

Understanding and Managing Risk of Musculoskeletal Injury (MSI)

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“Musculoskeletal Injury” or “MSI”

“an injury or disorder of
the muscles, tendons, ligaments, joints,
nerves, blood vessels or related **soft tissues**
including a sprain, strain and inflammation,
that may be caused or aggravated by work”.

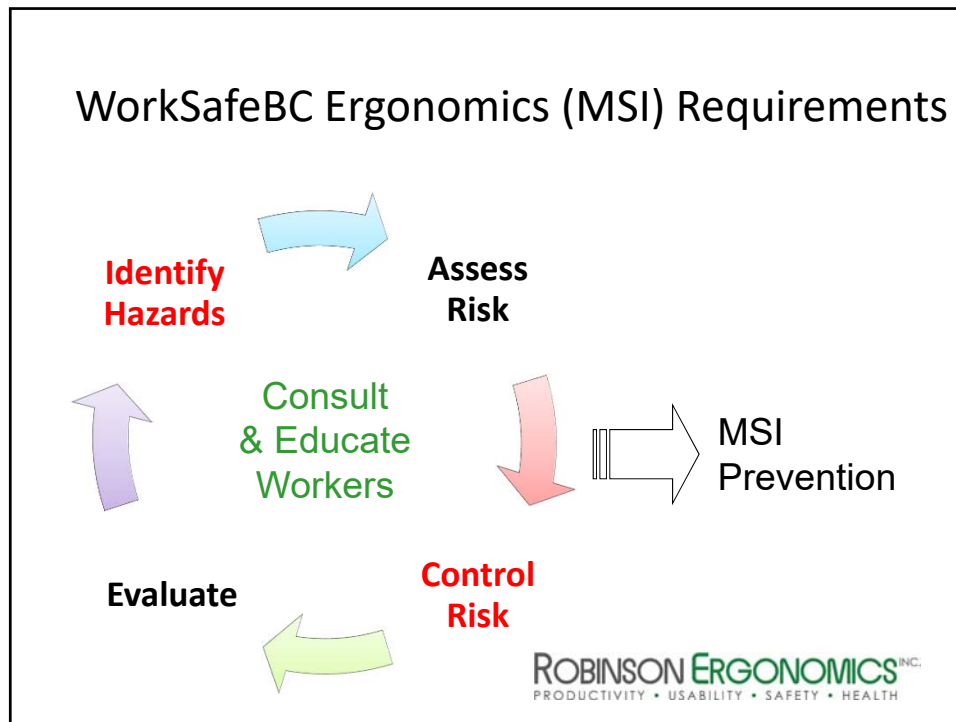
(BC OHS Regulation)

Also... Repetitive Strain Injury (RSI)

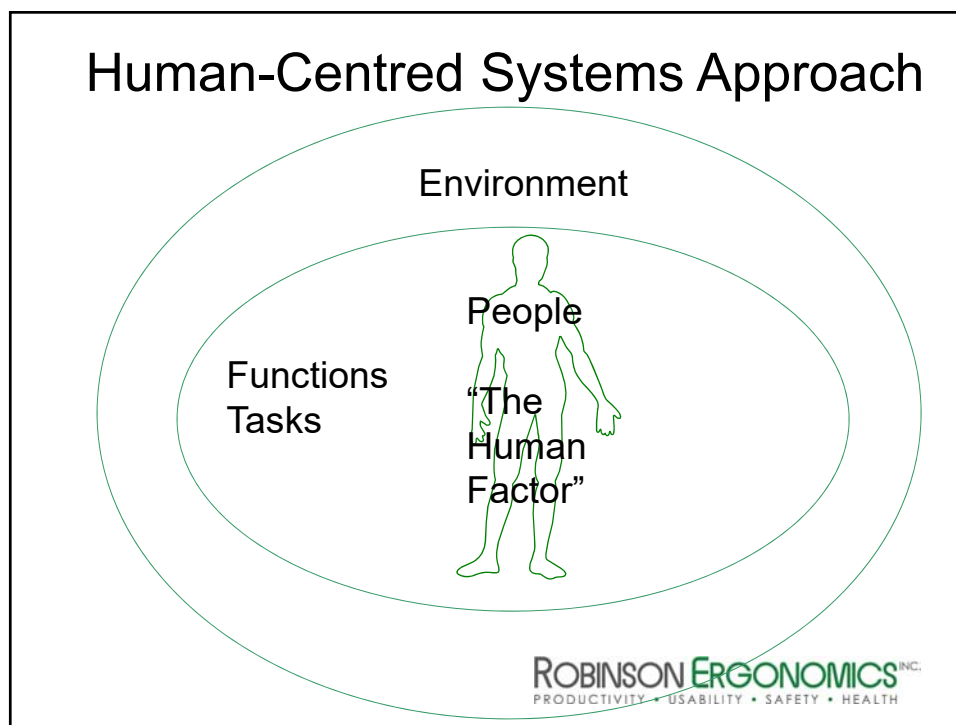
Musculoskeletal Disorder (MSD)

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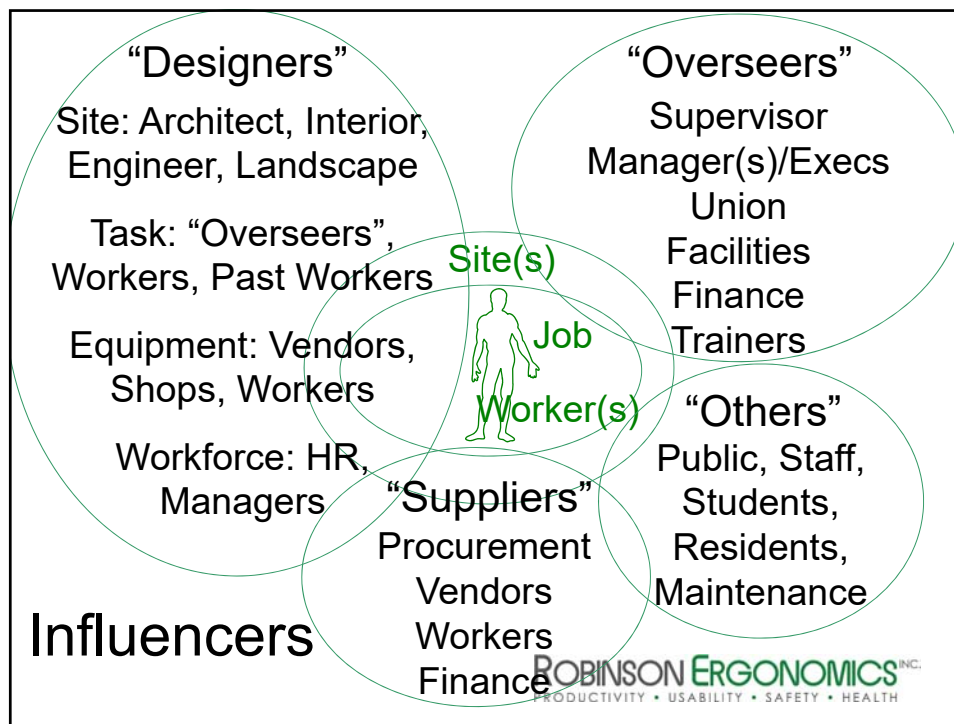
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Generic MSI Hazards

- **Force** = lifting, pushing, pulling, carrying, holding, gripping, torqueing, rapid motions
- **Awkward posture** = reaching, bending, twisting
- **Repetition** = how often (force, posture)
- **Sustained** = how long with no rest (force, posture)
- **Vibration** = powered hand tools or vehicles
- **Contact pressure** = leaning on or gripping edges
- **Unaccustomed** = new work or new worker

Combinations of these occurring together

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Risk Control

Consider:

1. What can you do with existing equipment?
2. What change in equipment might help?
3. What can the person do differently?
4. Who could be consulted to assist?

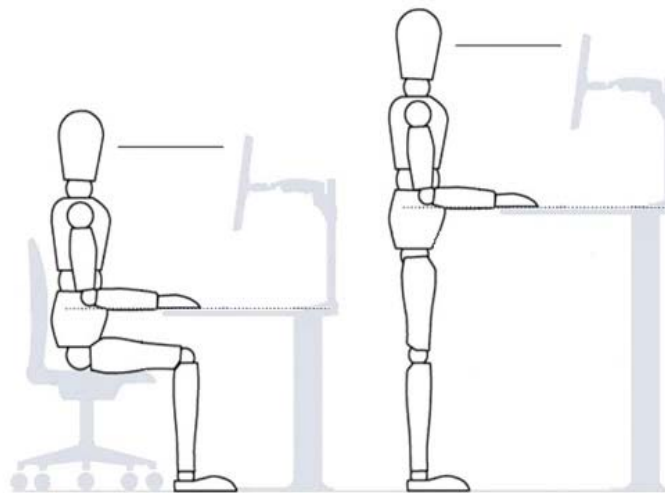
In order of preference...

- Engineering – equipment, space and set-up
- Administrative – how you do what you do
- Personal Protective Equipment (PPE)

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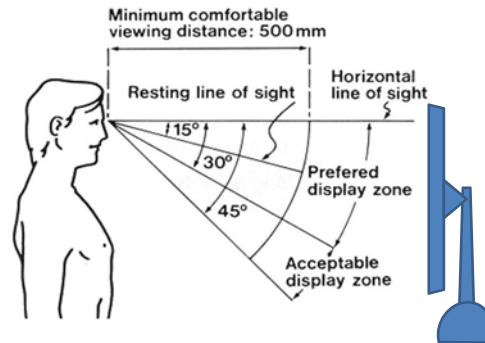
Aim for Neutral Posture



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Visual requirements



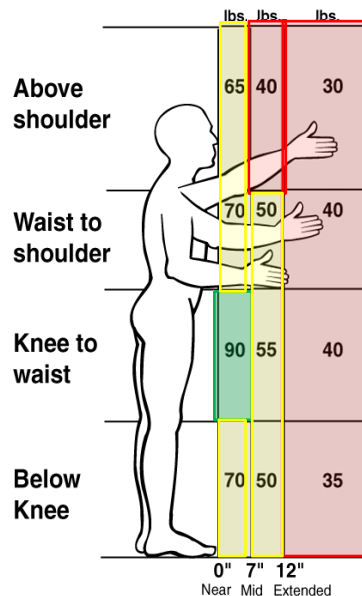
Display height or object height:

- top at eye height
- visual target within 45 degrees from horizontal

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Lifting Zones (lbs)



- Protects
 - 95% males
 - 33-66% females.
- Reduce by 1/3 to protect 95% females
- Guidelines used by WISHA, HSE (UK), WorkSafeBC (now modified in MSI-B)
- Reduce if twisting, poor grip, long duration, high repetition...

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Practice Scenarios

Identify MSI hazards and body parts at risk...

**Force, posture, repetition, sustained, contact pressure,
vibration, unaccustomed?**

Who could be consulted to assist... influencers

Identify potential solutions to reduce risk...

What can you do with existing equipment?

What change in equipment would help?

What can the person do differently?

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