

## Good Posture, Great Health

Presentation by:

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Beacon Hill Chiropractic & Massage



## Our vision at Beacon Hill Chiropractic & Massage

Vision:

*To be leaders in health care helping people live healthy, balanced lives!*

Our purpose statement:

*We change people's lives through inspiration, empowerment, and excellent health care delivery*



## Why discuss this topic of posture & chiropractic wellness?

- One overlooked contributor to our well-being
- Under regarded by mainstream medicine, yet spinal health is generating very exciting research interests
- A KEY health factor that, if ignored, can become a risk factor for economic costs, morbidity, and suffering in quality of life as well as your longevity
- Practical, safe, and effective forms of care within the health sciences fields like chiropractic are proven effective in promoting and maintaining good posture.



## Impact of our posture!

- Our bodies crave alignment & good posture => effortless ease in standing, sitting, & all movements
- With good alignment, our bones (not muscles) and healthy joints support our weight, lowering effort/strain
- Poor posture results in tension and joint pressure that affect us both physically and mentally
  - (attention span, depression, headaches, even our brain size)



## Impact of our posture!

- "Poor posture distorts the alignment of bones, chronically tenses muscles, contributes to stressful conditions such as **loss of vital lung** capacity, increased **fatigue**, reduced blood and **oxygen to the brain**, limited range of motion, **stiffness of joints**, **pain syndromes** (headaches, jaw pain, muscular pain), reduced mental **alertness and work productivity**, premature **aging**, faulty **digestion** and constipation, back pain, and a tendency toward **cynicism, pessimism, and poor concentration**."

Robert K. Cooper, Ph.D. - "The Performance Edge"



## Impact of our posture!

- "The more mechanically distorted a person is, the less energy is available for thinking, metabolism, and healing." In addition, "Ninety percent of the energy output of the brain is used to maintain relation of the physical body with gravity.

The brain's priority in managing posture leaves only 10% percent of the brain's energy output for thinking, metabolism, and healing the body from illness."

Dr. Roger Sperry, Ph.D.

1988 Nobel Prize Winner for Brain Research



## Cost impact!

- Of the top 10 causes of lost work days..
  - #1 back pain, #3 MVA – spine injury, #5 joint pain
- The leading MSK Medical costs in N. America
  - #2 MVA – spinal care, #4 back pain, #6 joint pain
- Leading reasons for a family physician visit..
  - #2 leading reason for a visit was back pain, neck pain, neck & shoulder pain, or headaches!

All effectively managed by chiropractors as per Manga, AHCPR, LBP & NP Task Force >>>would save millions \$\$

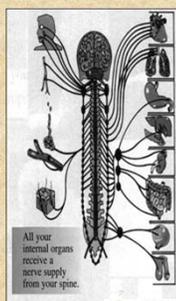


## Why is posture significant?

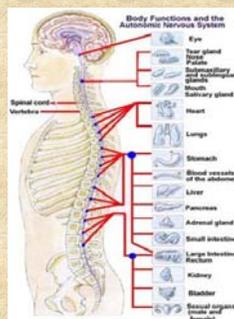
- The worse a person's posture, the greater the chances of them developing degenerative conditions.
  - Arthritis is #1 condition in adults (US & Canada) over 70 yrs
- Posture and motion go hand in hand.
  - Loss of motion is linked to hormonal dysfunctions like adrenal fatigue, and hypothyroidism
- University of London – poor posture resulted in loss of height and was directly related to an increase in the rate of death
  - > 3cm ht loss ~ a 43% increase in heart attacks



Posture Is Important – And one of the key focuses of chiropractors around the world!



## A healthy nervous system: The goal of today's great chiropractors



### FACTS

- First system to form after conception (day 18)
- 72 kilometers of nerves running through our bodies
- 3 trillion sensory bits of information per second
- 2.5 million brand new cells formed in body every minute



## It Starts With Our Children:



- ONLY 7% of children in Canada get the minimum baseline recommendation of **60 minutes** of moderate to vigorous PA/Day.
- Did you know that children aged 5-17 years spend 67% of their waking life in a sedentary position!
- Social media, TV, computer games are all contributing to postural shifts noted in young people.



## Keeping Our Kids Healthy!!

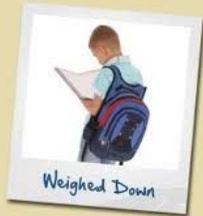


- Regular activity keeps kids healthy
- Lifestyle changes are needed to support health posture and movement
- In 1980s and 1990s - childhood obesity increased from 5% to 15%!!
- 1/5 children's calories consumed on the couch
- Currently 1/3 of children are overweight or obese.....WHY??



## Common Posture Concerns: Backpack Health

- Carrying a heavy load unevenly or improperly can result in poor posture distorting the spinal column, causing muscle strain, headaches, neck and arm pain, and even nerve damage.
- More than 50 per cent of young people experience at least one episode of low back pain by their teenage years



[http://www.albertachiro.com/files/newfiles/2012\\_back\\_ii\\_light\\_weight\\_ii\\_0116\\_backpack\\_kr.pdf](http://www.albertachiro.com/files/newfiles/2012_back_ii_light_weight_ii_0116_backpack_kr.pdf)



## How Do We Help?




**Backpack Modifications:**

**Back Pack Tips**

- Backpacks should be no heavier than 10% of a student's weight when packed.
- Backpacks should be no wider than the student's chest.
- Choose a backpack with broad, padded shoulder straps and waist strap.
- Don't wear the backpack any lower than the hollow of the lower back.
- Place all heavy items at the base of the pack, close to the spine, for a better distribution of the weight.

**Day to Day Changes:**

- Exercise every day
- Avoid slouching/hunching when sitting. Keep shoulders squared!
- Stretch before and after sports, and after each hour of sitting esp. with media
- Sleep on your side or back!
- Get adjusted!!
- Manage emotional stress!
- [www.straightenupalberta.com](http://www.straightenupalberta.com)




**DO IT TOGETHER!!!**

Did you know that only 38% of parents spend regular time in their schedules actively moving and playing with their kids??  
Everyone benefits! Health promoting habits start early!!  
[www.alive.com/articles/view/23897/overweight\\_and\\_underactive](http://www.alive.com/articles/view/23897/overweight_and_underactive)



## The Impacts of Posture:



- "Posture is affected by, and affects, every aspect of our lives... Your state of nutrition, exercise, stress management, body fat control, and mental development depend...on your posture. With good posture, exercise is more enjoyable, digestion improves, the mind is clearer, senses sharper, and problems seem more manageable. In contrast, poor postures-tense, slumped, struggling positions-sabotage your every thought and movement."

-Robert K. Cooper, Ph.D, -"The Performance Edge"

## How Sitting is Ruining Our Health:

- Women > 3 hours/day vs. Men > 6 hours/day is the definition of excessive sitting
- Sedentary behaviour is unrelated to lack of exercise!!
- Contributing to postural tendencies such as **Forward head posture** and **rounded hips and shoulders!!**



## The Spiral of Declining Posture:

- Influence on muscles of respiration=30% decline in lung capacity
- Increased respiration rate
- Increased bp and heart rate
- Relates to activation of fight or flight part of nervous system
- Increased circulating cortisol.....what are the consequences??

**Dangers of Forward Head Posture**  
The Domino Effect



- The head moves forward shifting the Center of Gravity.
- To compensate, the upper body drifts backward.
- To compensate for the upper body shift, the hips tilt forward.

So, the forward head position can be the cause of not only head/neck problems, but also mid-back and low back problems.

### The Spiral Continues:

- **Cortisol** is our body's stress hormone
- Role in decreased immune function, detoxification, wound healing etc.
- Influence on hormone balance and mental fatigue
- Contributes to elevated cholesterol!!
- This is why we check your vital signs!!



### Poor Posture and Neck Pain:

- Can result in decreased blood flow to the brain
- Noted in particular in region associated with sensory input/perception areas
- Headache contributor
- Brain-Body connection



### Consider this:

"Poor posture can diminish blood flow to the brain and cause impairments in creative thinking and emotional control, slow reaction time, magnify feelings of panic and helplessness, and may even cause depression."

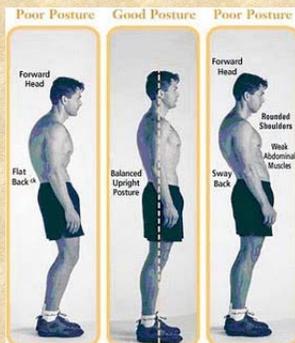
-Robert K. Cooper, Ph.D., -"The Performance Edge"

### How do we take care of our back?

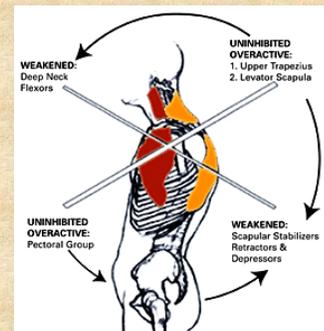
- Find out the cause and how to fix
- Exercise and stretching
- Proper lifting techniques
- Improved posture at work and home
- Chiropractic & massage



### Upper and Lower Cross Syndrome



### Upper Cross Syndrome



## Upper Cross Syndrome - Pitfalls

- Affects the head, neck and shoulders.
- Result of long-term seated postures.
- Rounded and elevated shoulders
- Increased thoracic kyphosis.
- Forward head posture.
  - Can increase O2 saturation by up to 30%
- Loss of cervical lordosis.
- Can cause pain in head, neck, mid back, and shoulders



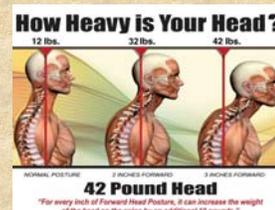
## Muscle Imbalances in Upper Cross Syndrome

### Tight-short muscles

- Suboccipitals
- Pectorals
- Anterior shoulder
- Upper trapezius

### Weak-long muscles

- Mid to lower trapezius
- Serratus anterior



## Decrease your pain, improve your posture/function

### Stretch

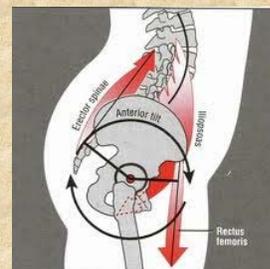
- Pecs, upper traps, levator scapulae

### Strengthen

- Rhomboids, neck flexors, lower traps



## Lower Cross Syndrome



## Lower Cross Syndrome - Pitfalls

- Affects the lumbar spine and pelvis.
- Anterior pelvis and increased lumbar lordosis.
- Tightness in the psoas and lumbar erector spinae.
- Responsible for low back and hip pain/dysfunction
- Long-term sitting contributes to this syndrome



## Muscle Imbalances in Lower Cross Syndrome

### Tight-short muscles

- Hip flexors
- L/S extensors

### Weak-long muscles

- Abdominals
- Gluteus min/med/max



### Postural Signs of Lower Cross Syndrome

- Dysfunction**
  - Shortened erector spinae
  - Weak gluteus maximus
  - Weak abdominals
  - Shortened piriformis
- Postural finding**
  - Lumbar hyperlordosis
  - Anterior pelvic tilt
  - Protruding abdomen
  - Foot turned out

### Decrease your pain, improve your posture/function

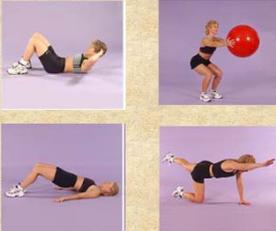
**Stretch**

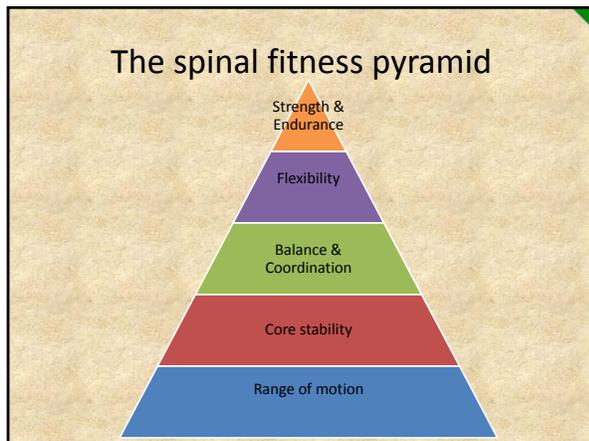
- Hip flexors, L/S musculature



**Strengthen**

- Abdominals, gluteal musculature





### Proper Lifting Techniques

“It’s not how much you lift or move, but the way you do it”!

**General Rules:**

- 1) Push vs. pull
- 2) Keep load close to body
- 3) Wide base of support
- 4) Back straight, shoulders up, head up
- 5) Bend at hips and knees – NOT BACK
- 6) Keep load close to body
- 7) Pivot with feet – avoid twisting
- 8) Breath out with lift
- 9) May use abdominal bracing
- 10) Team work vs. mule work



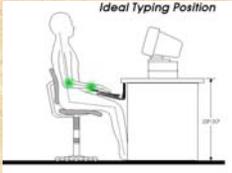
### Posture check

*Increased stress, decreased circulation...*



Typical desk top typing posture that increases muscle fatigue and injury risk.

Higher risk



Ideal Typing Position

Lower risk

### Posture check

*ask yourself...*

Do you use a headset rather than cradling the telephone between your head and shoulder?



### Posture check

#### *ask yourself...*

- Are you sitting against the back of your chair while you work?
- Is your head/neck upright and centered over your shoulders when you look at the screen or documents?
- Are your shoulders relaxed when keying and using the mouse?
- Are your arms close by your sides when you use the keyboard or pointer?

### Posture check

#### *ask yourself...*

- Are your elbows relaxed (100 degree angle) when using the keyboard or mouse?
- Are your wrists in a neutral position (aligned with your forearm) when keying or using the pointer?
- Are you avoiding awkward postures such as an extended finger or thumb when keying or using the mouse?

### Chair Basics

- Good lumbar (low back) support
- Comfortable sitting for at least 2 hours
- Chair has 5 point base
- Adjustable arm rests (or none)
- Seat pan is comfortable
- Easily adjustable while sitting
- Appropriate height & depth of seat pan



### Or be different , even wiser!

- Ball chairs for active sitting
- Standing work stations with or without adjustability, treadmills underneath your feet



### Monitor issues and glare

#### *protect your eyes !*

- Eye-to-screen distance at least 18 inches
- Top of screen at eye level or slightly below
- Don't stare...blink frequently to lubricate eyes
- Use blinds to control outside light
- Screen colors: dark letters on light background

### Work technique

#### *ask yourself...*

- Do you avoid leaning on the wrist rest while keying and using a mouse?
- Are you using a light touch to key?
- Are you holding your mouse loosely with your hand and fingers in a relaxed position?
- Do you let go of the mouse when not using it?
- Do you take 20 second breaks after every 20 minutes of keying?

### Work technique

*ask yourself...*

- Do you take eye breaks and look at a distance every 20 minutes?
- Do you blink while you look at the screen?
- Do you take stretch breaks throughout the day?
- Have you set up your work to encourage alternating sitting and standing throughout the day?
- Have you optimized your settings on your computer to make your work easier? (i.e. flicker rate, mouse speed, font size)
- Do you know how to adjust your keyboard tray and chair?

### Laptops

*a few words...*

**Risk Factors**

*Harder on eyes and neck*

- Smaller screens
- Lower quality displays
- Lower viewing angle

*Harder on wrists on arms*

- Narrow keyboard
- Awkward postures

*Harder on back*

- Carrying can strain back

**Risk Reduction Measures**

- External keyboards
- Docking stations
- Practice good posture on road



### Ergonomics isn't just a work thing!

*think "physics & leverage" working around home...*

- Washing dishes, pots & pans
- Carrying and loading groceries
- Picking up and carrying kids
- Walking the dog
- Yard work
  - Raking, shoveling, sweeping
  - Lawn mowing, snow removal
  - Wheel barrels




### Ergonomics isn't just a work thing!

*think of driving your car...*

- Elbow resting on door, center console
- Wrist over steering wheel
- Buttock and back pain
  - Posture
  - Nerve and tissue compression
- Position of legs while driving
  - Muscle strain: hamstring tightness
  - Decreased circulation
- Upper neck/back tension and pain
  - Muscle strain: upper trapezius
  - Stress reactions, trigger points
- Eye strain
  - Glare
  - Dehydration



### Ergonomics isn't just a work thing!

*think of sleeping in your bed...*

For long periods of time: static and awkward positions, decreased circulation, increased compression!

- Neck posture
- Shoulder and arm posture
- Wrist posture
- Knee and hip posture
- Back posture



### Massage Therapy

- Helps relax muscles made sore by bad posture
- Helps relieve pressure on joints
- Pressure points are relieved
- Relieves stress that causes poor posture



## Chiropractic Care



- Natural, drugless, & highly effective
- For all ages
- Preventative and restorative
- Pain care and illness preventing
- Restores movement (a joint that is stiff or stuck, is a sick joint)
- Will help remove restrictions caused by stress and bad posture
- Will help normalize tense muscles
- Will improve circulation to improve healing
- Educate you to help break the common bad posture cycle

- If there is anything that prevents the nervous system from working at an optimal level, it will in some way affect the body's ability to heal and regulate!!



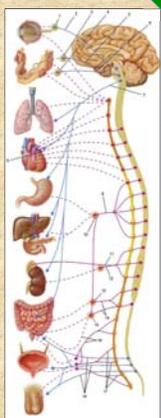
## Chiropractic Care

Chiropractic has been shown to normalize increased electrical brain activity (EEG Studies), & has a **calming effect on over-stimulation, by activating the cerebellum!!**



↓  
Better adapting ability to stress and less harmful stress responses!

**Health Naturally**



## The complete posture checkup!

- History & consultation – what is your story?
- Examination
  - Posture examination
  - Global motion examination
  - Nerve function diagnostic testing
    - » Organ controlling nns. & muscle controlling nns.
  - Radiology if needed (looking for change or damage)
  - Exam of segmental motion, muscles, & mm balance
- Review your results with your chiropractor

“The doctor of the future shall give no medicine but will interest his patients in the care of the human frame, and in the cause and prevention of disease”

- Thomas Edison

## The best moment to invest time and direct interest into posture is now!

- Anyone at any age can improve their posture and become more posture aware!
- Correction of poor posture is possible no matter how late in life one hopes to start!
- Like most complex things, improving posture requires time and guidance, demands your daily attention like all good habits, and will benefit you beyond your imagination! Let us help you with this!

Just remember...



There is light at the end of the tunnel

Thank you