

Laboratory Ergonomics

Body Mechanics

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- Harm Data (Slide 3)
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Medical Center Data

Workplace Safety Incident Report

Total Count

10

Dashboard Updated:
7/16/2022

(All) Covid-19
 COVID-19 Only
 Exclude Covid-19

(All) Entity
 SCPMG

(All) Hospital
 Hospital
 MOB

Med Center: Ontario
 Building Name: (All)

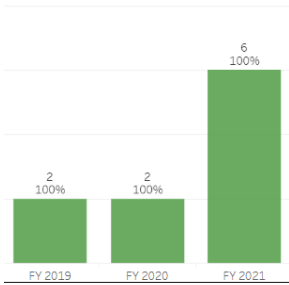
Functional Unit: Pathology & Lab

Department: Pathology/Lab-P...
 Cost Center: 786

(All) Incident Type Group
 (All)
 Contact with objects or equipment
 Overexertion
 Patient Handling Injury

(All) Year of SFR Reported
 Month SFR Reported: (All)
 CIRAS Event Type: (All)

of SFRs by Performance Year

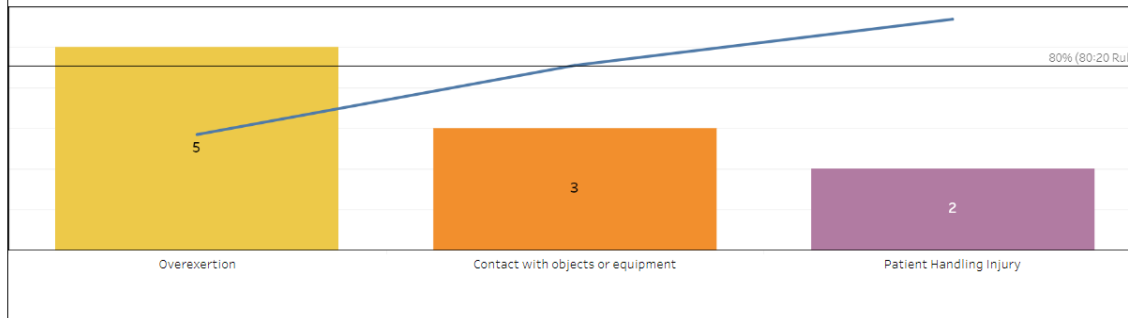


Entity
SCPIMG

National Chart of Accounts (NCOA)
Functional Unit

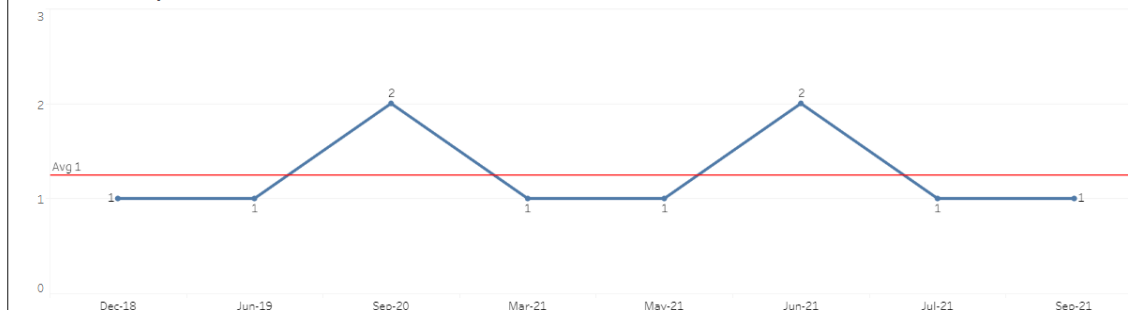
Functional Unit	Count	% of Total
Pathology & Lab	10	100.00%

Incident Type Group Pareto



Incident Type	Count	% of Total
Repetitive motion (workstation)	3	30.00%
Struck by object or equipment	3	30.00%
Preventing Patient Fall	2	20.00%
Material handling - lifting, lowering	1	10.00%
Repetitive motion (non-workstation)	1	10.00%

Incident Count by Month



The Ergonomic Process

Ergonomics is the process of matching a job so that it can best fit an individual's capabilities and limitations – physically, mentally, and psychologically. The ergonomic process involves your interaction with **tools**, **tasks** and the **environment** while performing your job.

Tools



Task



Environment



Who is Affected By Ergonomics?

A wide variety of staff are affected by ergonomic issues. Example of these employees include:



Patient Handlers
Clinical Staff
Radiology
Patient Transports



Materials Handlers
Laboratory Technicians
Couriers
Materials Managers



Office Staff
Administrative Associates
Call Center Staff
Claims Representatives

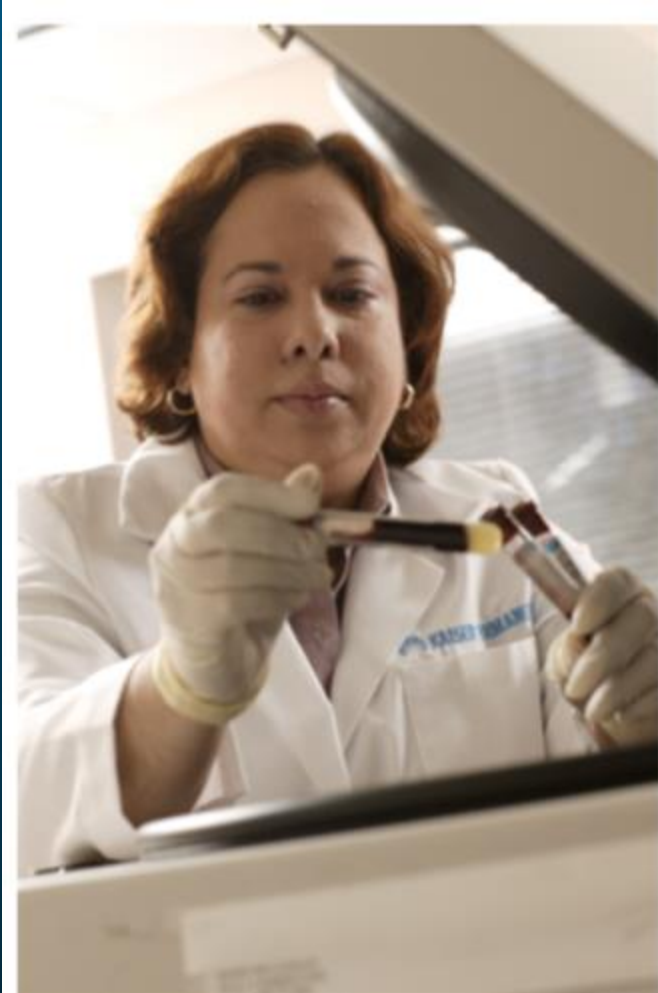
Phlebotomy

Draw Stations



Laboratory Work

Laboratory work can be repetitive and cause musculoskeletal stresses.



Be aware of the following:

- Avoid overreaching, excessive forces on your fingers and sharp counter edges
- Make sure your forearms are supported and avoid holding positions for long periods of time
- Laboratory work can involve very precise work or work that involves high visual demands. Be aware of this and if you feel discomfort, adjust your body position or task
- Pay attention to the height of your workstation

Materials Handling Body Mechanics

Materials Handling



Materials Handling ergonomics tasks include

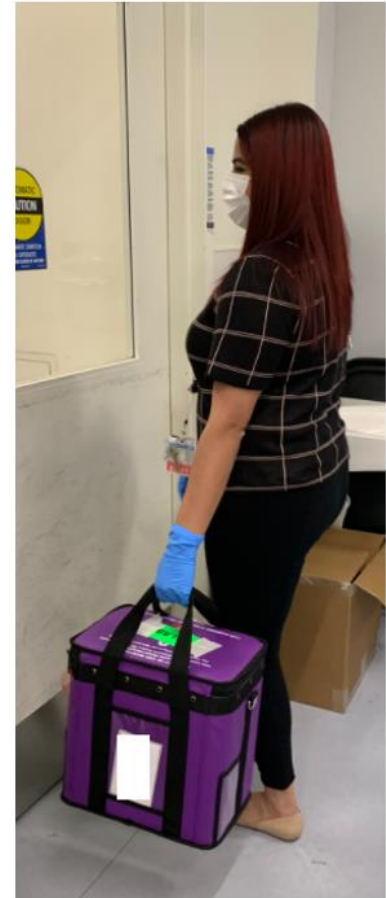
Lifting and Lowering

Carrying or Holding

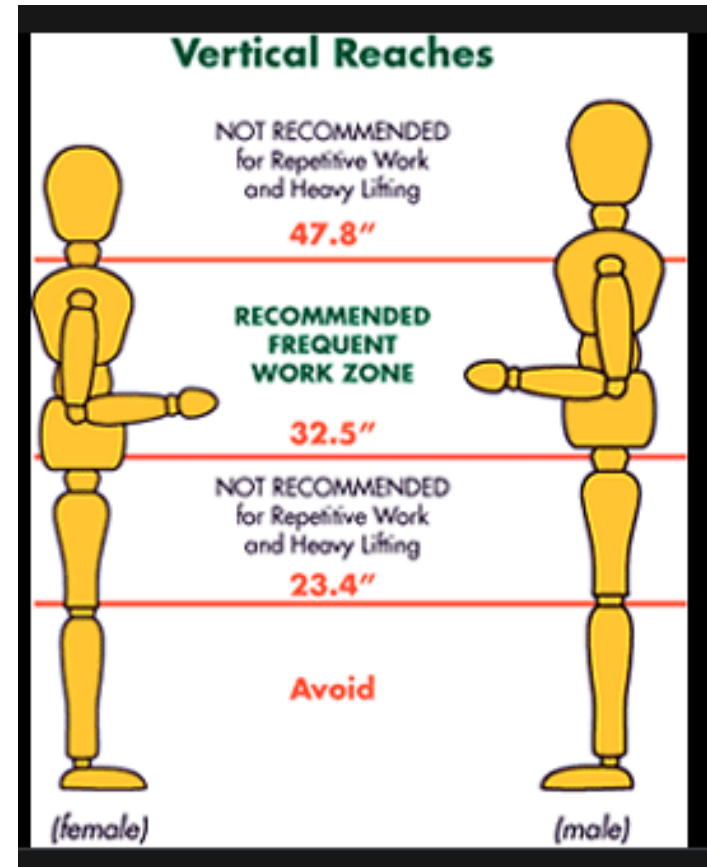
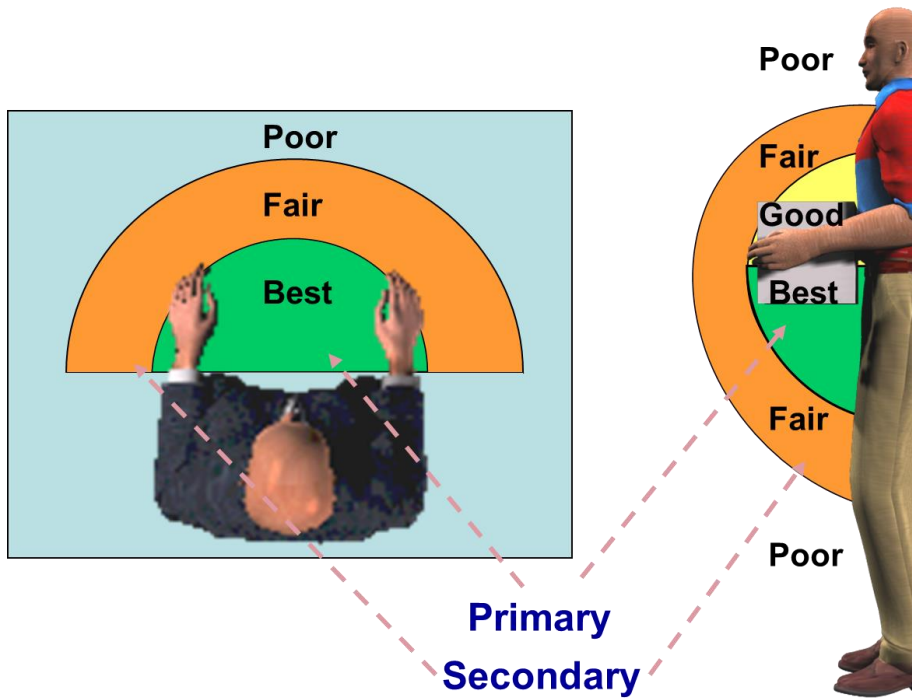
Pushing/Pulling

Using Equipment and Instruments

Laboratory Work

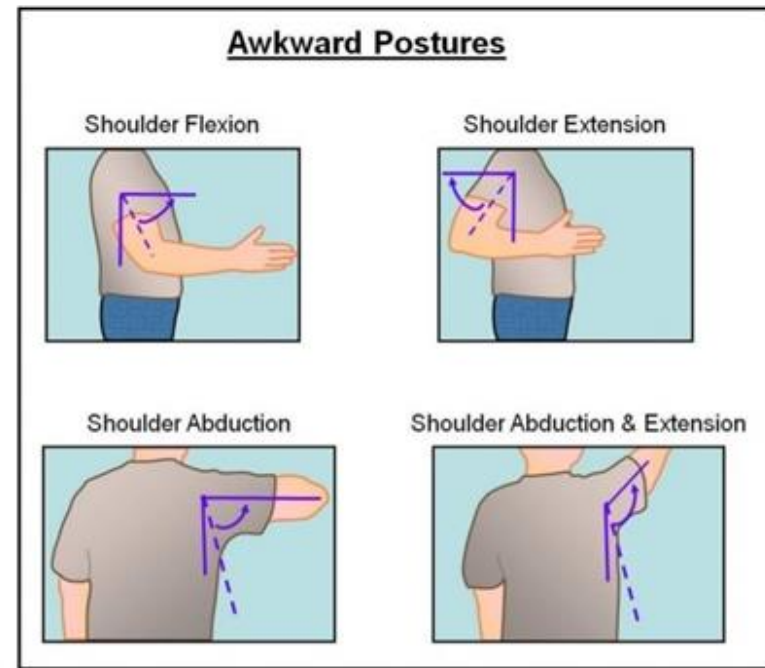
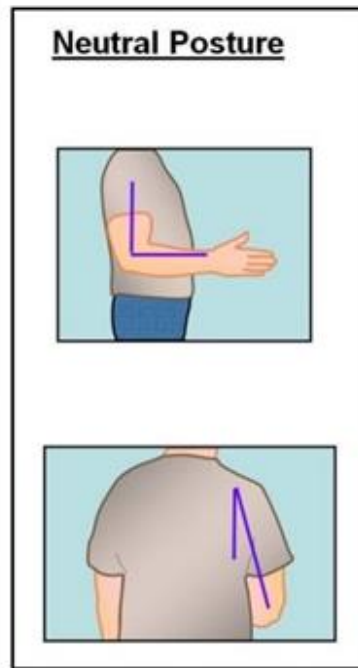


Optimal Work Height & Reach Envelopes



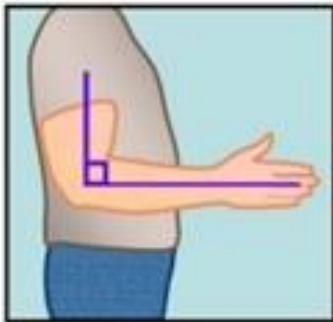
Good Alignment

- A neutral spine is important because the “core” muscles are balanced.
- Balanced muscles don't fatigue easily and don't hurt.
- You are less likely to get injured when working in good proper alignment or neutral body position.
- Working in awkward postures increases your risk for an injury.



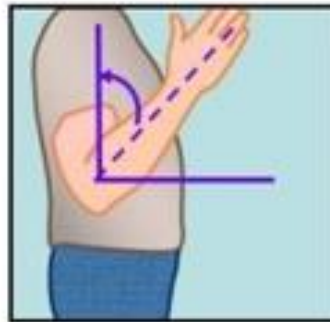
Neutral Postures

Neutral Posture

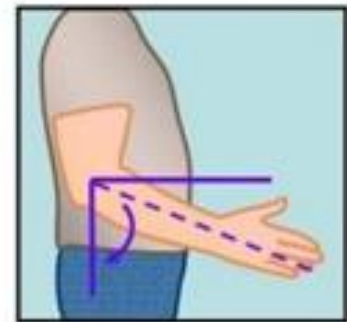


Awkward Postures

Elbow Flexion



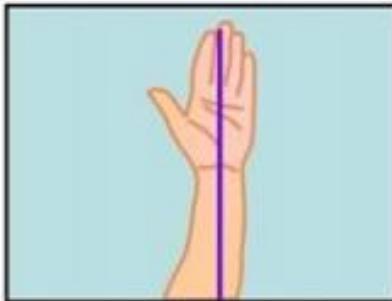
Elbow Extension



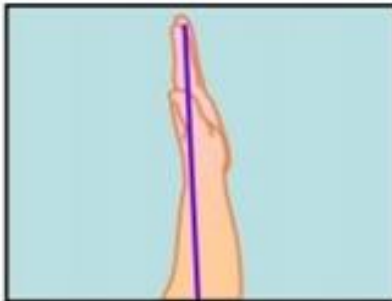
Neutral Postures

Neutral Posture

View#1
(minimal radial/ulnar deviation)

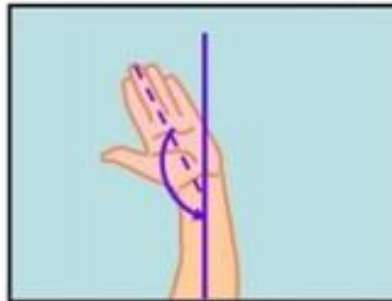


View#2
(minimal flexion/extension)

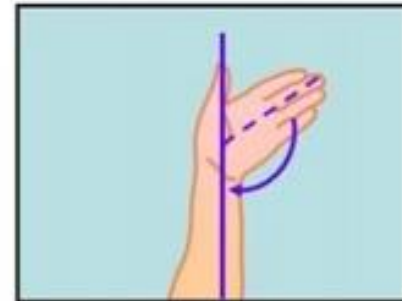


Awkward Postures

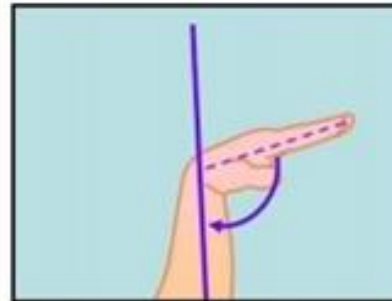
Radial Deviation



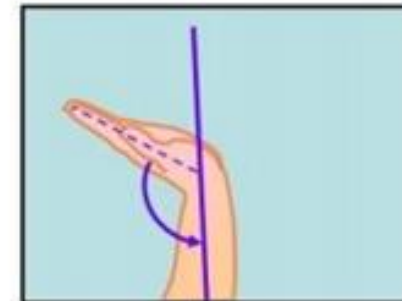
Ulnar Deviation



Flexion

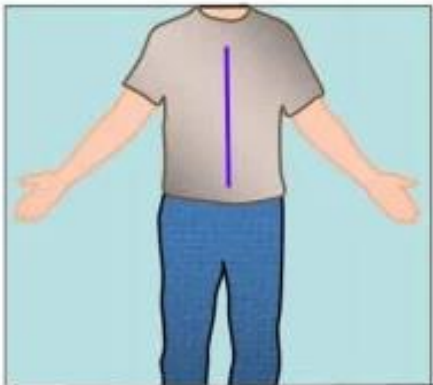


Extension



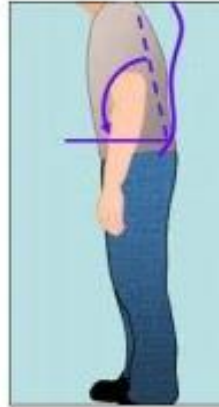
Neutral Postures

Neutral Posture



Awkward Postures

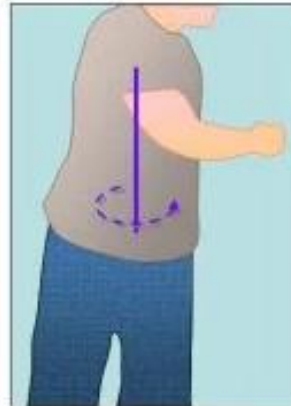
Back Flexion



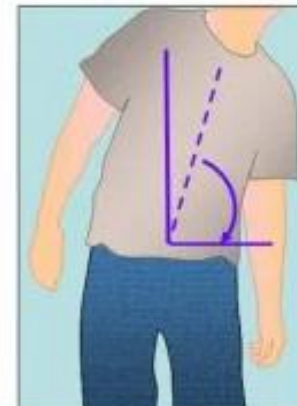
Back Extension



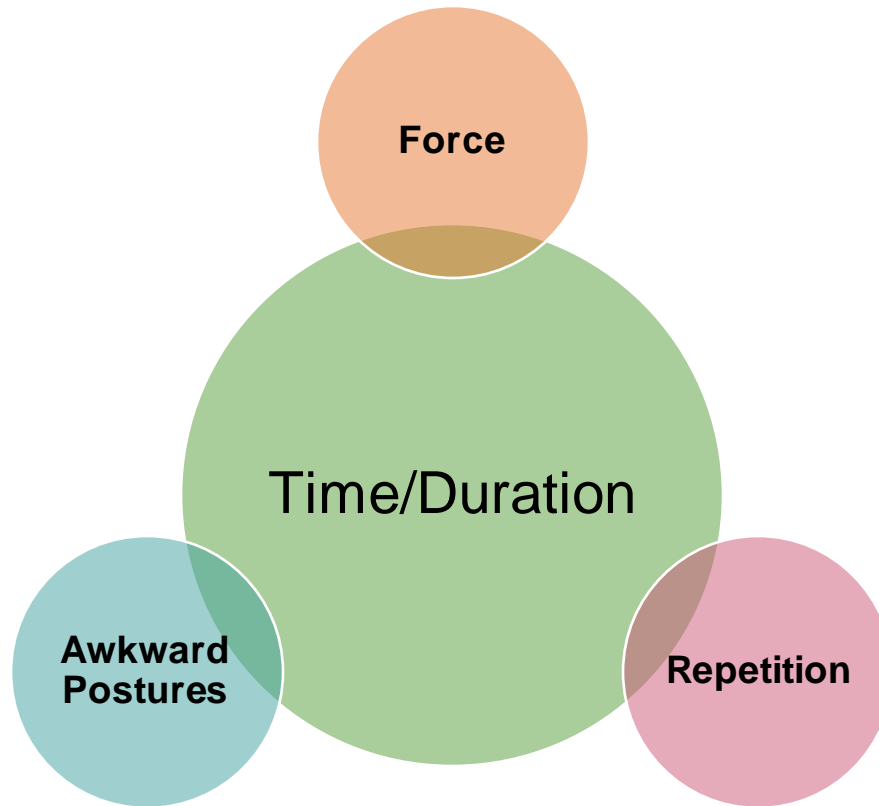
Twisting about Waist



Lateral Bending



Components of Injury



How do you feel today? At the end of shift?

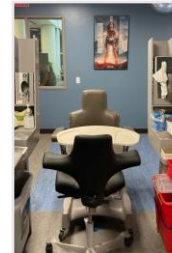
- **Muscle Fatigue**
- **Discomfort**
- **Swelling**
- **Tingling**
- **Numbness**
- **Pain**



Source of Risks



Position of supplies



Position equipment/tools



Equipment Adjustments



Stationary postures



Awkward postures

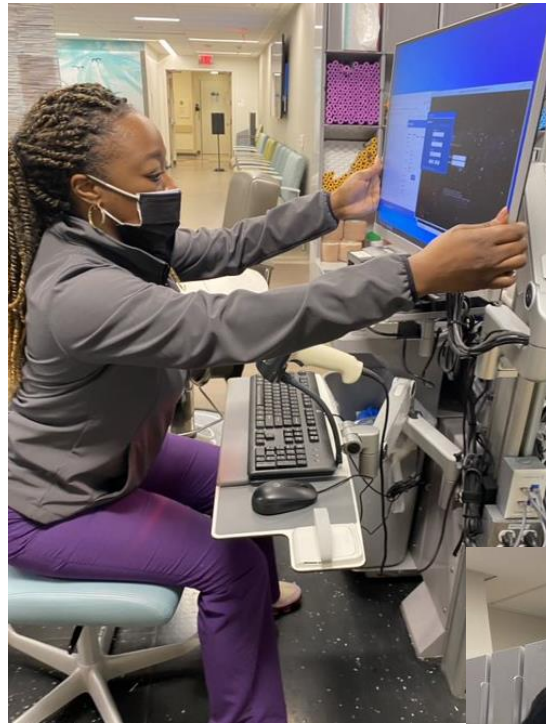


Awkward movements

Phlebotomy Workstations

Overexertion Examples:

- Reaching above shoulder for supplies
- Reaching away from body to grab labels
- Leaning over-to tie a tourniquet
- Twisting to use the computer
- Sharps disposal

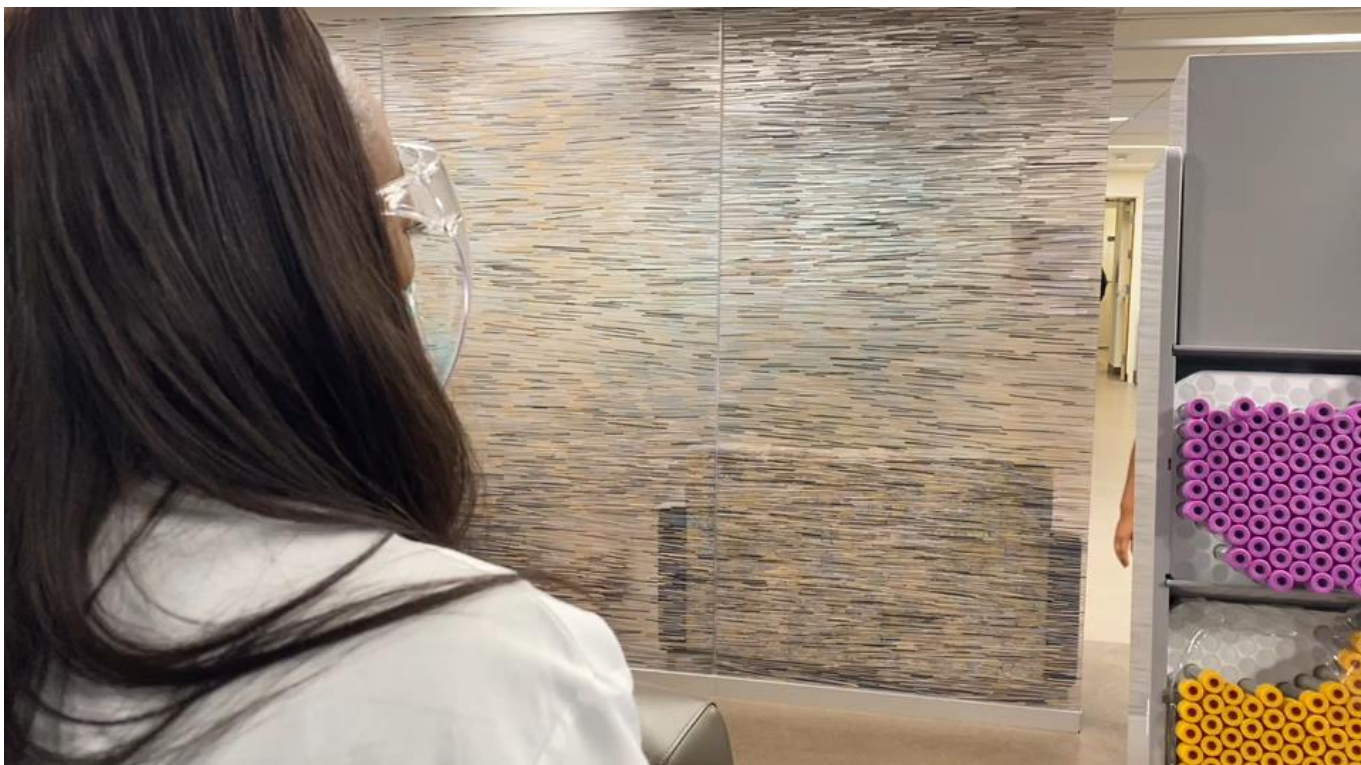


Basic Phlebotomy Supplies

- Gloves
- Tourniquets
- Needles
- Barrel or Syringe
- Tubes
- Alcohol
- Cotton or Gauze
- Bandage or Tape



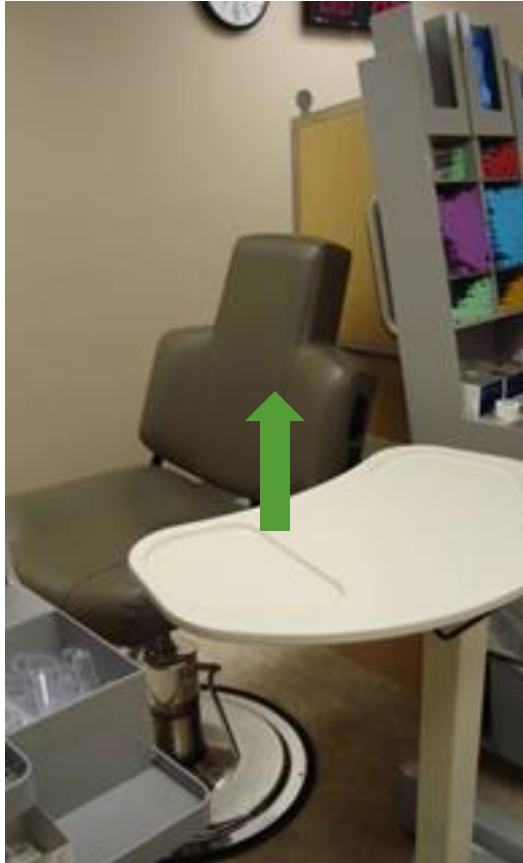
Video Example



Let's Review: Standard Operating Procedure (SOP)

1. Ensure pathways are clear of trip hazards
2. Wear PPE (gloves, lab coat, eye protection if needed)
3. Call patient to station and perform patient verification and validation of tests
4. Print labels
5. Set member chair to face sideways
6. Lock member chair before drawing blood
7. Move table against member chair
8. Table height set within staff member "work zone"
9. Lock table
10. Stand to retrieve all supplies
11. Ensure patient's arm and materials are within arms' reach and below shoulder level during venipuncture
12. Keep neutral spine while performing entire task
13. Activate safety device prior to disposing needle in sharps containers
14. Do not cross over body to dispose of sharps
15. Dispose of sharps immediately after draw
16. Add labels and log into system
17. Replace gloves after each patient

Equipment Adjustment



Adjust Member Chair

Rotate member chair to face sideways

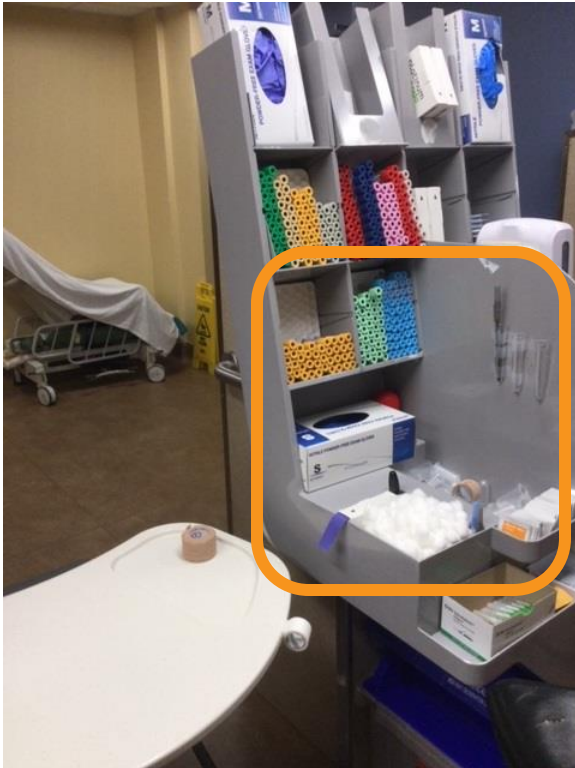
Move table against member chair



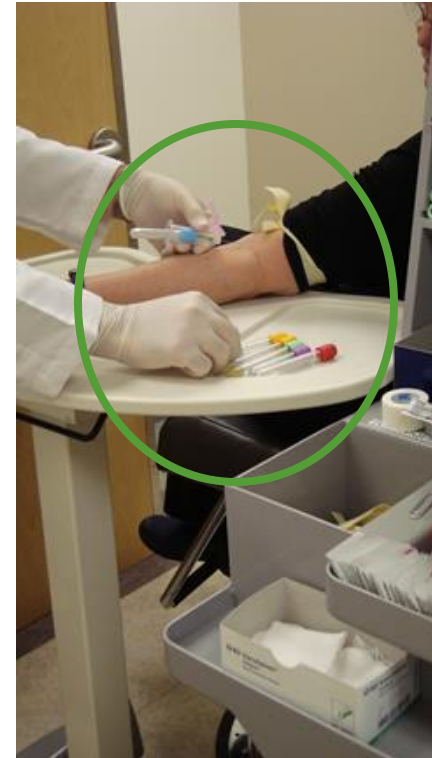
Adjust Table Height

Use angled wedges to help maintain straight wrists and bring member's elbow closer

Supplies within Reach

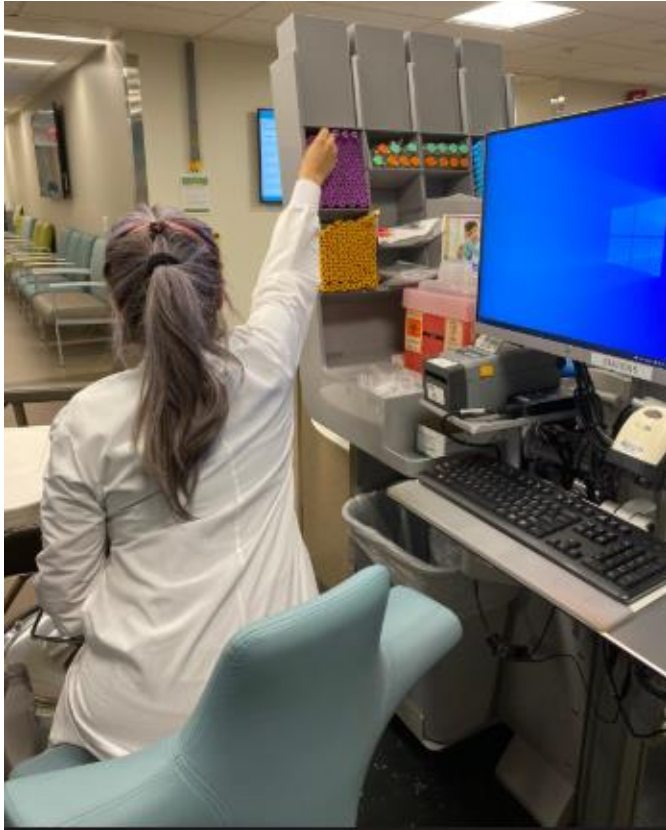


During venipuncture do not reach for tubes or supplies



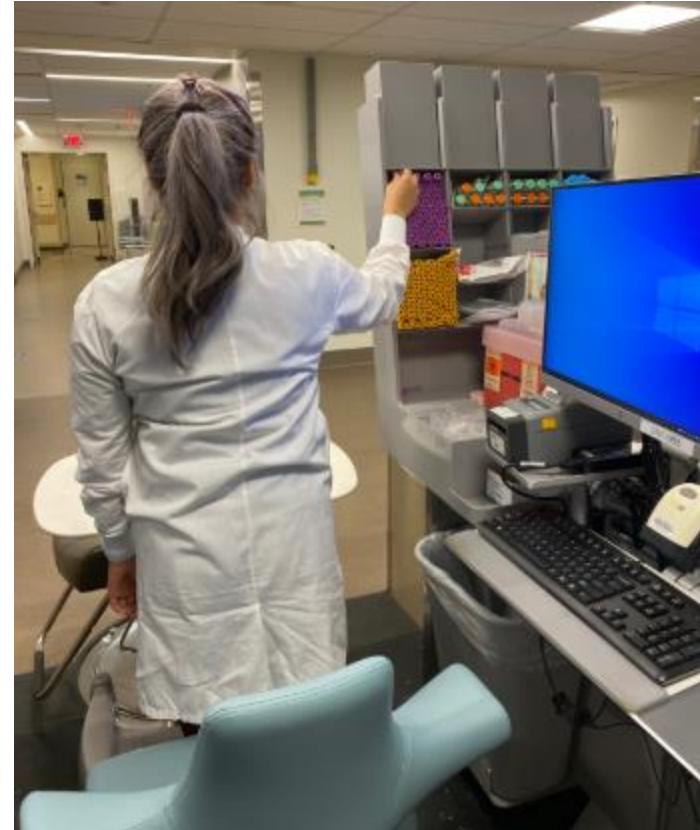
Keep supplies close to avoid awkward postures

Reaching away from the body- reaching above shoulders



Improper position:

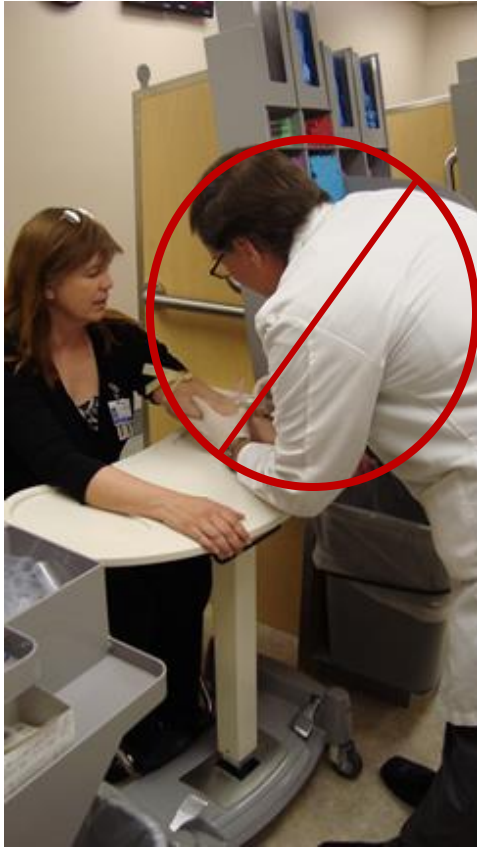
- when gathering supplies
- Avoid reaching above the shoulders and getting into awkward postures



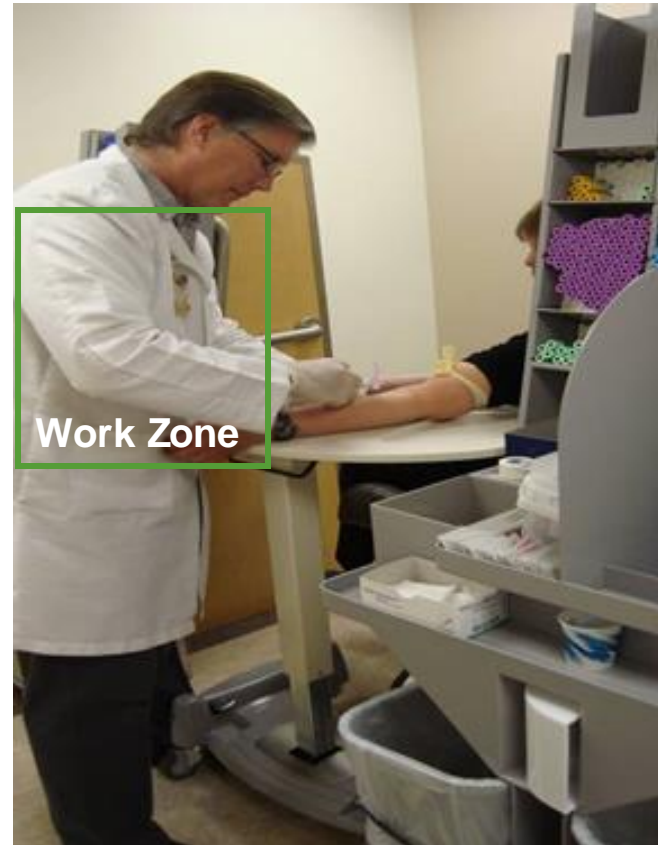
Proper position:

- ✓ Stand to gathering supplies
- ✓ Working within your “Work Zone”

Standing Position



Incorrect Posture



Correct Posture

Sitting Position

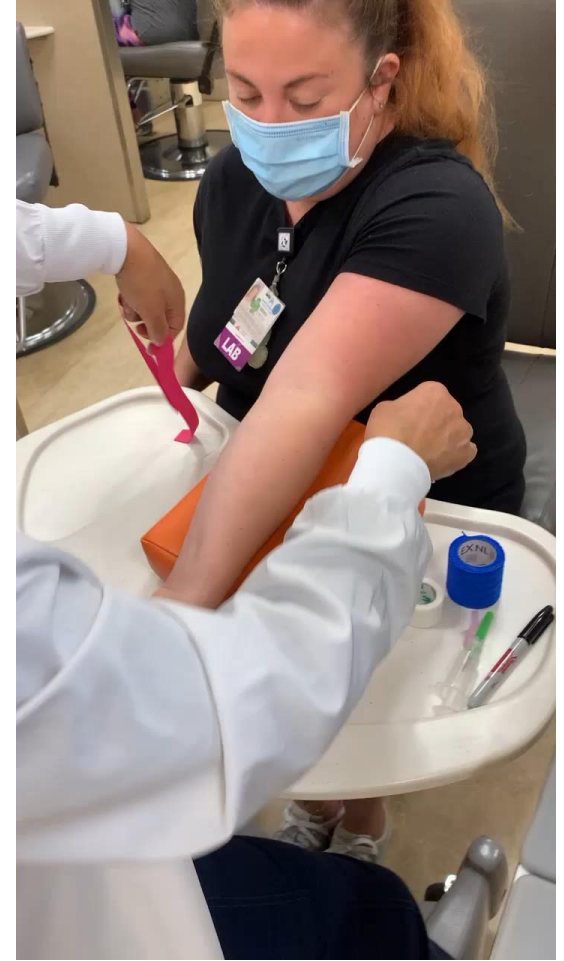


Improper Positioning
Patient arm and member
sitting facing staff



Proper Positioning
Patient arm and member sitting
sideways

Techniques Tourniquet Application



Tourniquet Application for Venipuncture Procedure

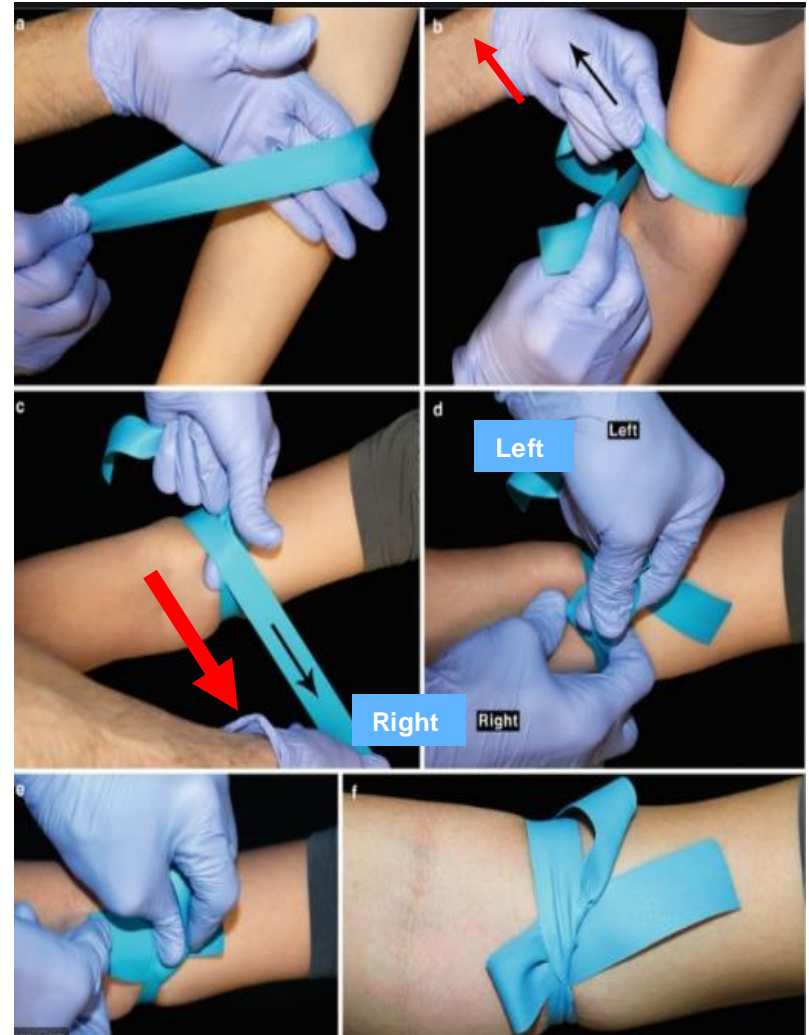
Six Steps

Maintain a relaxed shoulder posture and keep hands/wrist in a neutral position. **Only use one tourniquet per patient blood draw.*

1. Hold each end of band tightly between thumb and first (index) finger
2. Stretch band several times to ensure flexibility prior to placement on member's arm
3. Place Tourniquet under member/patients arm and cross the two ends
4. Take "your" dominate hand and gently pull band and tie into a bow
5. Leave one bow point underneath the tourniquet
6. Ready to Release- remove by pulling one end to release tourniquet



[Ergonomic Guidelines Tourniquet Application week 8.pdf](#)



Let's Recap: Standard Operating Procedure

1. **Ensure pathways are clear of trip hazards**
2. **Wear PPE (gloves, lab coat, eye protection if needed)**
3. **Call patient to station and perform patient verification and validation of tests**
4. **Print labels**
5. **Set member chair to face sideways**
6. **Lock member chair before drawing blood**
7. **Move table against member chair**
8. **Table height set within staff member "work zone"**
9. **Lock table**
10. **Stand to retrieve all supplies**
11. **Ensure patient's arm and materials are within arms' reach and below shoulder level during venipuncture**
12. **Keep neutral spine while performing entire task**
13. **Activate safety device prior to disposing needle in sharps containers**
14. **Do not cross over body to dispose of sharps**
15. **Dispose of sharps immediately after draw**
16. **Add labels and log into system**
17. **Replace gloves after each patient**

Return Demonstration for validation

Check list

[Validation Link](#)

Ergonomic Resources in One Page



Assessment Requests

Need assistance with your Work & Home environment.

Contact your local Ergo Consultant

[Contacts - ErgoInfo \(kp.org\)](#)



SCAL Ergo/Safety Class

Learn the basic fundamentals of ergonomics.

**Scheduled on the 4th Friday of every month*

[KP SCAL Ergonomic/SafetyClass](#)



Workplace Safety Information

Website Link:

[SCAL Workplace Safety - Home](#)



Computer Ergo Class

Learn the fundamentals of computer ergonomics for remote work.

**Scheduled every Wednesday*

[Computer Ergo Class](#)

KP Learn Module

Course | ID: SAF:NEHS 22 11215M

Ergonomics - Materials Handling 2022

Course | ID: SAF:NEHS 22 11215O

Ergonomics - Office 2022

Course | ID: SAF:NEHS 22 11215P

Ergonomics - Patient Handling 2022

Laboratory Ergonomic Body Mechanics Training

Future Areas of Focus

- *Inpatient Blood Draw*
- *Specimen Processing*



How do you thrive? Movement is the key