STANDING WORKSTATIONS
FAD OR NEW OFFICE OF TODAY?

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BECOME PROFICIENT IN

• Common anatomic causes of injury from Standing or Seated Work Postures

• Identifying Workplace Risk Factors in Standing or Seated Workstation

• Benefits of Sitting & Standing

• Making a sound decision
Holmes & Watson Perspective

OBESITY STATISTICS

• 400,000 People in US died from obesity (2006)
• 66% Americans are overweight or obese (2006)
• Obese workers spend 20% more time sitting
• Obese workers lost 13 more days of work
• Obese workers’ medical costs were 77% higher
• $13 billion per year = obesity costs to business
• Diabetes, arthritis, heart disease = $200 billion
• Obesity related disabilities cost employers up to $8,720 per claimant a year
OBESITY IN U.S.

MISCONCEPTIONS

HOW TO: Greenify your workspace & get healthy with a STANDING DESK!
Is One Position Really Better?

Many risk factors are the same:

- Repetitions
- Force
- Awkward Posture
- Static Posture
- Distance
- Direct Pressure
- Time

Many risk factors are the same.
ADDED RISK FACTORS WITH STANDING & WALKING

• Slip, Trip or Fall Hazard
• Multi-Tasking Issues/Focus Lost
• Increased pressure on body
• Low Back Improvement but…..

A BRAIN CHALLENGE
You will find that it is actually difficult to walk and perform certain computer functions at the same time. You will either stop walking or make an “error” in your computing.

Neutral Spine Position
DISC PRESSURE

STANDING & THE SPINE

• Restoration of 3 Curves
• Increased Physical Activity
• Minor Increase in Caloric Burn Rate
• Increase Bloodflow & Circulation
• Increased Pressure on Knees, (Legs)
• Aging Population---Standing ???
ANATOMY OF ERGONOMIC INJURIES: The Back

• BACK ANATOMY
  – 3 CURVES
  – ALIGNMENT
  – HEAD
  – MUSCLES

• CAUSES
  – SLOUCHED or UNSUPPORTIVE SITTING
  – BENDING
  – AWKWARD POSTURE
  – REPETITION

Neutral Spine

Cervical (C1 through C7)
Thoracic (T1 through T12)
Lumbar (L1 through L5)
Sacral (S1 through S5)
Coccygeal or Coccyx (Tailbone)
ANATOMY OF THE DISC

SIMILAR POSTURE & POSITION

- Neutral Wrist Position
- Monitor at or just below eye level
- Relaxed Shoulder Position
- Distance from Monitor
- Upper Extremities in Neutral Position
ANATOMY OF ERGONOMIC INJURIES: The Hand/Wrist

• ARM/HAND
  – MEDIAN NERVE
  – CTS
  – Others

• CAUSES
  – Position
  – Force
  – Repetition

THE CARPAL TUNNEL

In order to understand CTS, it helps if you understand the anatomy of the carpal (meaning “wrist”) tunnel. Conditions in many parts of the body can cause symptoms in the hands and fingers. In CTS, the symptoms occur because a major nerve is compressed as it passes through a narrow tunnel of bone and ligament at the wrist. The result is numbness, tingling, “pins and needles,” burning, and pain in the middle and index fingers and thumb, and sometimes in all five fingers.

Neutral Wrist Position Seated
Neutral Wrist Position Standing

DISTANCE & DIRECT PRESSURE

• Direct Pressure
• Reaching for:
  – Phone
  – Mouse
  – Reference material
  – Files
DISTANCE & DIRECT PRESSURE

• Leaning on:
  – Elbow
  – Wrist
  – Forearms

• Reading Distance
  – Glasses
  – Motion & Reading

ADDED RISK FACTORS WITH SITTING

• GONE-Slip, Trip or Fall Hazard
• GONE-Multi-Tasking Issues/Focus Lost
• RELOCATED-Increased pressure on body
• INCREASED-Low Back Pressure L4-5, S1
• DECREASED-Circulation in Body
• DECREASED-Caloric Burn Rate
QUESTION: Does Sitting increase our risk factors or does life style choices or behaviors increase them?
QUESTION-Does Sitting increase our risk factors or does life style choices or behaviors increase them?

- If I ate better would sitting matter as much?
- If I exercised more regularly
- If I increased my stretch/work breaks
- If I got up to see someone vs texting or IM
- If I took the stairs vs elevator more often

ERGONOMIC EXERCISES

- 1. Prevents muscle injuries
- 2. Increases range of motion
- 3. Prepares muscles for use
- 4. Promotes good circulation
- 5. Increases coordination
- 6. Promotes muscle relaxation
- 7. Decreases muscle tension
- 8. Increases productivity
**Financial Considerations**

- Cost of getting up more frequently versus a sit/stand desk?

- Cost of drinking more water versus a stool chair?

- Will increased capital expenditures equate to increased productivity?

**Financial Sample**

- Employee approaches you wanting a sit/stand option. Cost of a good Ergotron is ~$500.

- Employee wants the desk raised to 41” height to stand and work. Cost for facilities to raise the worksurface **PLUS** cost of new stool chair for employee to sit when they get tired of standing (and they will). Cost of lowering worksurface when employee moves or gets tired of standing, (happens all the time). ~$800-$1,000
**Sit-Stand Workstations**

**Alternative Approach**

- Sit Stand workstations must have ease of adjustability to be effective. An employee is less likely to adjust the workstation if it is awkward or time-consuming to do so.

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**Basic Sit/Stand Desktop**

- Simple desktop table
- Maintain current chair
- Monitor arms optional
- Frequency of use
- Ease of use
- Cable management
ERGOTRON-S Unit AKT

ADJUSTABLE KEYBOARD TRAY EXTENSION
LOW COST

Kickstarter: Cardboard Desk
Simple Solutions & Cost

More Elaborate Solutions & Costs
I don’t care whether you raise my desk or lower my chair---just do SOMETHING !!!

WORKSTATION OF THE FUTURE
SUMMARY THOUGHTS

• Standing can provide some health benefits
• Standing can increase some risks
• Financial costs to consider. ROI
• Disc pressure reduced when standing (L4-5, S1)
• Standing will not MAKE you Healthy !!
• Life Style Issues impact BOTH (Sit or Stand)
• Obesity-Is it driving the change ?
• Business Insurance costs unchanged
• Many Postures & Positions will be the same
• Examine office workflow & demands carefully

??? Q & A TIME ???

• Why do we need to stand when we work ?
• What will the costs ($) be if we stand ?
• Will employees alternate between sit/stand ?
• Will my Insurance reduce premiums ?
• Will work be reduced or increased, WHY ?
• Provide a test area before you proceed
• Explore different ways to stand & costs
• Promote Healthy Lifestyles in all aspects
• Provide “common” standing work areas