



Pre / Post
Envision Analysis for
CCC – Final Results

A Proactive Approach

Near-miss identified:

- Early feedback from training reported that new Envision system required more mouse clicks - raising the potential for injury.



COLLECT DATA FOR ACCURATE
UNDERSTANDING OF RISK

INSTALLED RSIGUARD ON 100+ COMPUTERS



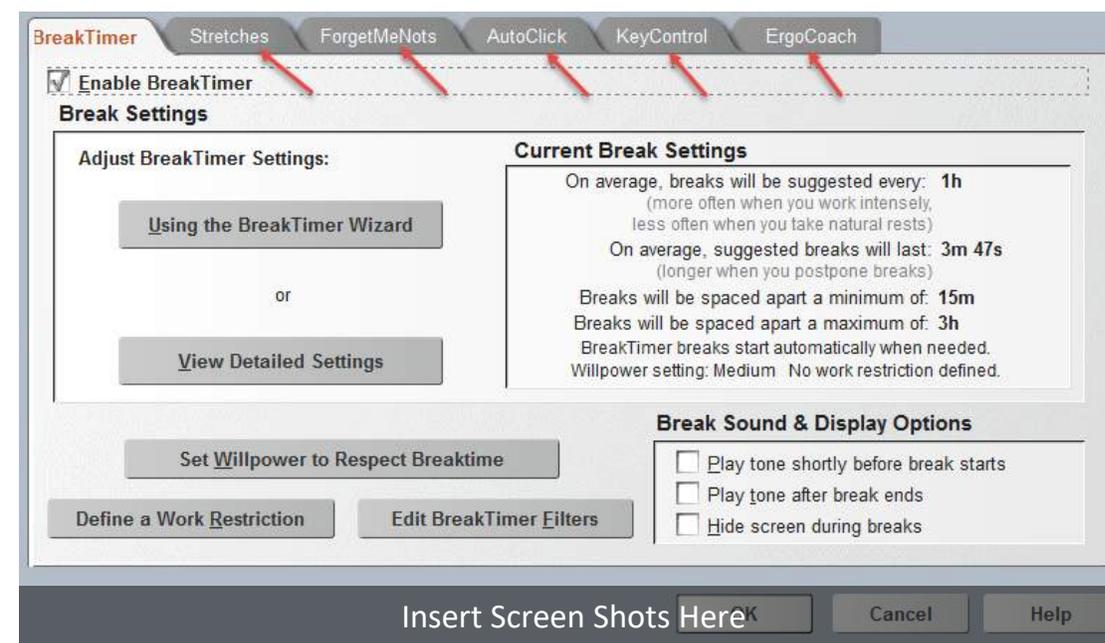
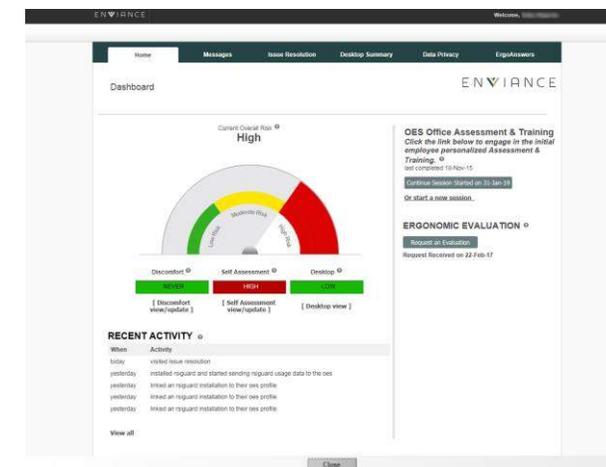
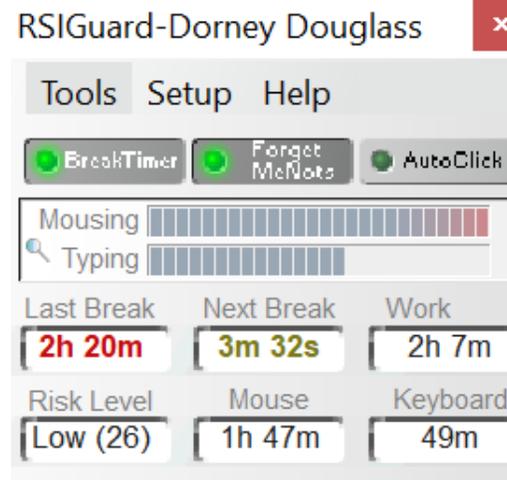
IMPLEMENT ALTERNATE MOUSE PROGRAM
TO CHANGE HAND AND WRIST POSTURES



PROVIDE SUPPORT FOR ADDITIONAL MICRO
BREAKS

RSIGuard = Computer Use Risk Awareness

- Features include:
 - Stretch Breaks
 - Forget Me Nots
 - Auto Click, Key Control
 - ErgoCoach
- Captures actual computer, mouse, keyboard use and breaks
- Personal Dashboard
- Work Restrictions Management
- Quick Access to Self-Assessments, Training, and Discomfort Reporting



RSI Guard



24-May-2021 - 20-Jun-2021 (22 days activity in 28 day range) | [Average Workday](#) |



Hours Using Computer : 3.1 hours



Overall Break Compliance : 99%

BREAKS [view all](#)

Overall Break Compliance
99%

- ▶ BreakTimer Compliance **95%**
- ▶ Microbreak Compliance **Disabled**
- ▼ Natural Breaks
 - > 15 sec **95**
 - > 1 min **34**
 - > 4 min **12**
 - > 15 min **3**
- Preemptive Breaks **0**
- Longest Stretch Of Work w/o Rest **21 min**
- 2nd Longest Time w/o Rest **17 min**
- 3rd Longest Time w/o Rest **13 min**

KEYBOARD [view all](#)

Keyboard Usage
54 min

- ▼ Keyboard Strain **Above Avg**
 - Total Keypresses **8177**
 - KeyControl HotKeys **0**
 - Switches Between Keyboard & Mouse **404**
 - Keyboard Force Estimate **Low**

PRIMARY COMPUTER

- ▶ Primary Computer Type **Unknown**

MOUSE [view all](#)

Mouse Time
2.7 hours

- ▼ Mouse Strain **Avg**
 - Left Clicks **2180**
 - Right Clicks **20**
 - AutoClicks **0**
 - Double Clicks **171**
 - Middle Clicks **0**
 - ScrollWheel **5417**
 - Mouse Movement **125 meters**
 - Manual Drag & Drops **80**
 - KeyControl Drag & Drops **0**

OTHER SETTINGS

- AutoClick Enabled **No**
- User-Defined Hotkeys: **0**
- ▶ Work Restriction, set to: **Enabled**

Break Timer -
Leadership added
two additional 3-
minute breaks (one
in am - one in pm)

Break provided at your request

Break Time

Time left in break **1:45**

Reach for the Sky, Sitting
Sit with a straight back with both hands in lap. Lift one arm out to the side, then reach up and over your head. Spread fingers. Lower arm and repeat on other side.

Speak volume

Mousing

Typing

Stop Stretches **Next Stretch**

You can postpone break up to 18 more minutes

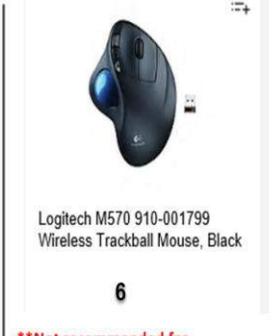
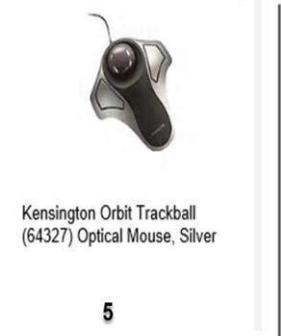
Adjust Break Schedule **Postpone: 10min** **Postpone: 2min** **Skip Break**



Vertical Mice



Alternate Mouse Choices



****Not recommended for
smaller hands**

Trackballs

Conventional Mice

- Tend to result in the wrist making contact with the work surface causing it to bend upward (wrist extension) with pressure over carpal tunnel.
- Wrist extension creates static muscle tension, reducing blood flow.
- Forces user to twist their hand palm-down and parallel to the work surface into forearm pronation resulting in static load on pronator muscle group.

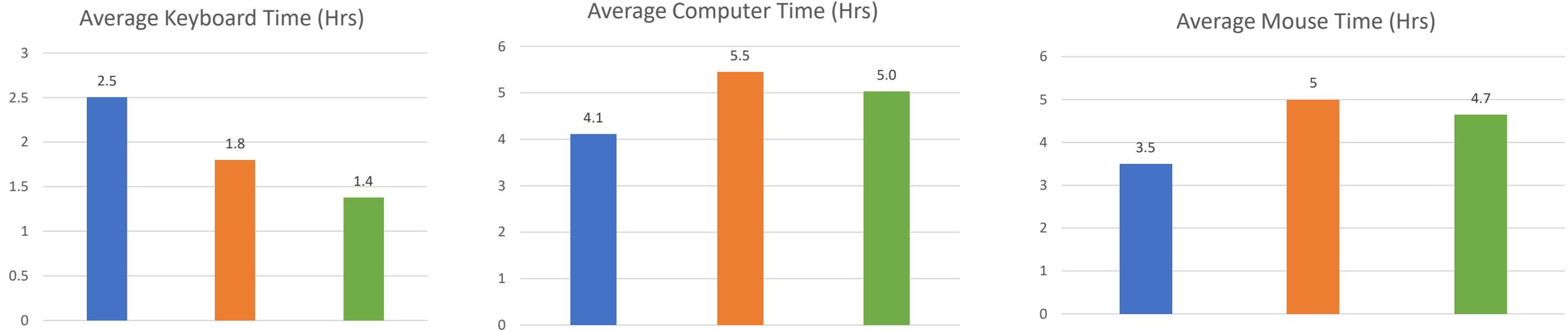


Benefits of Vertical Mice

- Allows for a “handshake” or neutral forearm position.
- Removes pressure from the carpal tunnel area of wrist.
- Encourages activation of larger muscle groups in entire arm.



Comparison of Pre, 30- & 120-Days Post Envision Usage

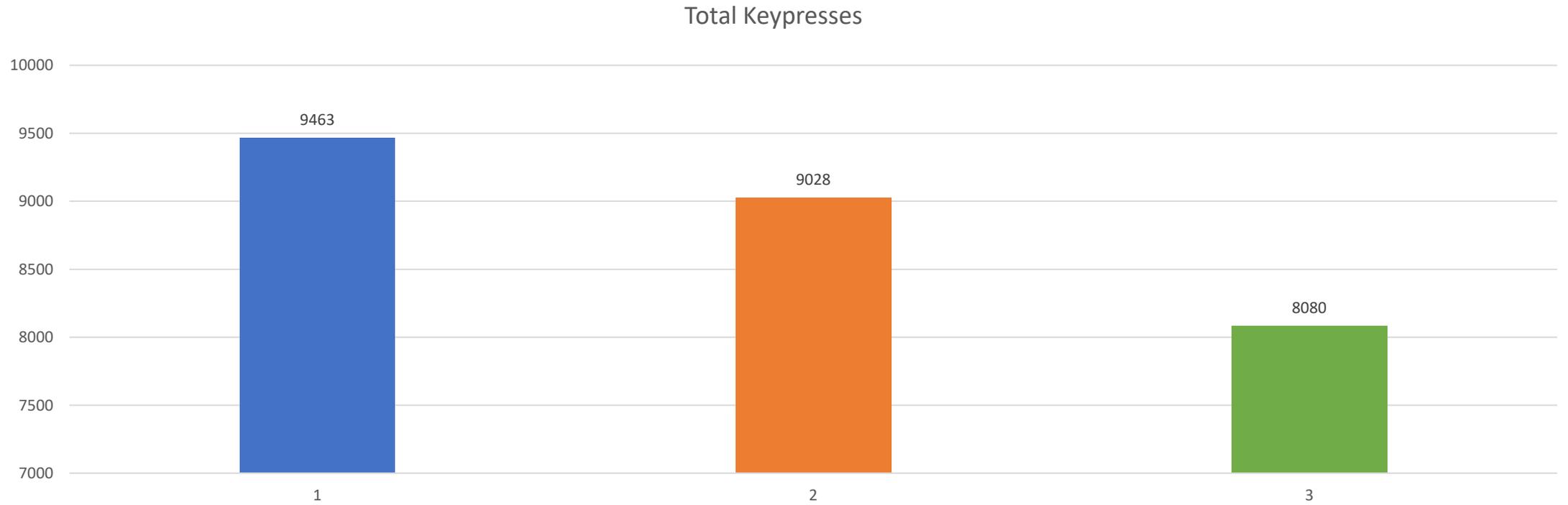


LEGEND

- Blue = Pre-Envision
- Orange = 30 Days Post
- Green = 120 Days Post

- Initially keyboard time reduced by approximately an hour per day and computer time and mouse time increased by approximately 2 hours per day.
- This confirmed the prediction that the new system requires more mousing

Total Keypresses



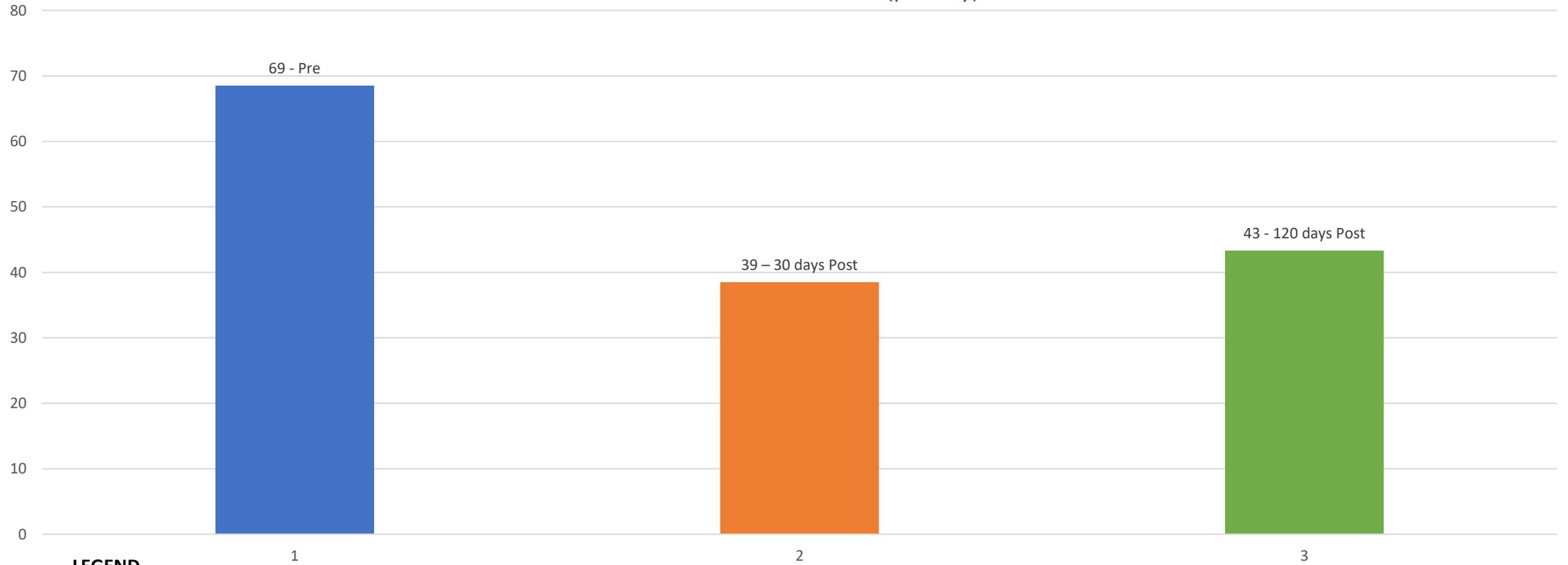
LEGEND

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Keypresses decreased by 85%

Natural Breaks

Natural Breaks >1 Minute (per day)

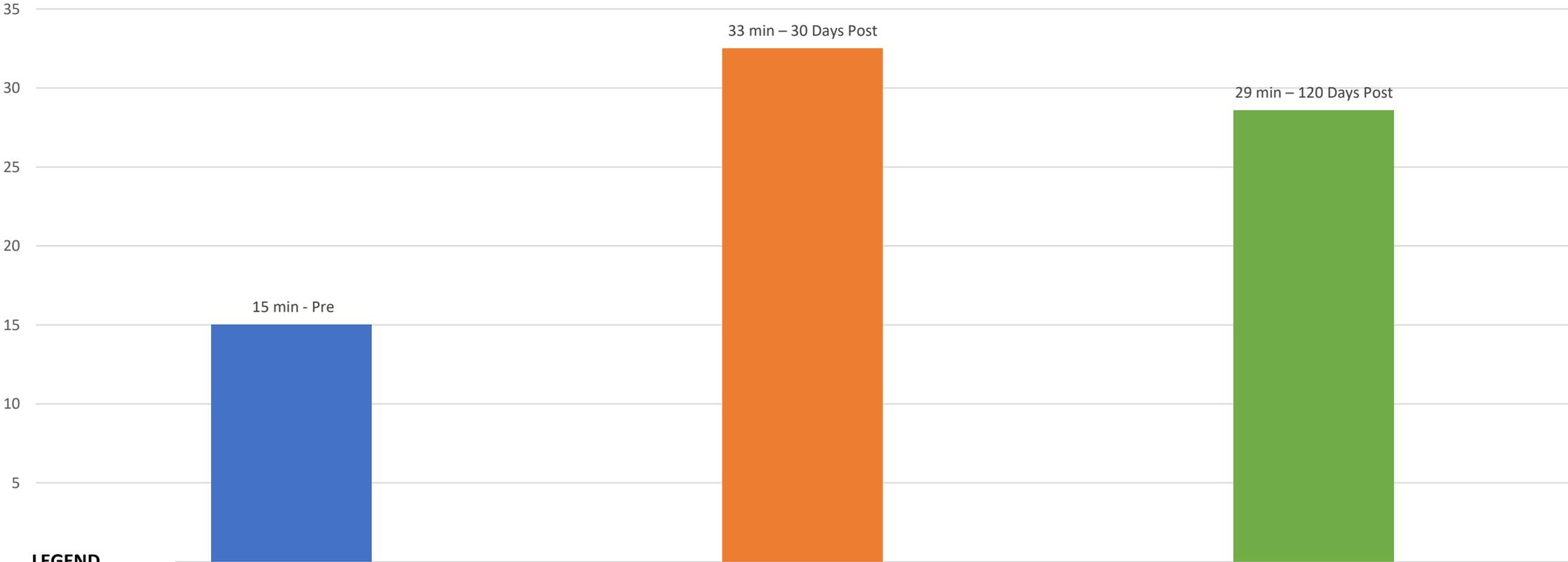


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Time Without Natural Breaks

Longest Stretch Without a Break

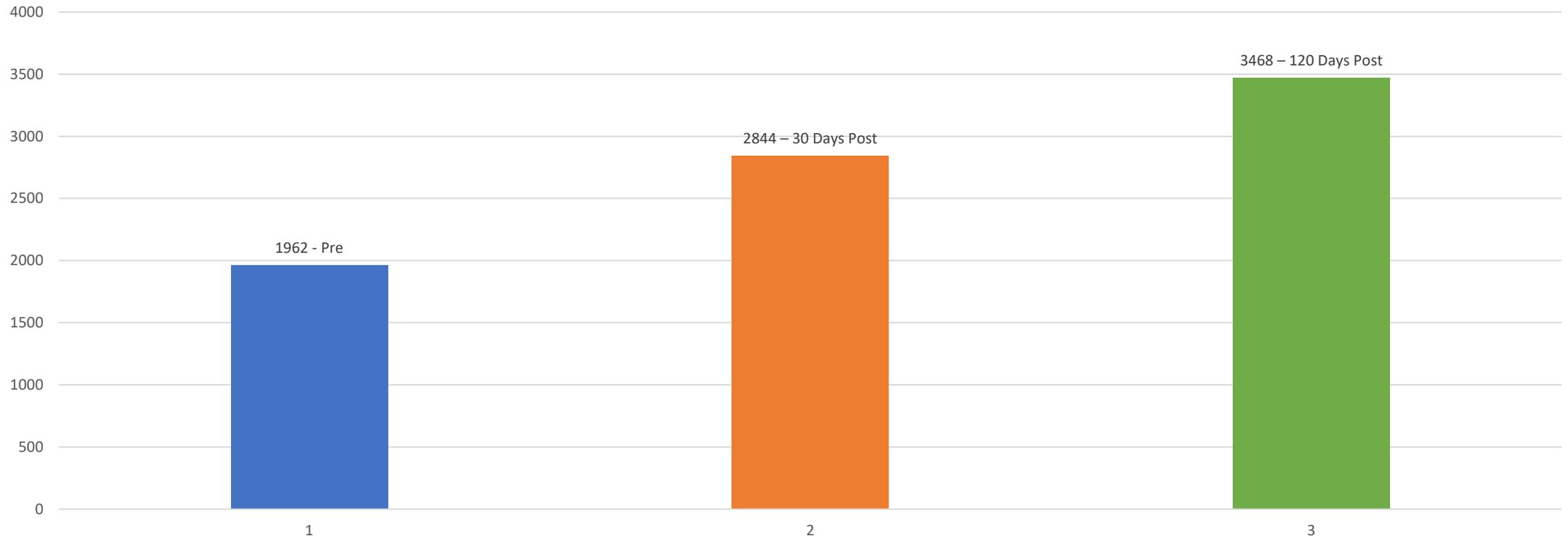


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Mouse Clicks Increased

Left Clicks



LEGEND

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Average Left Click Increased by 77%

Next Steps

Investigate ways to reduce mouse clicks

- Work with management and Envision team to determine ways to reduce mouse clicks, i.e., hot keys

Deeper dive into mouse program

- Educate and promote alternative mice and switching hands

Review and Renew mini break and stretching program – emphasis on looking away from screens to reduce forward head and neck posture

- Develop “Let It Go-Look Away” Strategy

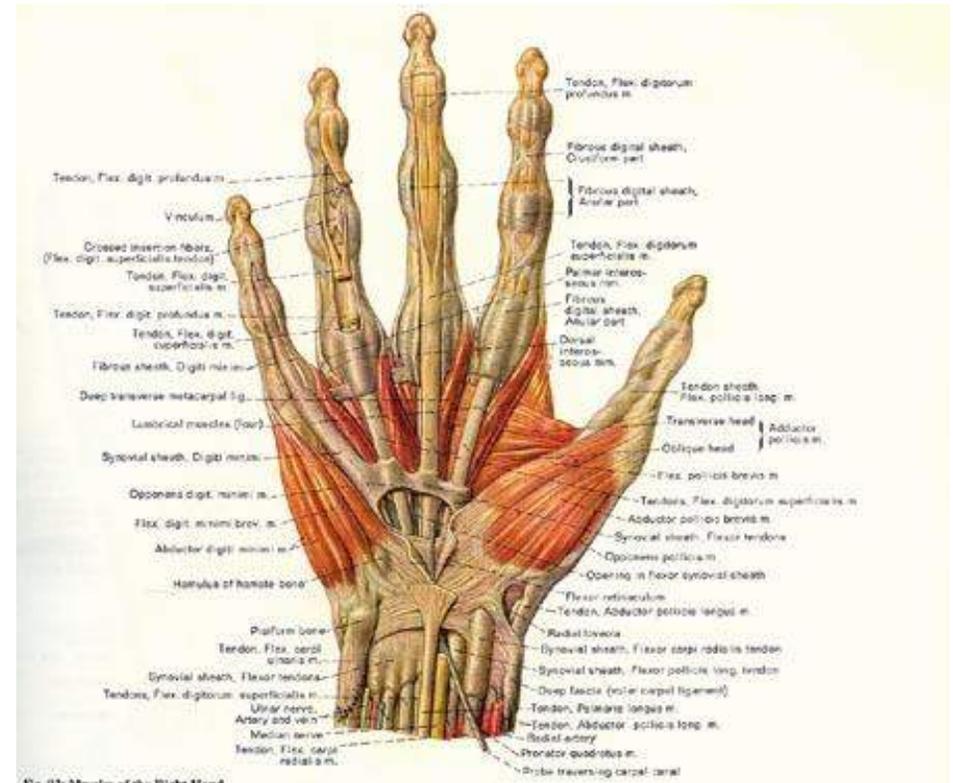
Take program across company



Make friends with your
Mouse

Did you know...

- Over 30 muscles and 30 bones in the hand work together to coordinate complex motions.



Mouse Basics

- Don't grip!
- Make sure it fits.
- Release it when not using it.



One size does not fit all!



Mouse too small



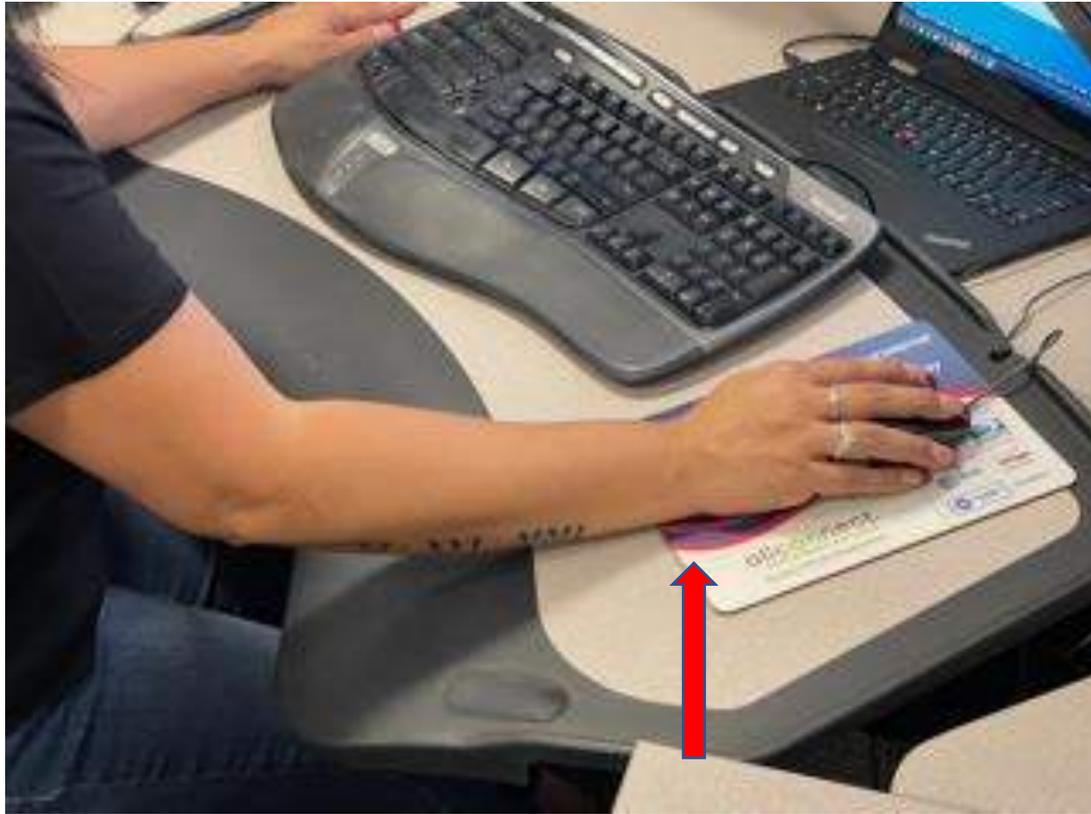
Mouse too large

Let it Go – Look
Away



Recline





Slump – “Kickstand” Arm

What Drives Posture?

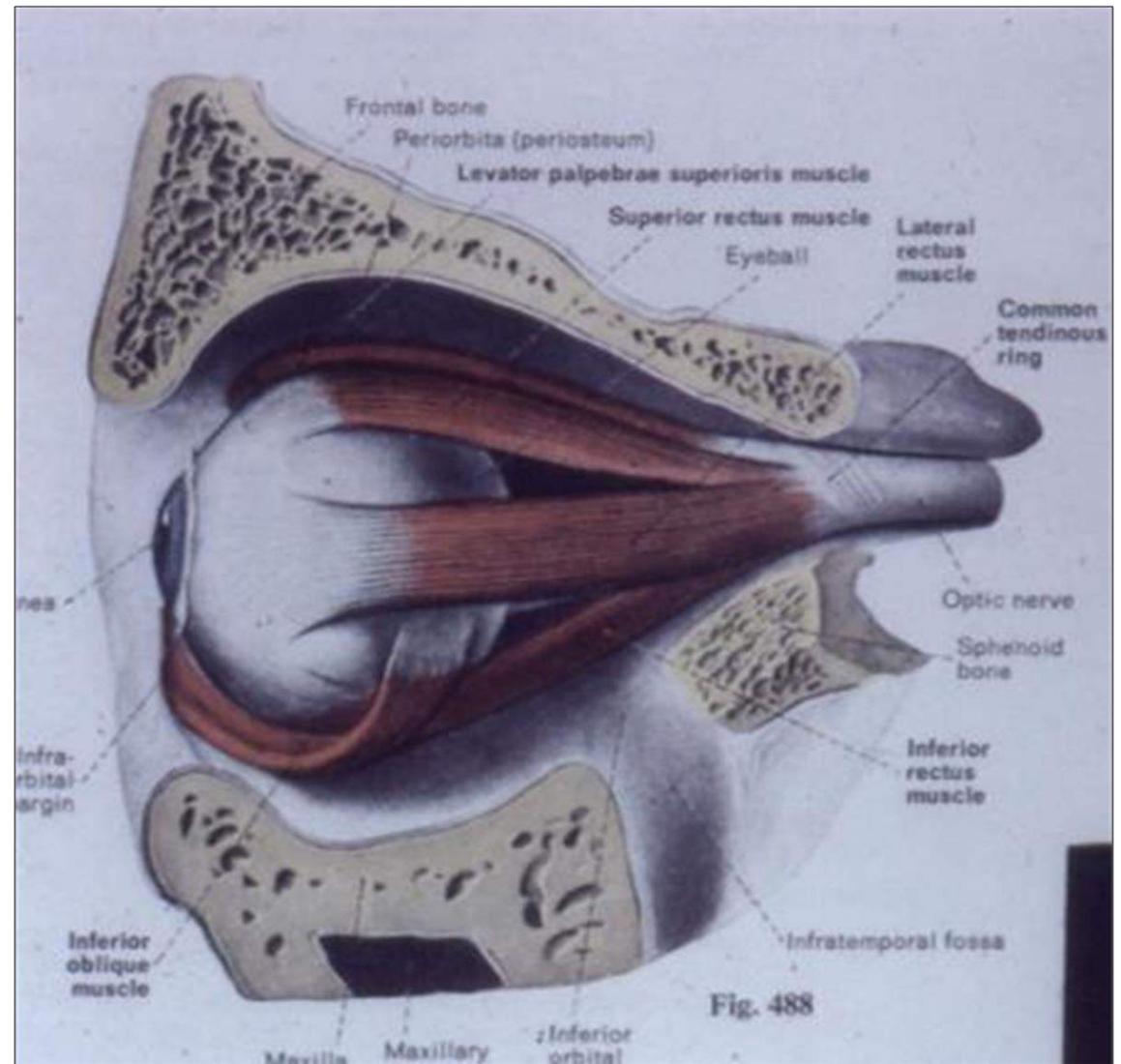
- Our eyes!
- It's more difficult to view a fuzzy pixel than print.



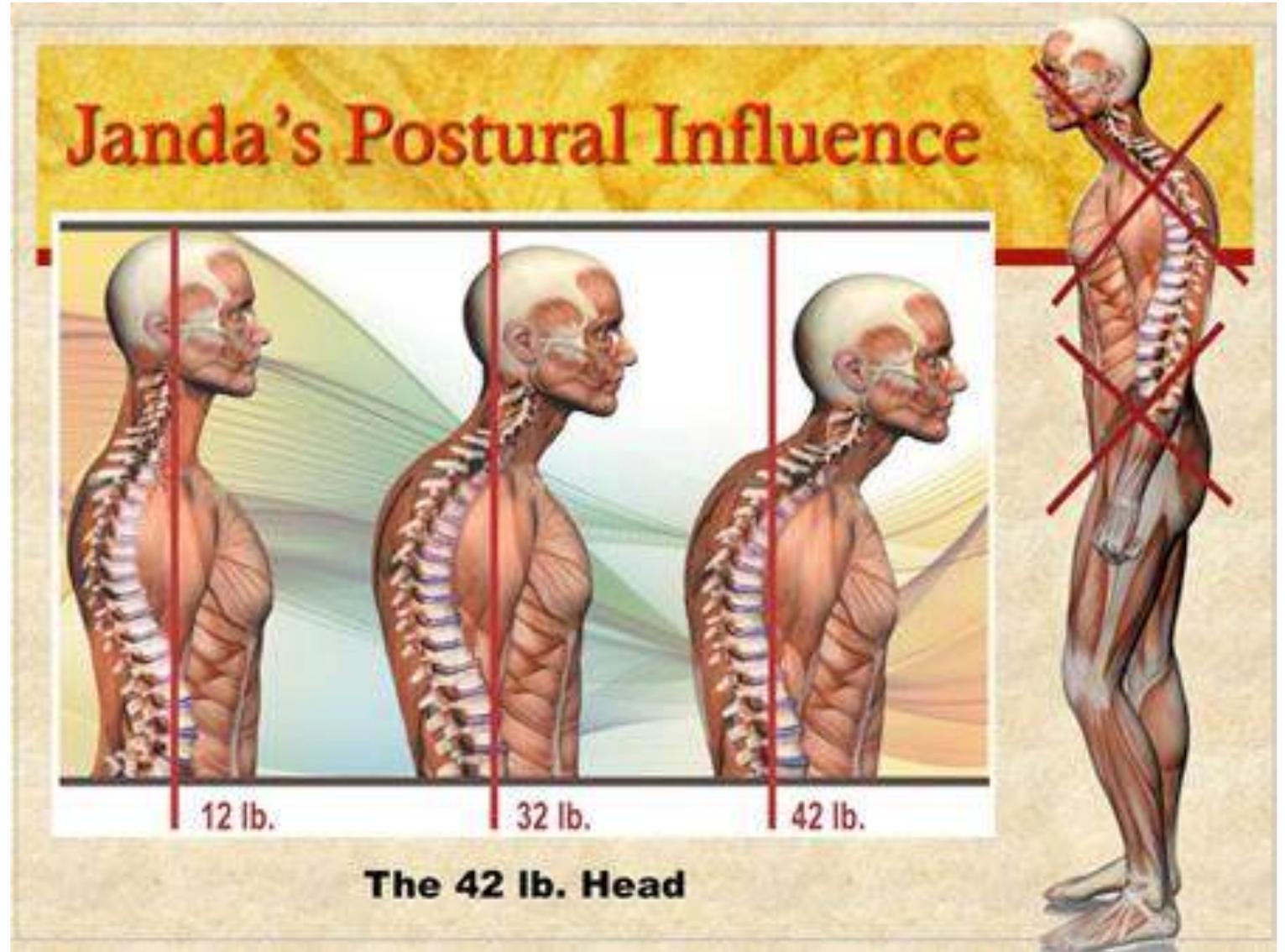
“You should have come in sooner.”

Our posture is dictated by our need to see...

- Making our eyes our most used sensory organ...
- And our eye muscles our most used muscles...
- *Every day your eyes take a 50-mile hike*



And...our neck and posture is at the mercy of our eyes



Director Action Items

Encourage

Encourage the purchase of a second mouse, either vertical or track ball, coordinated with the return-to-work effort.

Install

Install RSI Guard

Challenge

Challenge employees to mouse with non-dominant hand

Promote

Promote stretch breaks; one morning and one afternoon. Take advantage of the Desktop Yoga videos provided by Wellness.

Questions?

