



# At Home Ergonomics

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MFL Occupational Health Centre

[www.mflohc.mb.ca](http://www.mflohc.mb.ca)

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# OHC

## MFL Occupational Health Centre

Healthy Workplaces. Healthy Workers. Healthy Communities.

The MFL Occupational Health Centre (OHC) is a community health centre funded by Winnipeg Regional Health Authority and donations. The Centre helps workers, employers, and joint health and safety committees to improve workplace health and safety conditions and eliminate hazards.



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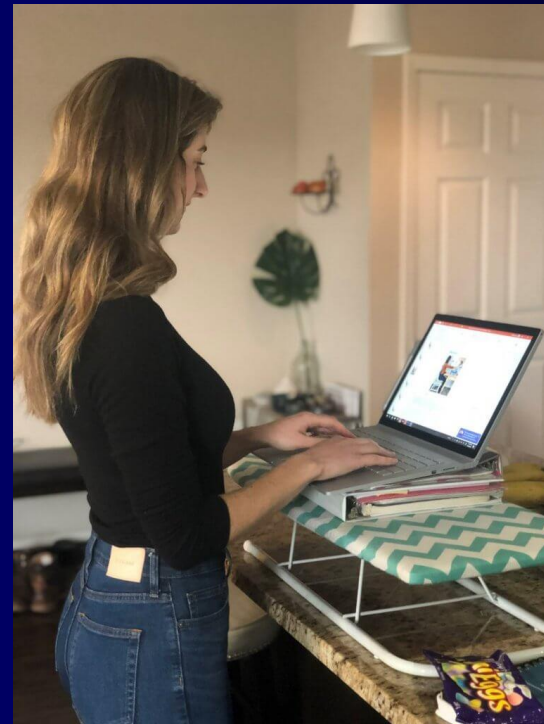
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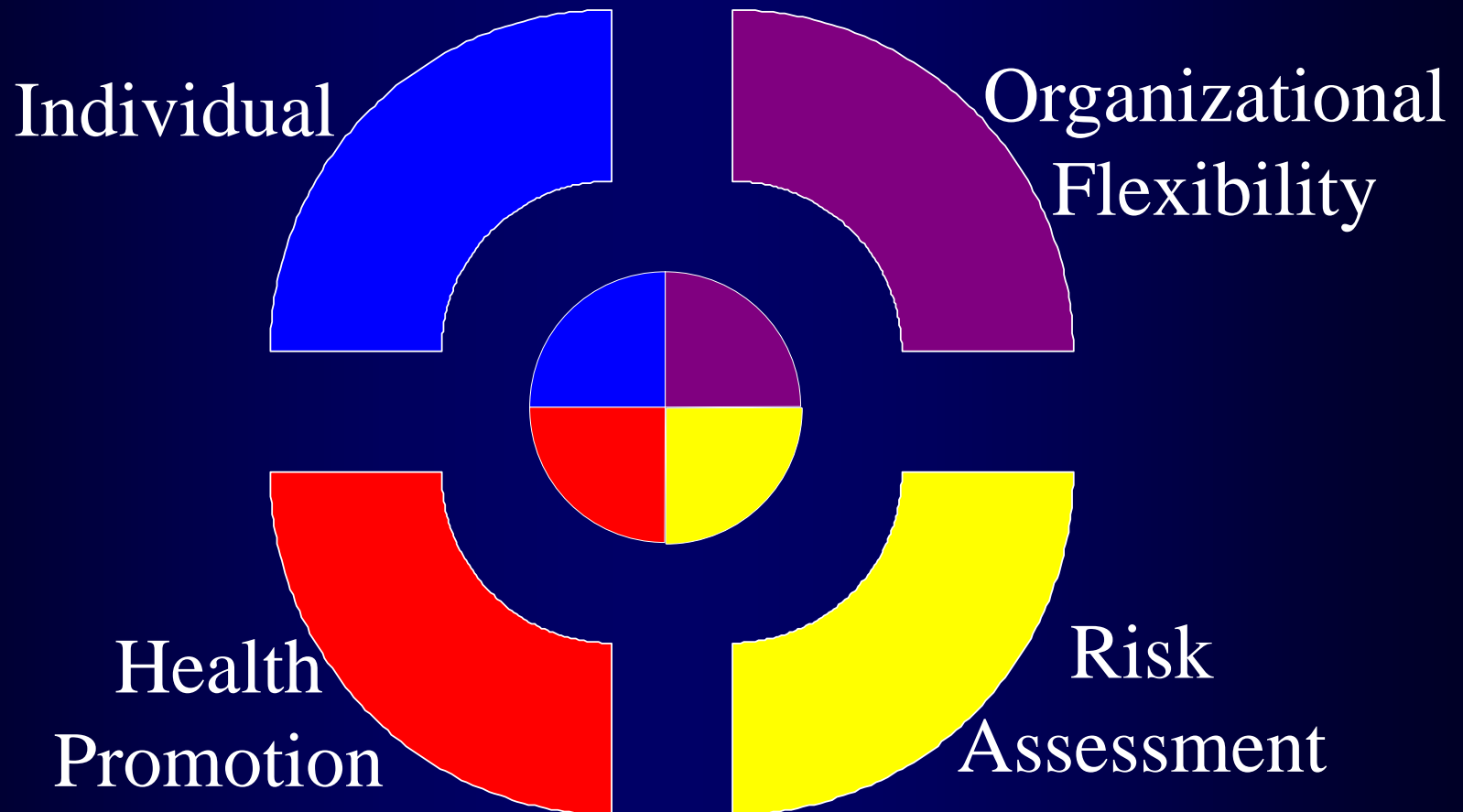
Our services, available free of charge, include a medical clinic, assistance to workplaces, and informative fact sheets on a variety of topics such as preventing repetitive strain injuries, respectful workplaces, preventing workplace violence, and more.







# Safety Program



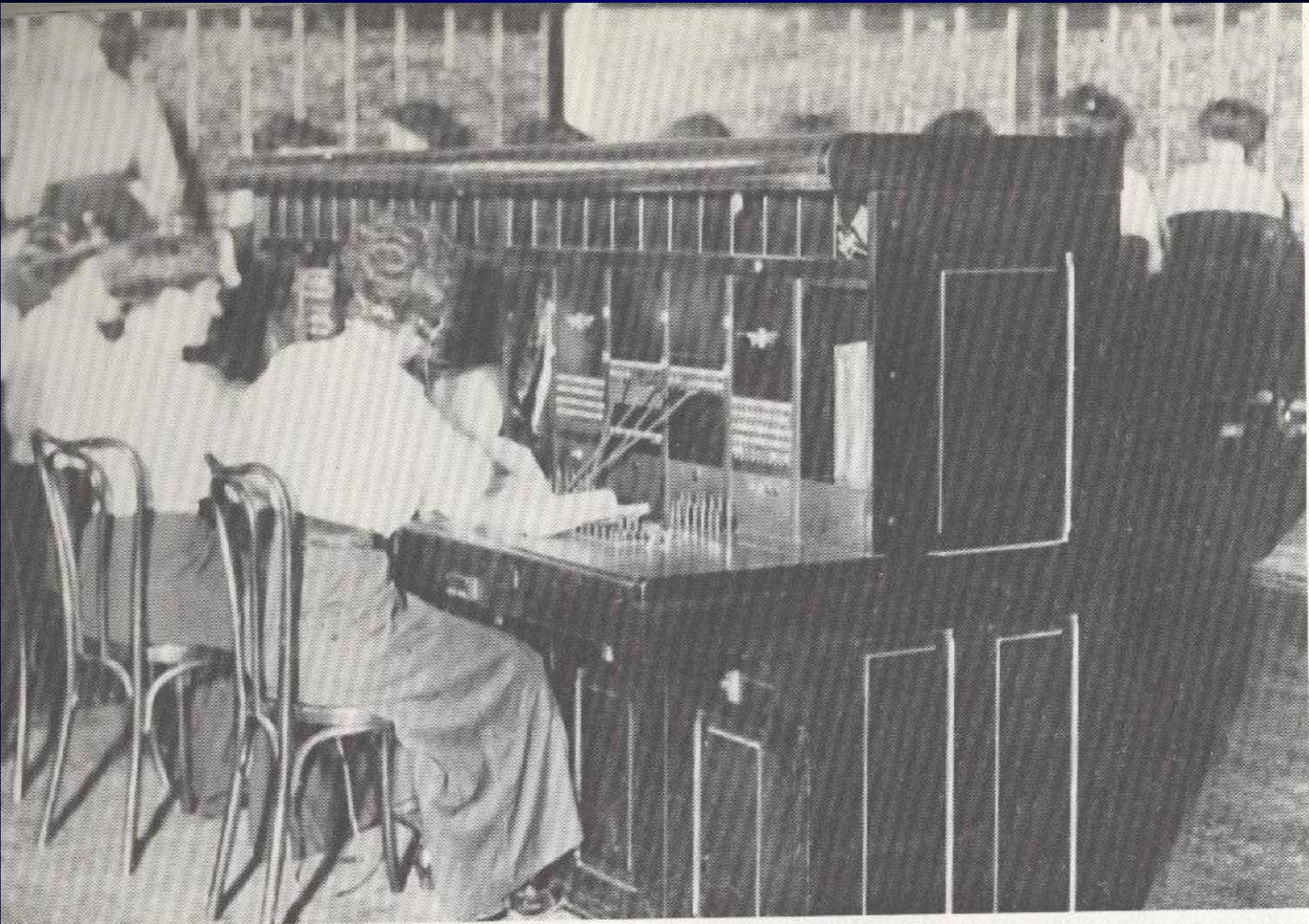




# Disruption

- Telework policies – new ways to work
- OHC has
  - Definitions, Rationale
  - Telework Program Plan
  - Equipment and Security
  - Health and Safety





Switchboard work, repetitive and demanding patience, was considered ideal employment for women. Women were paid less too, and employers considered them more docile than men. But they were not always so: in 1917 telephone operators walked out to protest their low pay.

# New Ideas

## Open Minded yet Critical

- Initial work was standing
  - Hard on the body so sitting
- 1960's – need to get sitting because standing is too hard on the body
  - Sitting is the new smoking



Throw  
book out  
the window





# Mashable

## Lifestyle DIY









# Key Points

- ❑ It's the Job and Education/Awareness
- ❑ Wear and Tear – too much / too often
- ❑ Hazards and Risks – cause / aggravate





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# Musculoskeletal Injuries!

- Common Names

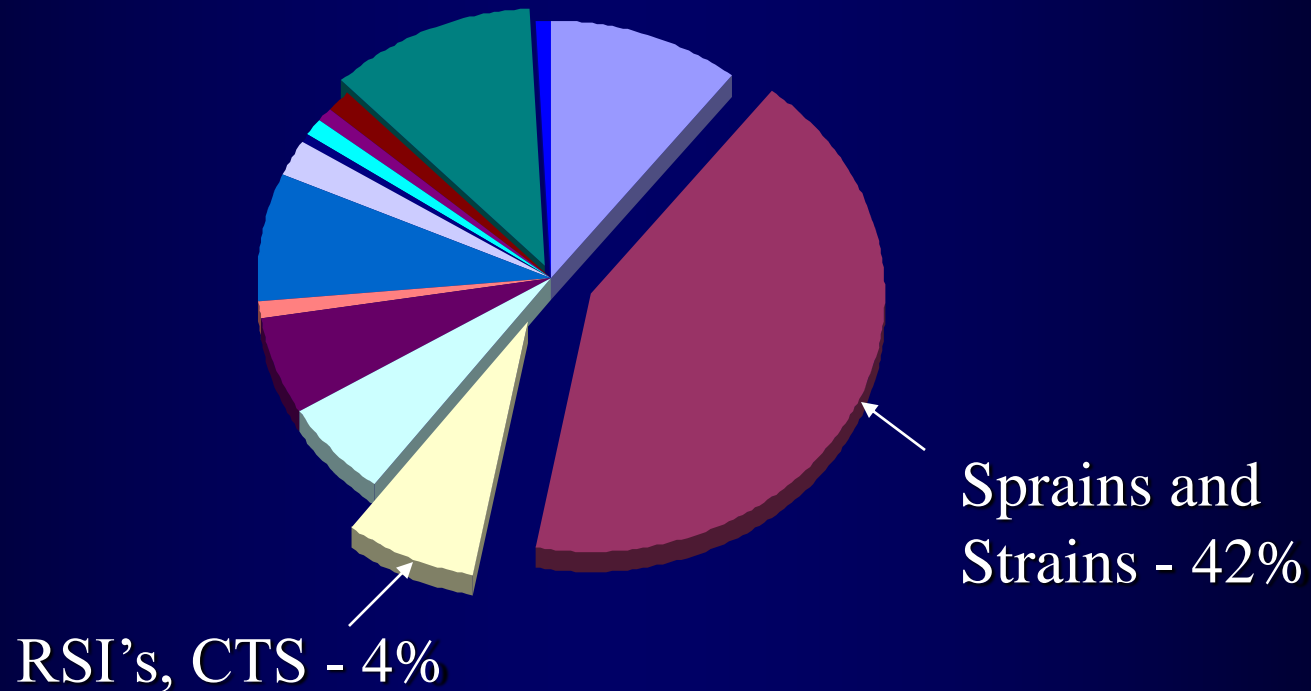
- repetitive strain injury (RSI), repetitive motion injury, cumulative trauma disorder (CTD), sprains and strains, overuse injury

Work Load > Body Capacity  
= wear and tear ~ INJURY



# Why Ergonomics is Important in Manitoba

**WCB MANITOBA CLAIMS, 1997**  
**By DIAGNOSIS (n=389,204 days)**



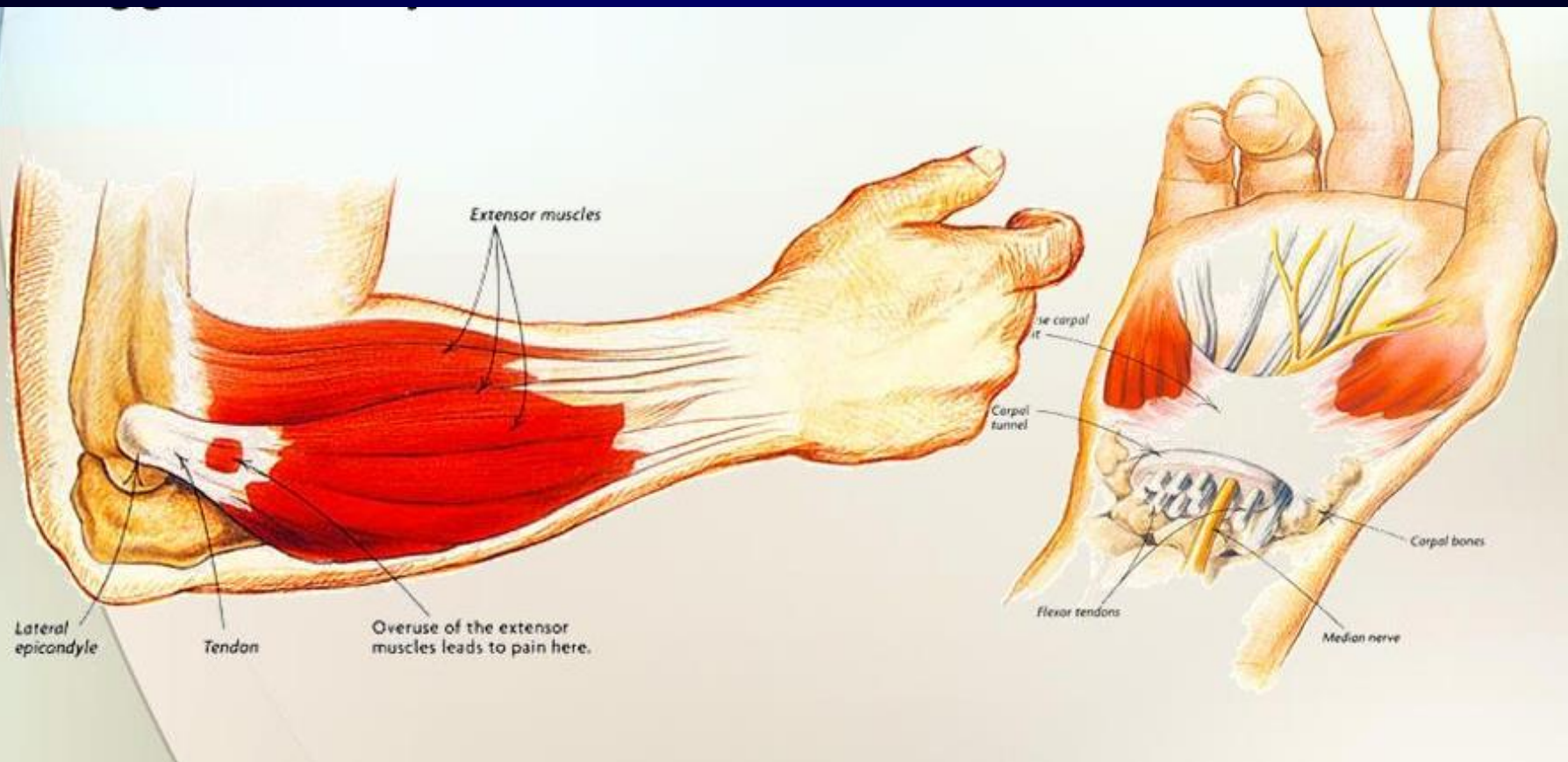
# Signs and Symptoms of a Repetitive Strain Injury

- Pain or Discomfort
- Swelling and Inflammation
- Numbness and Tingling
- Stiffness or decreased movement
- Symptoms worsen with time



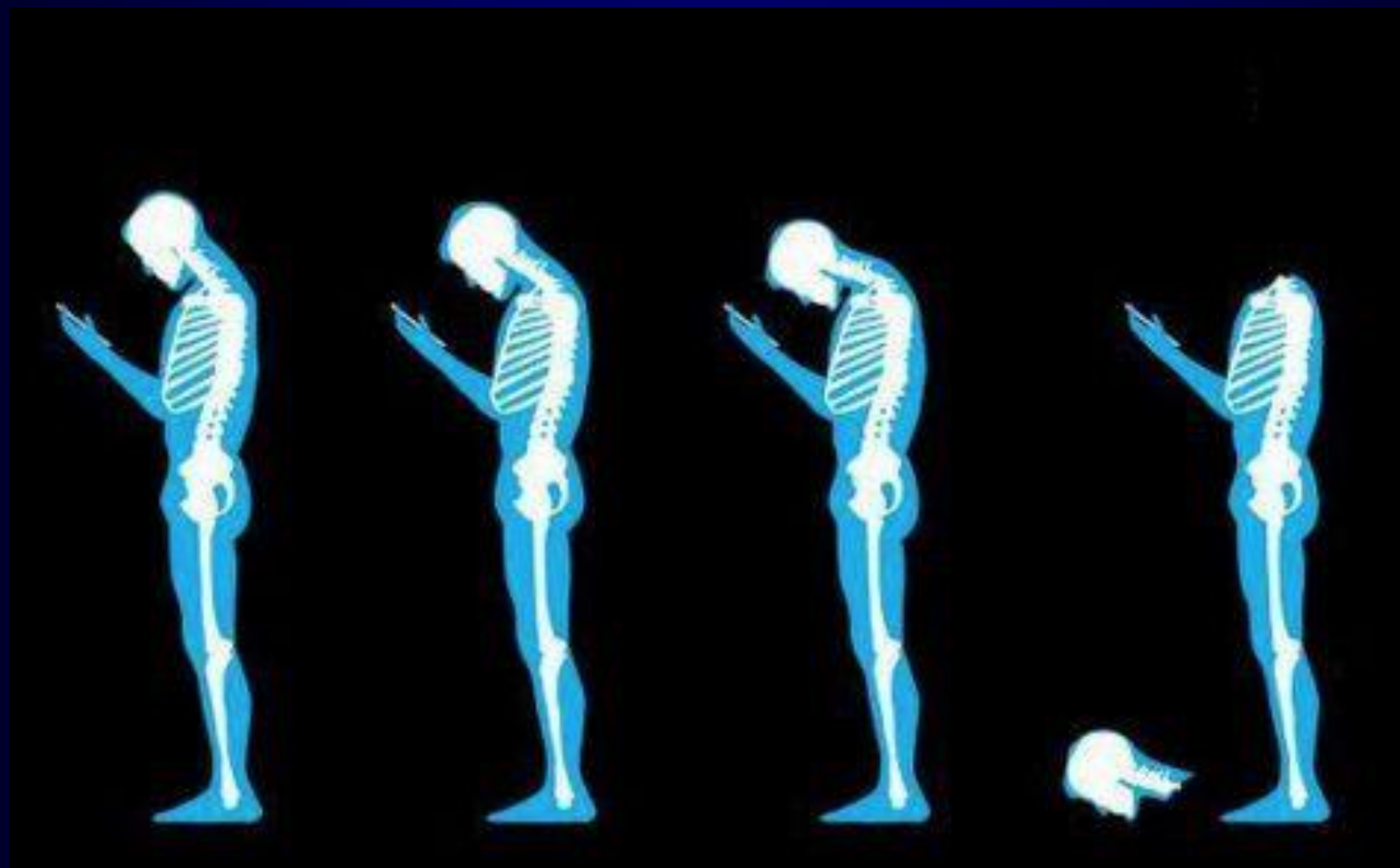








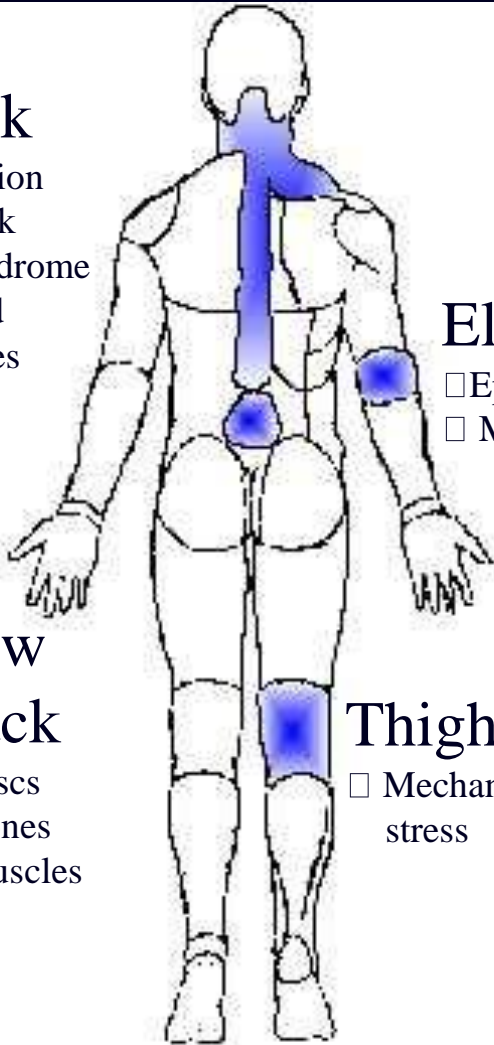




# What's Missing

## Neck

- ☐ Tension Neck Syndrome
- ☐ Head aches

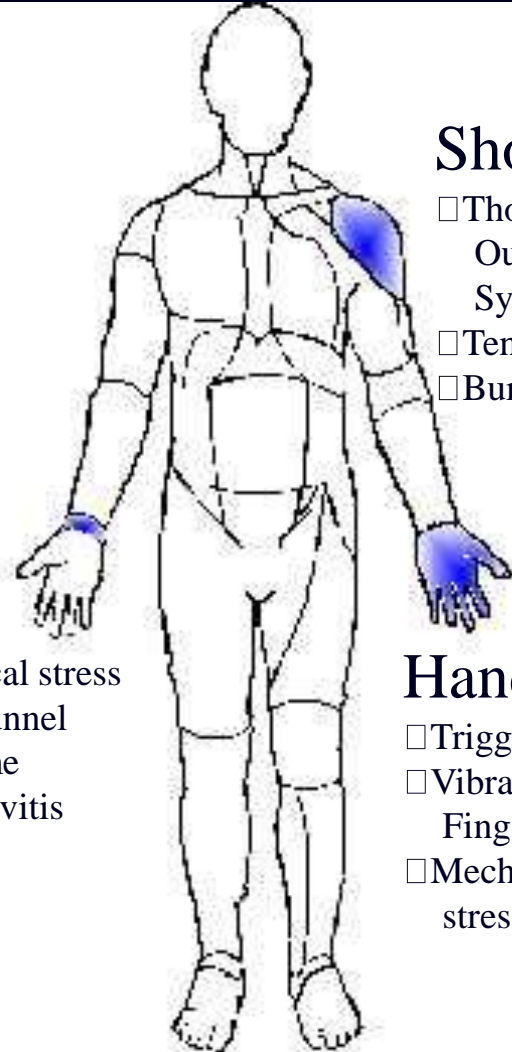


## Elbow

- ☐ Epicondylitis
- ☐ Mechanical Stress

## Shoulder

- ☐ Thoracic Outlet Syndrome
- ☐ Tendonitis
- ☐ Bursitis



## Low Back

- ☐ Discs
- ☐ Bones
- ☐ Muscles

## Thigh

- ☐ Mechanical stress

## Wrist

- ☐ Mechanical stress
- ☐ Carpal Tunnel Syndrome
- ☐ Tenosynovitis
- ☐ Ganglion

## Hand

- ☐ Trigger Finger
- ☐ Vibration White Finger
- ☐ Mechanical stress



# Stages of Injury

- Day to Day Aches and Pains
- Hurts for a few days
- Interferes with work, other activities
- Chronic Pain

# Specific Limits?

- Exactly how much and how often?
- Specific number of repetitions?
- Threshold Limit Values?

Ethics!

# Asbestos Quote

“We repudiate the term ‘Asbestos Poisoning’.  
Asbestos is not poisonous and no definition  
or knowledge of such as disease exists”,

(T&N's Turner Brother Asbestos board view,  
1922)



# Hand Held Device Quote

“There is no link between repetitive and continuous use of hand held devices and the onset of musculoskeletal injuries as seen in the workplace”.

(A. Dolhy, 2011)

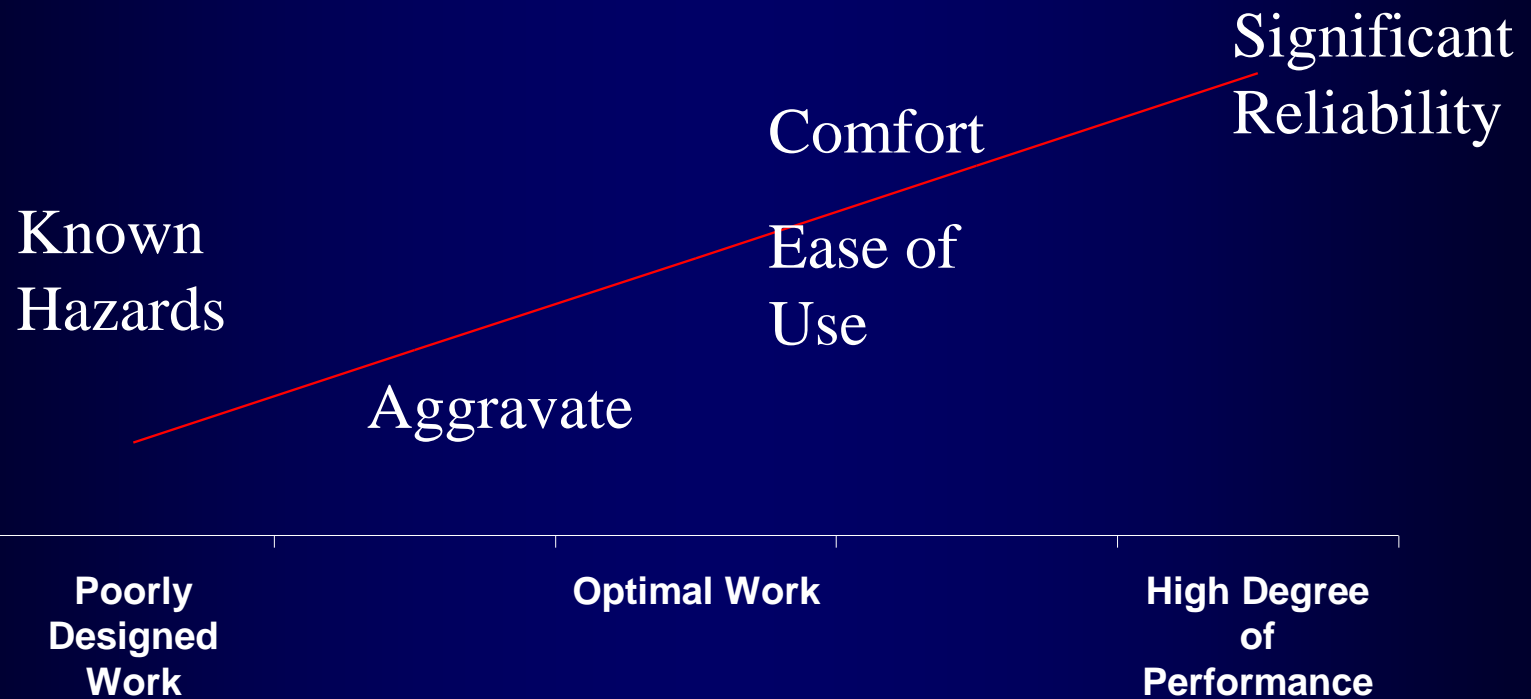
# What is Ergonomics?

The science of fitting workplace conditions and job demands to the capabilities of the working population.

*‘Fitting the task to the worker’*

# Ergonomics

## Range of Outcomes





# 3 Simple Ergonomic Principles

- Inspect, Assess, Evaluate and Educate

## How the Body Works

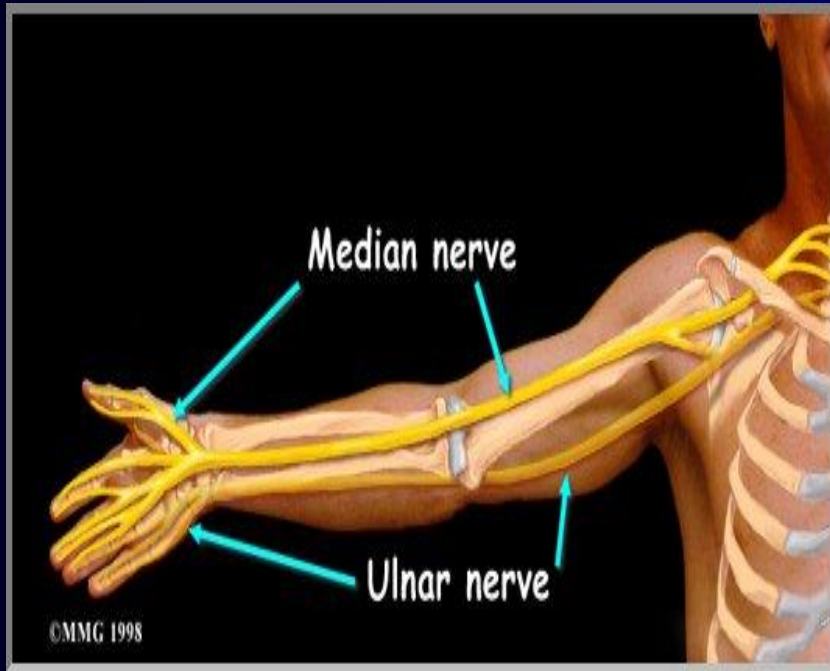
Shoulders - Basketball

Hands - Soccer

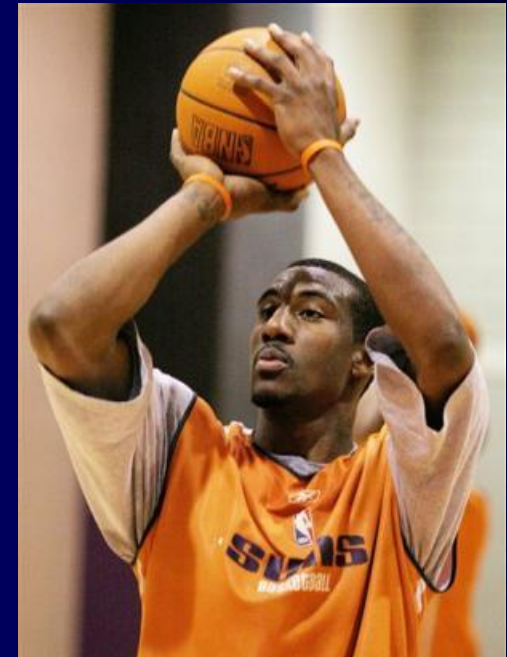
Back - Baseball

# Ergonomic Principle #1

## Keep Elbows In Close to the Body



**The  
Basket  
ball  
Rule**



# When Reaching, Lifting and Pushing

# Notes

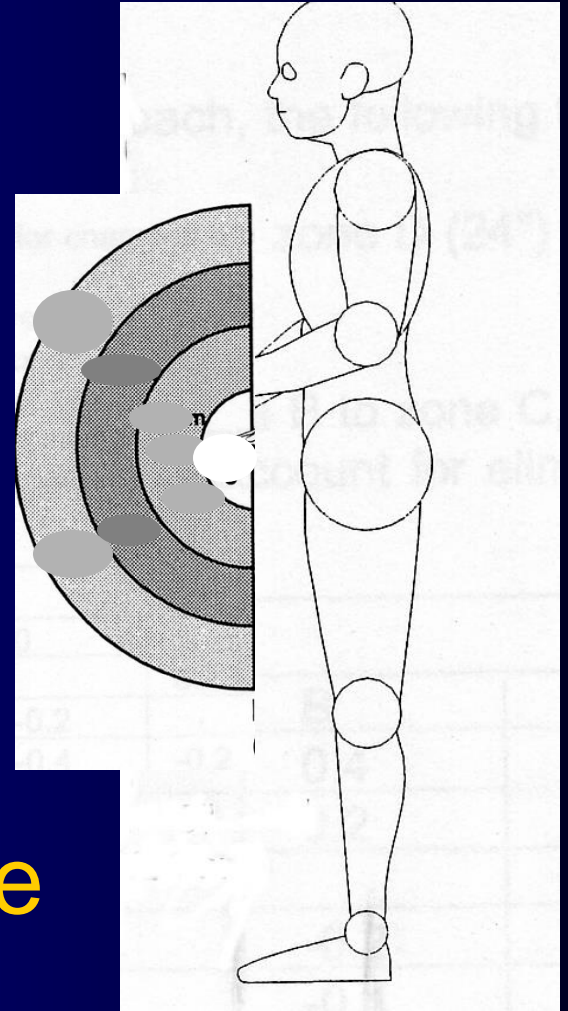
# Ergonomic Principle #2



the  
Strike Zone Rule  
(Chest - Knee)

and

Avoid Rounding the  
Lower Back

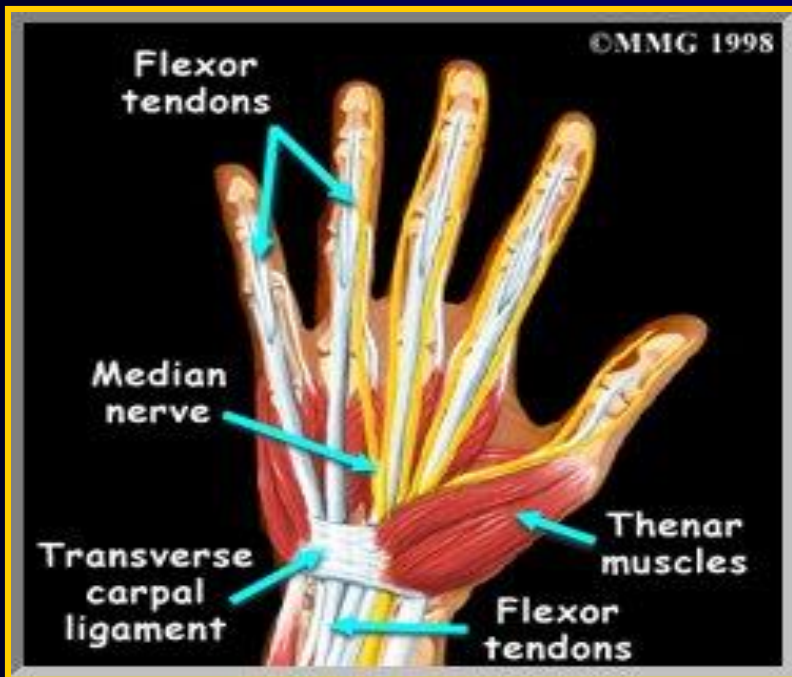




# Notes

# Ergonomic Principle #3

## Reduce Stress in the Hands



Watch  
the  
Hands  
Rule



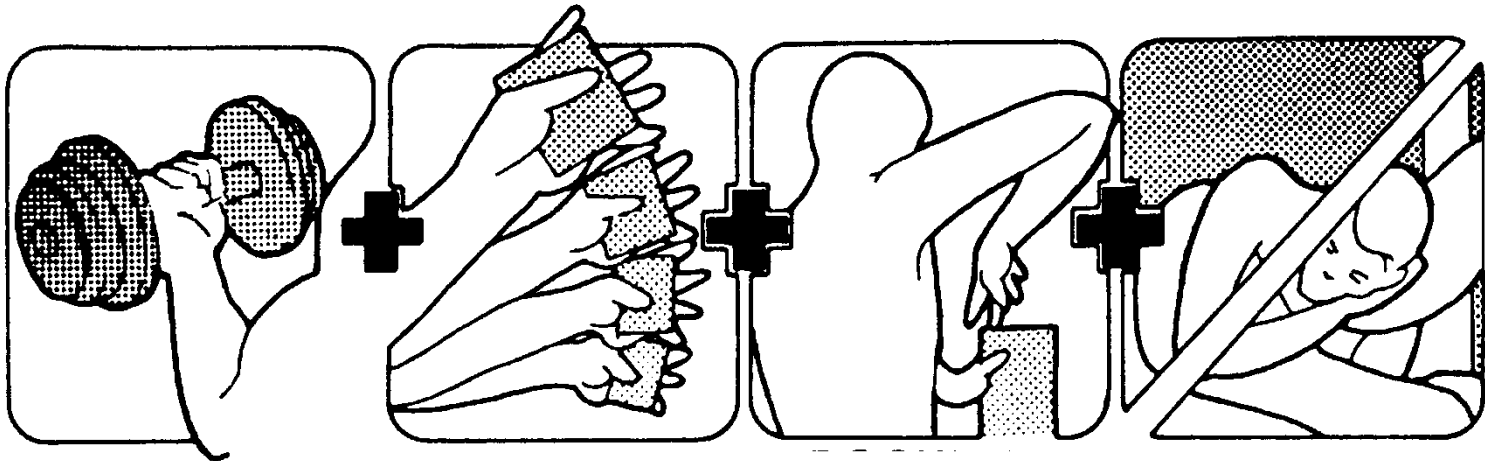
**Avoid pinching, over gripping, using the palm as a hammer and excessive bending the wrist**

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# Notes

# A Word of Caution...

- All workplaces have risk factors
- Must examine them in combination to assess risk



Force

Repetition

Awkward  
Postures

Lack of Rest

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# Psychosocial Risk Factors

- Job control (deadline pressure)
- Job satisfaction
- Social support (work and home)

Hazard is a Hazard Resources

# Workstation Checklist

## At Home - Workstation Self Assessment Checklist

Employee Name: \_\_\_\_\_ Location: \_\_\_\_\_

Date of Assessment: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

Sitting				
Preferred	Yes	No	If no, try the following	Comments
You know how to operate your chair.	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Review chair instruction sheet</li> <li>Play with the adjustments</li> <li>Wood or metal kitchen chairs may actually support a good sitting position but not for long periods of time. – no cushion.</li> <li>Take frequent breaks and get out of the chair as much as possible.</li> <li>Stand to make phone calls or do other tasks.</li> </ul>	
Adequate back and lumbar support so the ears are in line with the shoulders and hips.	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Adjust the chair.</li> <li>Add a lumbar support or pillow</li> <li>Review example picture 1.0 of poor sitting issues.</li> </ul>	
Shoulders relaxed and level when keyboarding and using the mouse	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Adjust/eliminate armrests</li> <li>Raise/lower chair</li> <li>Raise/lower work surface height</li> <li>Learn to use the mouse on the left side</li> </ul>	
Elbows in line or slightly lower than the hands	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Adjust/eliminate armrests</li> <li>Raise/lower chair</li> <li>Raise/lower work surface height</li> <li>Use a wrist rest – only length of keyboard</li> </ul>	
Thighs parallel to floor, knee at same height as hips	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Raise/lower chair</li> <li>Raise/lower work surface height</li> <li>Add/remove footrest – use books or old binders</li> </ul>	
Two to three finger breadth between knee and front edge of seat pan.	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Use footrest – will raise knee up a bit</li> <li>Use lumbar support or pillow if seat pan is too long</li> <li>Adjust chair if possible</li> </ul>	
Adequate space on work surface – frequent reaches are in 2 o'clock or 10 o'clock positions	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Organize and reposition items</li> <li>Locate frequently used items within easy reach</li> <li>Position documents between the keyboard and monitor. Use angle adjustable</li> </ul>	

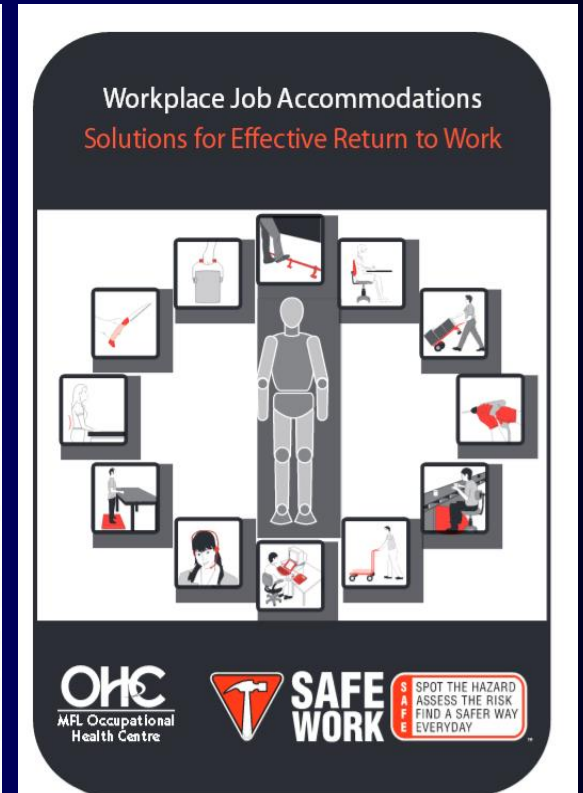
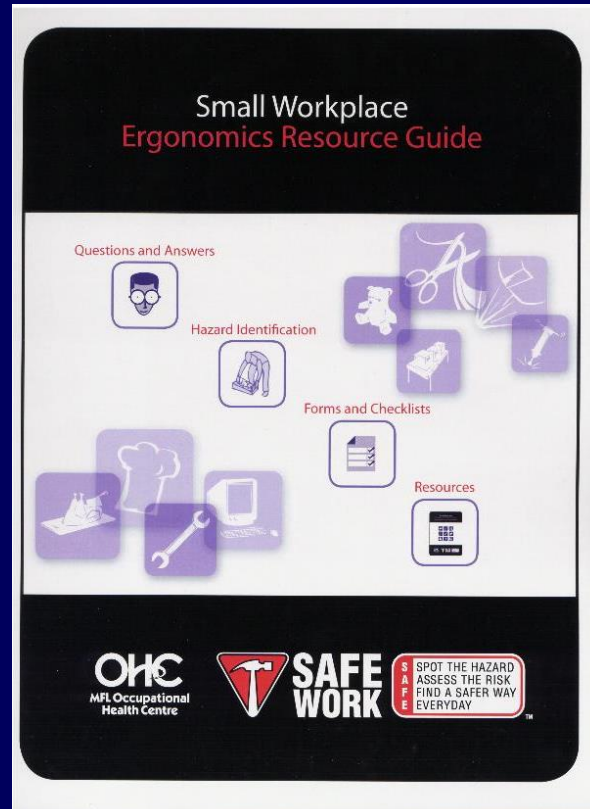
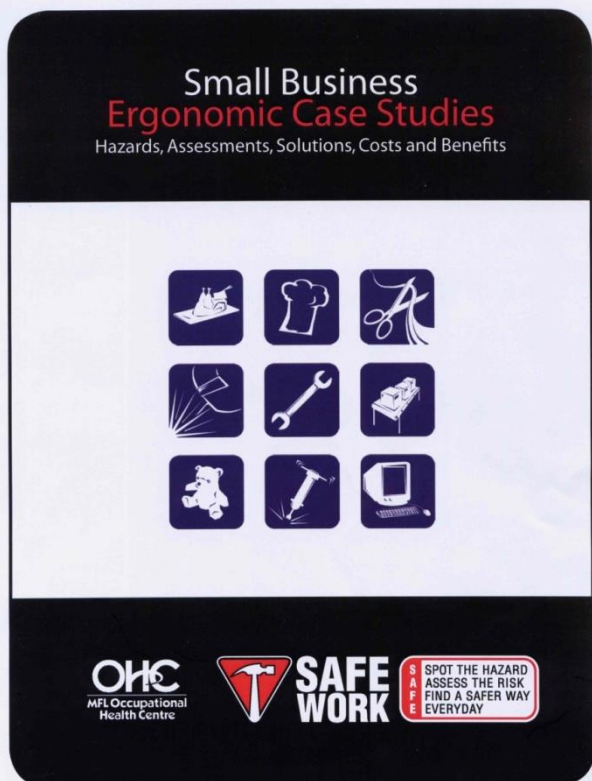
Minimal reaching above shoulder and below knee heights	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Stand to reach overhead binders/items.</li> <li>Place frequently used items on desk</li> <li>Support upper body weight by placing a hand on the desk or on the knee.</li> </ul>	
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Standing				
Preferred	Yes	No	If no, try the following	Comments
Standing in a neutral position	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Feet are shoulderwidth apart, no slouching to the side</li> <li>Use a footrest and place one foot on it</li> <li>Adjust desk height to avoid leaning forwards</li> <li>Adjust monitor height for standing, usually a little higher than sitting position</li> <li>Avoid leaning on the workstation/keyboard, raise the height or use a wrist rest</li> </ul>	
Standing for long periods of time	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Adjust sitting and standing time accordingly</li> <li>Use a footrest to change posture</li> <li>Wear proper footwear</li> <li>Try an anti-fatigue mat</li> </ul>	
Documents and equipment positioned appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Standing allows for easier movement; rearrange documents and equipment to take advantage of more desk space.</li> <li>Position equipment at the same level when standing as with sitting</li> <li>Adjust height to reduce wrist direct pressure or leaning forearms on the edge of the workstation</li> <li>Avoid reaching across the body</li> </ul>	

# Sections

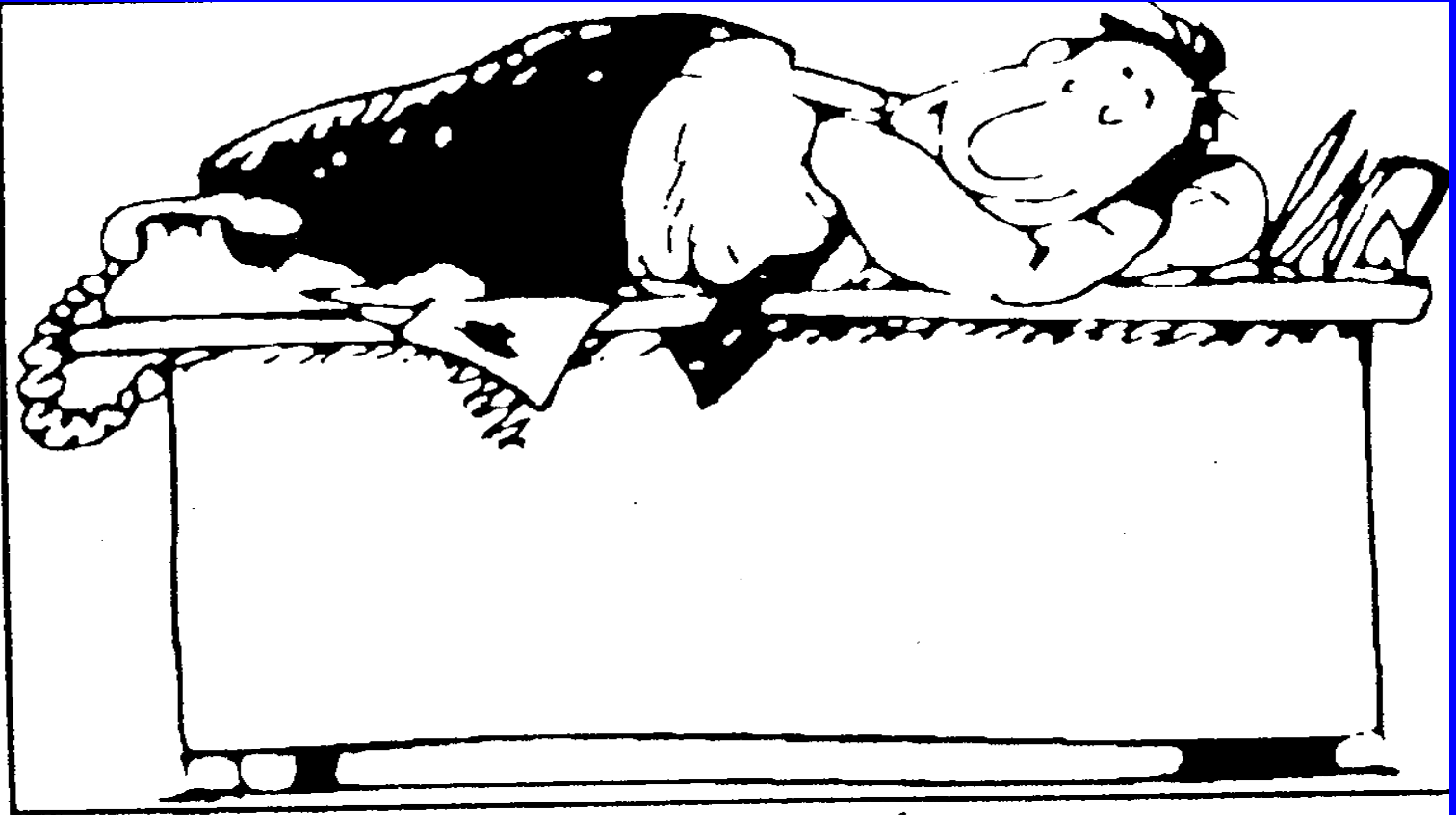
- Sitting
- Standing
- Keyboard
- Mouse
- Monitor and Documents
- Telephone
- Job Variety

- Small Business Ergonomic Case Studies
- Small Workplace Resource Guide
- RTW and Job Accommodation Resource





# Final Thoughts?



“When working at your desk, try to maintain a neutral posture.”