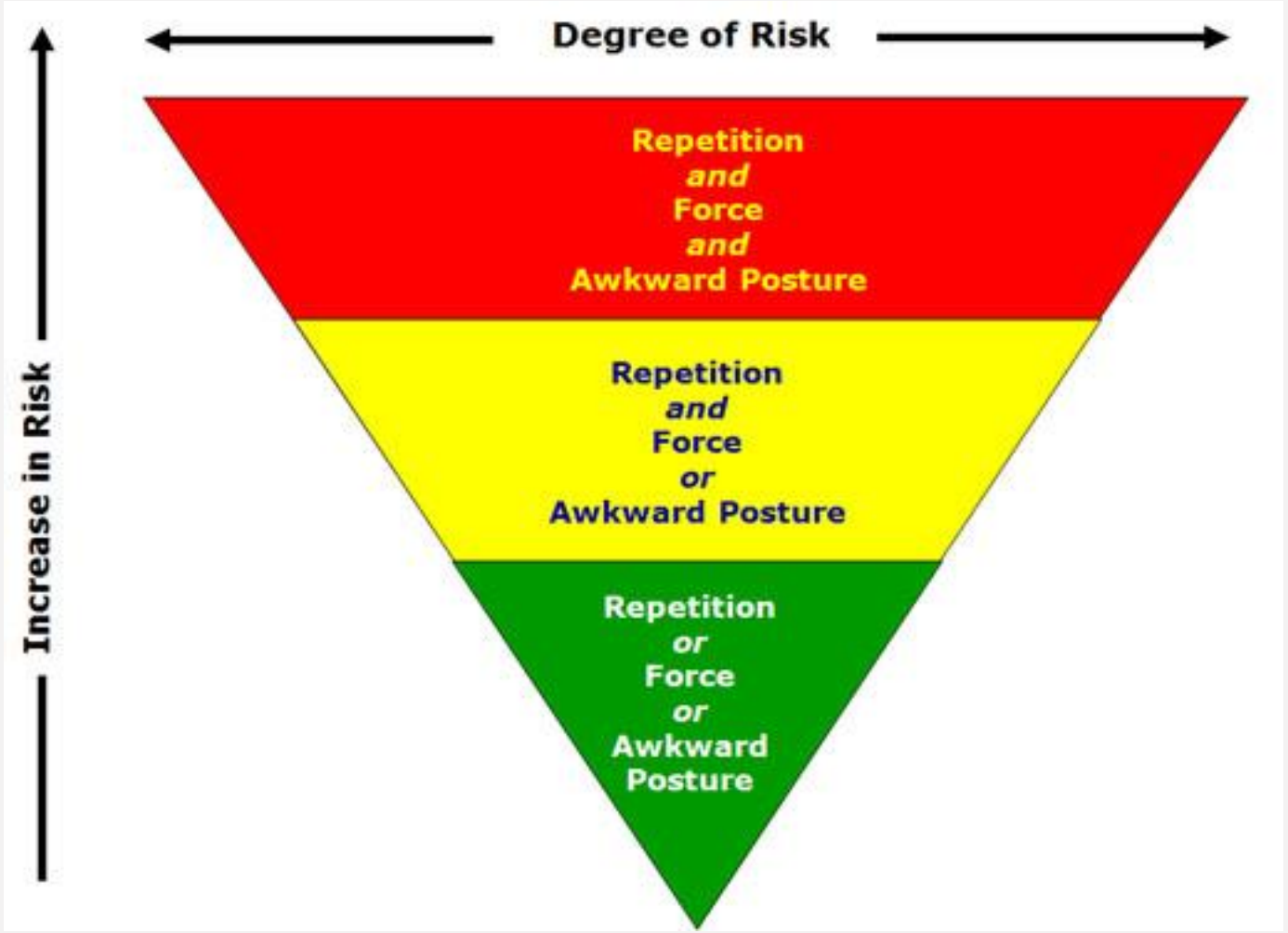
Force

Static Postures

CONTACT STRESS

AWKWARD POSTURES

Understanding the Hazards



MSD Prevention in the Workplace

MSD injuries ***continue*** to be the #1 injury with the WSIB

What are the ‘keys’ to preventing MSDs in the Workplace??

The ‘Culture’ in the workplace is critical for a successful program!

Why develop procedures

- To be **proactive** in reducing or eliminating the MSD hazards in the workplace
- To help ensure that workstations, work processes, tools and equipment are designed to reduce the hazards associated with musculoskeletal disorders (MSDs)
- To ensure compliance with the Occupational Health & Safety ACT (OHSA) and regulations.

- Procedures and guidelines should apply to NEW and modified workstations, work processes, tools and equipment in all departments

Who should have responsibility?

- It's important to **assign** responsibility for MSD prevention to ensure compliance with your workplace procedures
  - Senior Managers
  - Managers
  - Supervisors
  - Engineering
  - Purchasing
  - H & S
  - Ergonomist (internal or external)
  - Worker

Responsibility: Senior Managers

- Ensure compliance with the Act and applicable legislation
- Ensure the company MSD prevention procedures is effective and ensure maintenance of the program
- Ensure compliance with the requirements set out in the procedures
- Ensure that all the workplace parties understand the intent and requirements of the procedures

Responsibility: Managers

- Adhere to the program requirements
- Assist supervisors, engineering, H & S
- Ensure that worker exposure to MSD hazards are in accordance with the program and report hazards to Senior Managers
- Ensure that controls are put in place
- Communicate the program requirements to all workers under their area
- Ensure there is follow up with MSD issues and monitor and maintain the controls that are implemented

Responsibility: Supervisors

- Adhere to the requirements of the procedures/program
- Assist and cooperate with workers, engineering, H&S, purchasing
- Ensure that workers comply with the requirements in the program
- Assess their departments in relation to compliance with the procedure
- Control worker exposure to MSD hazards and report hazards to their manager if they are not able to control the hazards
- Communicate the purpose of the program to the workers under their control
- Follow-up with MSD issues and ensure controls are in place and working

Responsibility: Engineering & Purchasing

- Fulfil the requirements of the procedure/program
- Work with the workers, supervisors, management and H&S
- Assess the potential for MSD hazards in equipment, workstation, process during the development or modification stage
- Incorporate ergonomic controls in the ‘design’ phase or when workstations, equipment or processes are being modified
- Develop purchasing requirements to ensure that anything new has the required controls in place (equipment, tools, furniture, seating, etc)

Responsibility: H & S / Ergonomist

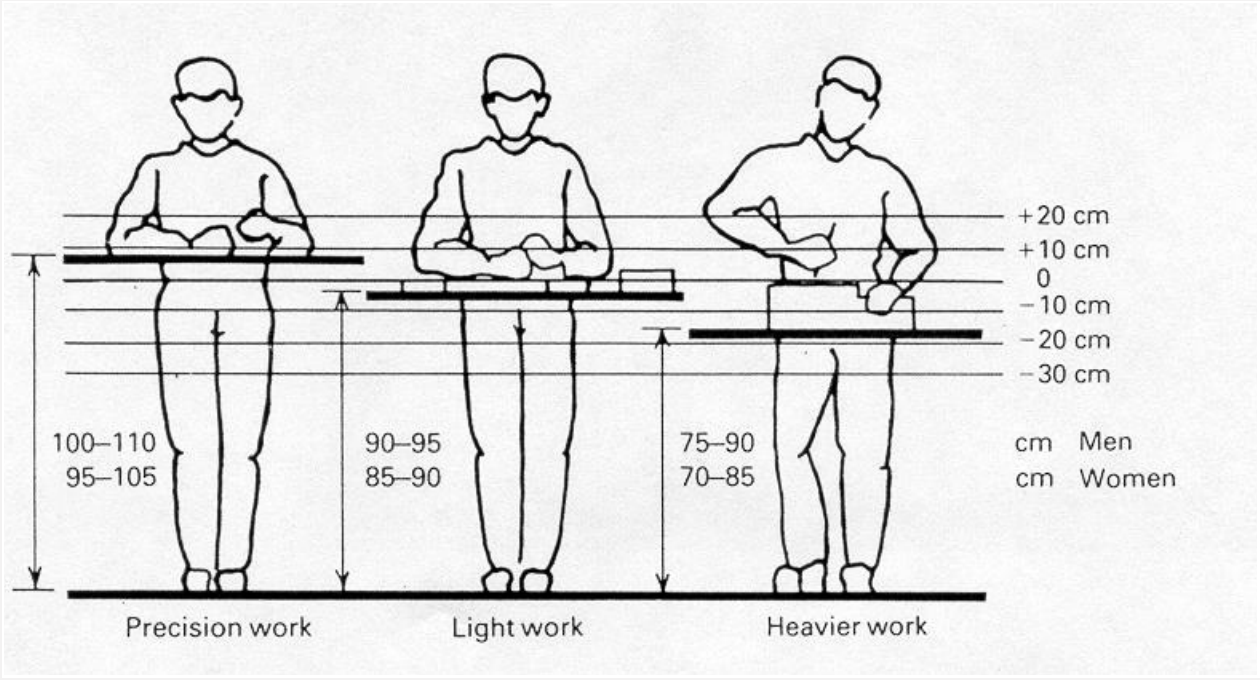
- Develop an effective ergonomic program
- Ensure that there is effective communication and training
    - Engineers – procedures, assessment, controls
    - Managers/supervisors – procedures, assessment, controls
    - Workers – hazards, signs & symptoms of MSDs
    - Joint H & S Committee – workplace inspections
- Monitor the program
- Evaluate the program and make changes if necessary

Responsibility: Workers

- Comply with the requirements of the procedure
- Participate in training and use their knowledge and experience to assist with protecting themselves and other workers (assessment, controls)
- Report MSD hazards to their supervisor
- Report their MSD injuries to their supervisor

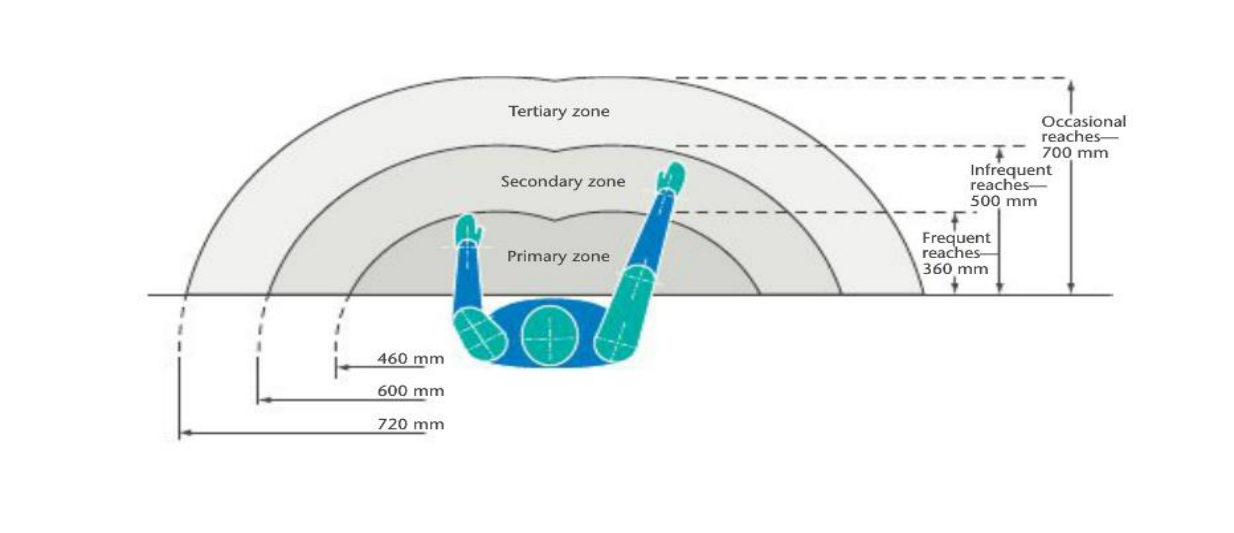
Procedures: Workstation Design

- Sitting / Standing / Walking
- Workstation height
  - Fixed or adjustable
  - Clearances (knee, foot, etc)
  - ‘type’ of work performed
    - Precision, light assembly, heavy assembly



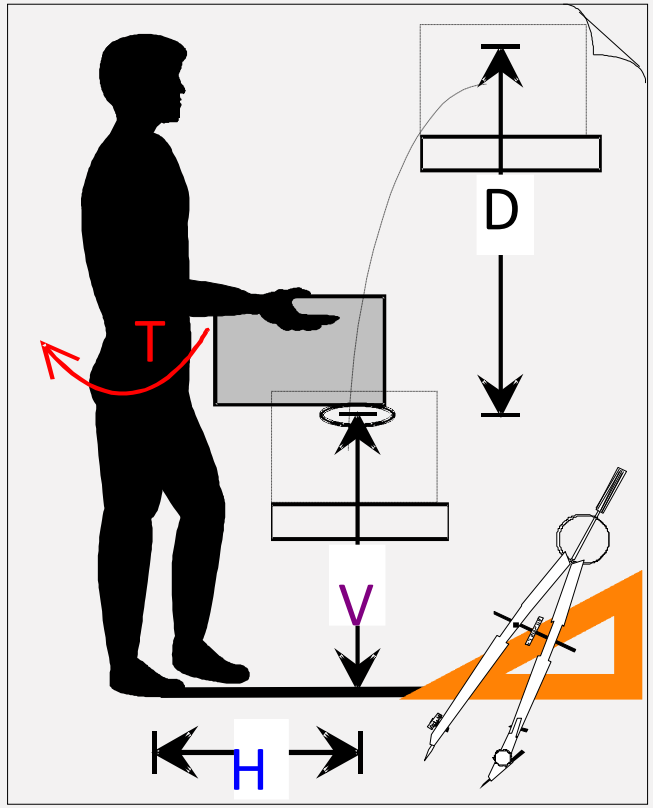
Procedures: Workstation Design

- Work reaches
  - Primary zone – frequent to constant reaches
  - Secondary zone – infrequent reaches
  - Tertiary zone – occasional reaches



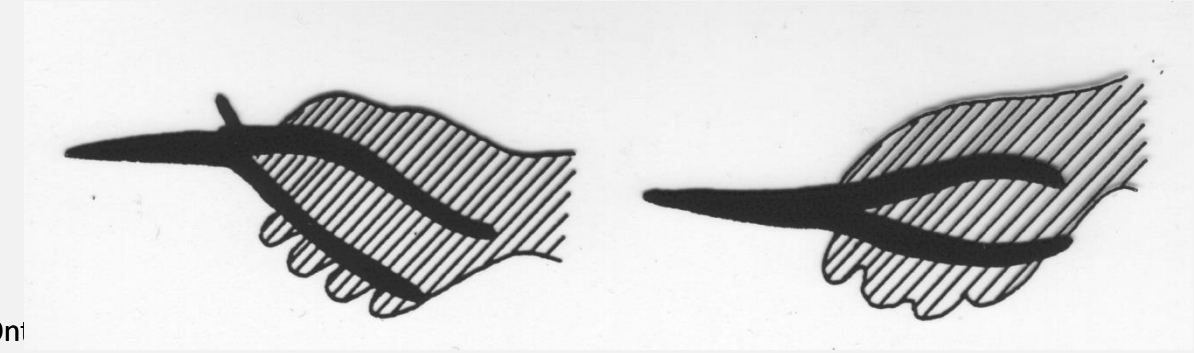
Procedures: Manual Material Handling

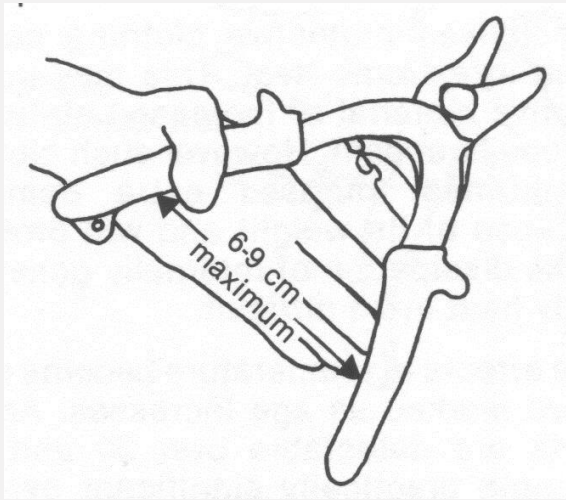
- Lifting and Lowering, Carrying
  - Frequency and duration, reach, twisting, lifting an asymmetrical load, coupling, load placement, weight, lifting vs. lowering, distance carried
  - One handed versus two handed
  - Consider the space (at the workstation and in aisle space) and layout of the workstation
- Pushing / Pulling
  - Push/pull forces, distance, frequency and duration, handle height
  - Flooring, grading, maneuvering, environment (lighting, temp)



Procedures: Tool & Equipment

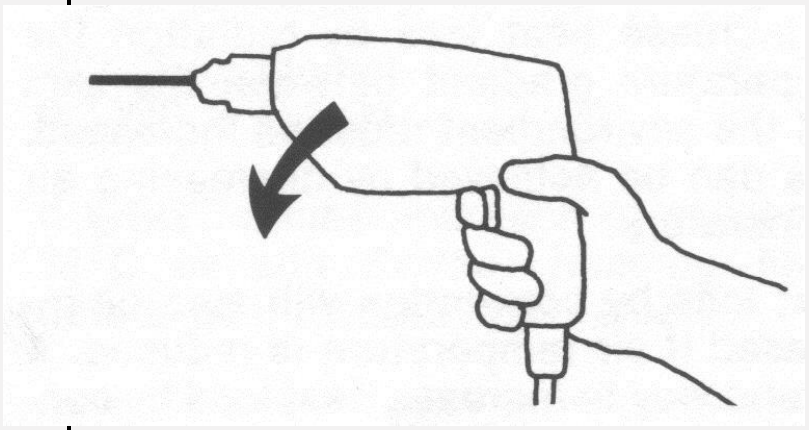
- Tool selection and Design
  - Type of task and the function of the tool (ie. Torque and vibration)
  - Tool weight – distribution of the weight of the tool – should a tool balancer be used?
  - Tool handle:
    - does the handle allow for neutral arm/wrist positions when being used
    - Power grip – optimal grip diameter
    - Handle length

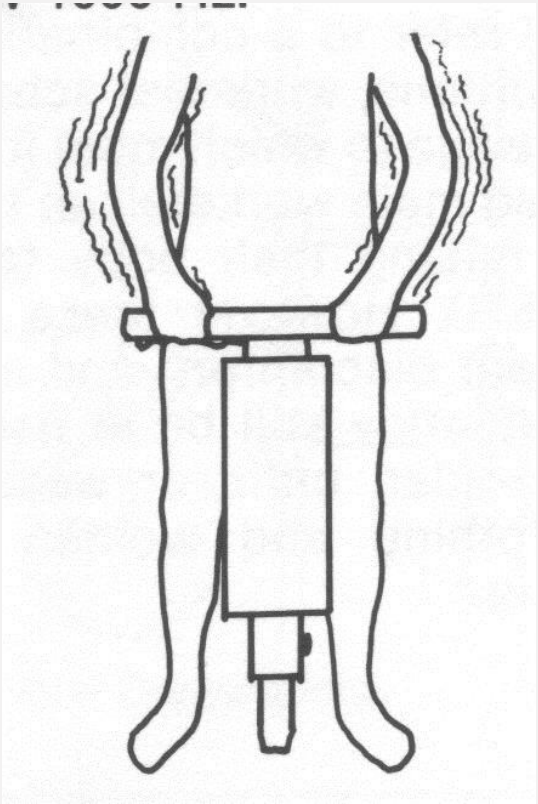


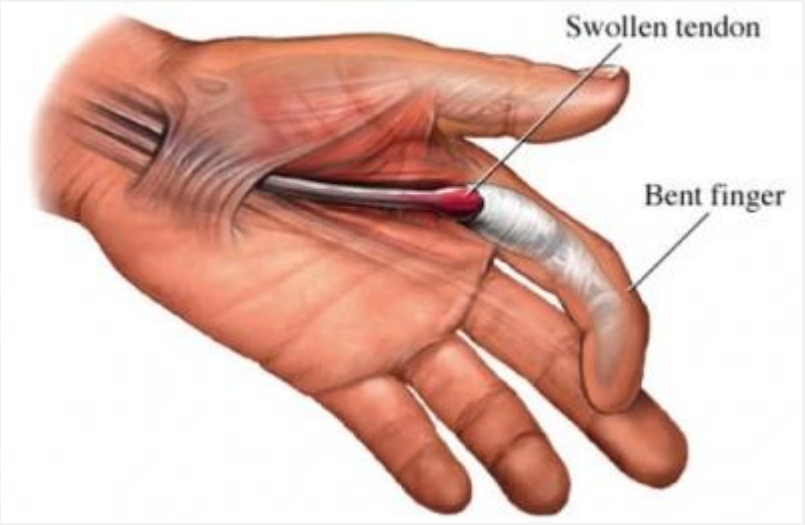


Procedures: Tool & Equipment

- Tool trigger – whole hand vs one-two-three finger trigger
- Tool vibration – ACGIH guidelines
- Contact Stress
- Torque







Procedures: Purchasing

- Develop a process for identifying and addressing MSD hazards prior to the acquisition of products
- Ensure that the products that are purchased – equipment, vehicles, furniture, etc – are designed to be in compliance with ergonomics standards/guidelines

- Internal standards should be developed prior to equipment/furniture/vehicle purchases are made
    - Example: Seating – develop a purchasing standard that ensure that the seating has the required features that will allow for adjustability to fit the majority of workers and the adjustment features have enough ‘range’ to accommodate the majority

Procedures: Training

- All managers, supervisors, engineering staff and JHSC members need to receive training on MSD hazards.
  - Engineering – guidelines for MSD prevention specific to their workplace, assessments, and controls
  - Supervisor, Managers, JHSC members – hazards, assessments and controls; including hazards in regular JHSC Inspections
  - All Workers – signs and symptoms of MSDs

- Training needs to be completed to all new hires and on a ‘regular’ basis

Procedures: Evaluation

- The H&S and/or Ergonomist will need to evaluate the effectives of their standards/procedures annually
- Assessments and controls need to be evaluated regularly to ensure that the corrective actions were appropriate and successful