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Industrial Hygienist Ergonomic Program TPOC

INL Telecommuting Ergonomics Resources for BEA Employees



Introduction

- We have surpassed one full year of telecommuting due to the pandemic!
- Home office setups have become more important than ever.
- The move to telecommuting came with some challenges in the area of ergonomics.
 - Increased computer use paired with (less than ideal) home office setups may influence employees developing occupational injuries/illnesses.
- INL has dedicated a webpage specifically for telecommuting ergonomics.
 - Today we will highlight information found on that page.

Examples of Reported Telecommuting Occupational Injuries and Illnesses:

• May 2020:

- Elbow pain and loss of strength in their arm
- Strained shoulder and wrist pain
- August 2020:
 - Tingling in wrists and forearms
- September 2020:
 - Wrist pain and numbress in fingers

• October 2020:

- Upper back and neck pain
- Elbow pain
- Wrist pain

November 2020:

- Back, neck, and shoulder pain
- Neck pain and wrist tingling
- January 2021:
 - Wrist pain
 - Elbow tenderness and tingling in fingers

BEA Adapting Alongside the Pandemic

- Ergonomic assessments were moved from in-person to Teams calls and pictures.
- An "Ergonomics While Telecommuting" resource page was created.
- Ergonomic information was sent out via iNotes (to all BEA employees) multiple times throughout the pandemic.
- A telecommuting ergonomics poster was created for the Virtual Safety Fair.
- Ergonomic SME presented ergonomics safety briefings for the Laboratory Employee Safety Team (LEST) and Employee Safety Team (EST) meetings via Teams.
- We presented briefings on ergonomic resources and Q&As during Virtual Safety Meetings (also via Teams).
- A process was created to send employee chairs home.
- Desk converters were procured, and a process was created to send them home.

Additional Equipment

- At the start of the pandemic, employees were issued laptops to use while telecommuting.
 - Laptops were equipped with WorkPace ergonomic software before issuance
- Employees were also able to bring home additional ergonomic office items with a property pass:
 - Additional computer monitors
 - Keyboards/mice
 - Wrist rests
 - Standing mats
 - Footrests, etc.

Accessing the Ergonomics and Telecommuting Page

- To find the Ergonomics and Telecommuting page:
 - Nucleus -> A-Z -> E -> Ergonomics OR
 - Nucleus -> Banner -> Ergonomics While Telecommuting (see below) OR
 - Nucleus -> COVID-19 -> #8. INL Resources



Media Feed

In the News

INL.gov Highlights

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BROWSE PAGE

Industrial Hygiene Home

BioSafety

COVID-19

Electrical Safety

Environment, Health, Safety & Quality (ESH&Q)

Ergonomics

Fire Protection

Industrial Safety

Occupational Safety & Health (OS&H)

Asbestos Building Inventories

Beryllium Inventory

Confined Spaces Inventory

Confined Spaces Maintenance (IH Access only)

HASS (IH Access Only)

HAZWOPER Health & Safety Program

Heat Stress WBGT Estimator

Heat Stress Worksheet (with WBGT Estimator)

IH Equipment Inventory

+ Lasers

Manual 14A Vol. II - Safety, Fire Protection, Industrial

Industrial Hygiene

ESH&Q Departments 🔹

ERGONOMICS and TELECOMMUTING

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Emily A. Sherman

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** If your home office setup is causing pain and discomfort, contact your manager and area Industrial Hygienist to schedule an ergonimic assessment via Teams **



WorkPace Breaks and Stretches

- WorkPace is mandatory for single-user work stations; if WorkPace is not installed on your computer, call the OpsCenter 6-1000 for assistance.

- Follow prompted breaks, stretches, and micropauses.

- In the absence of WorkPace, take a 5-minute break after every 40 to 50 minutes of continuous computer work.

- Mac users can call the ops center 6-1000 and have "Time-Out for Mac" installed. http://www.macupdate.com/app/mac/12293/time-out

Computer Workstation Checklist

- Be sure to complete a Computer Workstation Checklist to ensure your home environment is setup correctly.

Office Chairs

Did you know you can take home your office chair to improve your home office ergonomics?
 Click here for instructions and a helpful checklist.

- Access this link for help in adjusting your chair. Ergonomic Chair Adjustment Videos

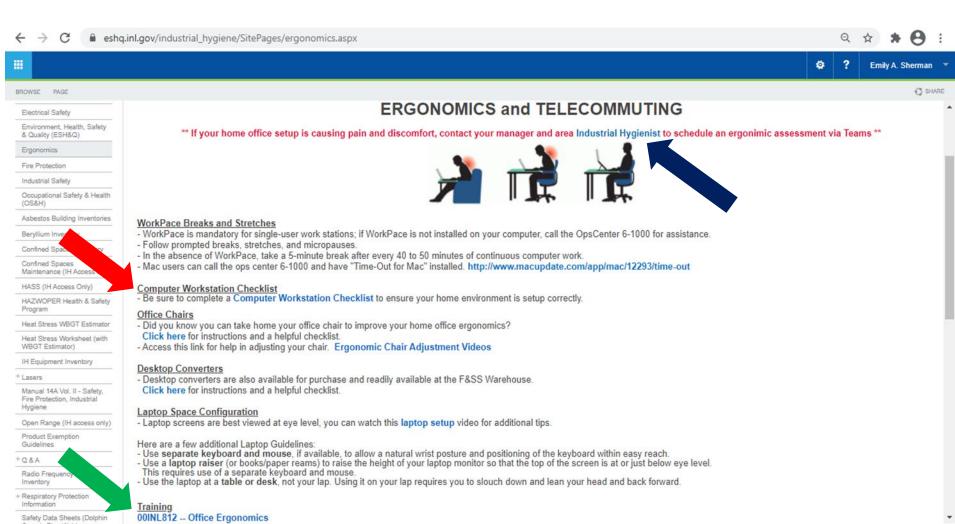
Desktop Converters

- Desktop converters are also available for purchase and readily available at the F&SS Warehouse.

Click here for instructions and a helpful checklist.

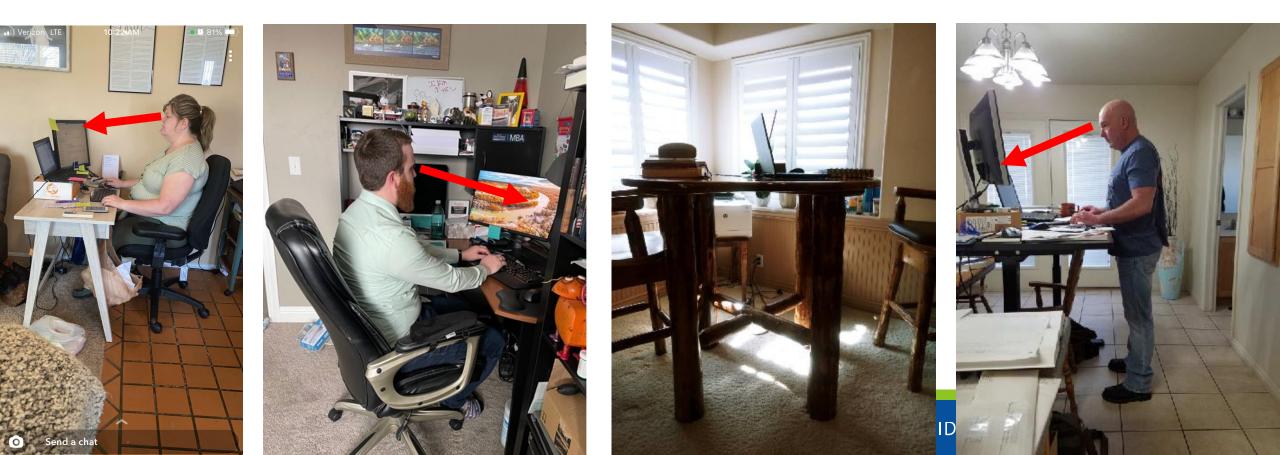
Need an Ergonomic Assessment for Your Home Office?

- 1. Contact your manager
- 2. Take the INL Office Ergonomics online training (00INL812)
- 3. Complete the Computer Workstation Checklist
- 4. Contact your area Industrial Hygienist
- 5. Schedule an ergonomic assessment with your area IH via Teams



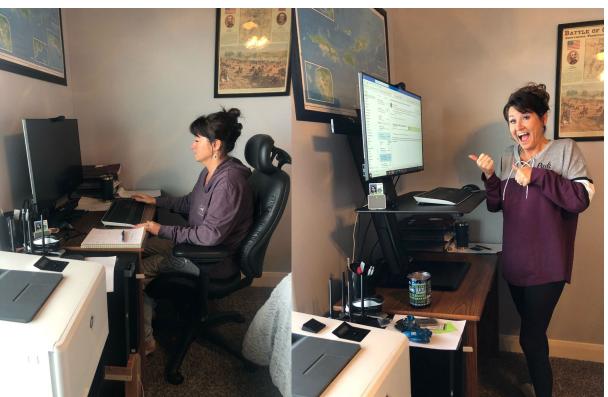
Examples of BEA Employee Home Office Setups Prior to Teams Ergonomic Assessments

• Prior to the Teams call I ask the employee to send me a picture of their home office setup, and if possible, a picture (side view) of them sitting at their desk.



Examples of BEA Employee Home Office Setups Following Teams Ergonomic Assessments

- Once the employee has obtained their recommended items from the assessment and incorporated them into their home office, I ask that they check in with a picture, email, or Teams call.
- Here are two great examples:





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BioSafety	
COVID-19	ESH&Q Departments -
Electrical Safety	ERGONOMICS and TELECOMMUTING
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HAZWOPER Health & Safety Program	Computer Workstation Checklist
	- Be sure to complete a Computer Workstation Checklist to ensure your home environment is setup correctly.

ATORY

- A helpful tool for our telecommuters that works to ensure that the home office is setup correctly.
- Also step #2 on the desk converter checklist (review with area IH).
- Encouraged anytime the employee is a new hire, relocates, telecommutes, or their workstation configuration changes.

Computer Workstation Checklist

Employee Name:	Work Location:	 Date:	

Reviewed by: _____ Job Description: _____

The following checklist provides a tool for employees to assist fellow employees with the proper set-up and use of their assigned computer workstations.

Employees who express discomfort potentially related to workplace tasks should be referred to the appropriate Safety and Health professional for a comprehensive Ergonomic Hazard Analysis (EHA).



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thighs parallel to the floor and knees bent at 90 degree angle

Workstation Checklist How many hours each day does the employee work on the computer? Is the employee experiencing any discomfort potentially related to their workplace tasks? Y N If yes, the employees manager shall be notified of the condition and a formal ergonomic hazard analysis be performed by a designated Safety or Health professional. Has the employee had any past history of ergonomic problems? Y N Has employee completed Office Ergonomics Training http://trainl.inl.gov/wbt/00INL812R01/start.cfm. Y Ν Has WorkPace software been installed on this computer? Y N If no, contact 6-1000 to have the Ops Center install it. (Freeware is available for Mac users at http://www.macupdate.com/app/mac/12293/time-out) WORKING POSTURE Y N Head and neck about upright (not bent down/back). Y А. Ν Y N Head, neck and trunk face forward (not twisted). В. Trunk about perpendicular to floor (not leaning forward/backward). Y N C. Shoulders and upper arms about perpendicular to floor (not stretched forward) and relaxed (not elevated). Y N D. Upper arms and elbows close to body (not extended outward). Y N E. Forearms, wrists, and hands straight and parallel to floor (not pointing up/down). F. Y N G. Wrists and hands straight (not bent up/down or sideways toward little finger). Y N Thighs about parallel to floor and lower legs to be about perpendicular to floor. Y N Н. Feet rest flat on floor or be supported by a stable footrest. Y Ν I. Computer tasks organized in a way that allows employee to vary these tasks with other work activities, or to Y N J. take micro-breaks or recovery pauses while at the computer workstation.

SEA	TING/CHAIR	Y	N
1.	Backrest provides support for employee's lower back (lumbar area).	Y	N
2.	Seat width and depth accommodate specific employee (seat pan not too big/small).	Y	N
3.	Seat front does not press against the back of employee's knees and lower legs (seat pan not too long).	Y	N
4.	Seat has cushioning and is rounded/ has "waterfall" front (no sharp edge).	Y	N
5.	Armrests support both forearms while employee performs computer tasks and do not interfere with movement.	Y	N
KEYBOARD/INPUT DEVICE		Y	N
6.	Keyboard/input device platform(s) is stable and large enough to hold keyboard and input device.	Y	N
7.	Input device (mouse or trackball) is located right next to keyboard so it can be operated without reaching.	Y	N
8.	Input device is easy to activate and shape/size fits hand of specific employee (not too big/small).	Y	N
9.	Wrists and hands do not rest on sharp or hard edge.	Y	N
мо	NITOR	Y	N
10.	Top line of screen is at or below eye level so employee is able to read it without bending head or neck down/back. (For employees with bifocals/trifocals, see next item.)	Y	N
11.	Employee with bifocals/trifocals is able to read screen without bending head or neck backward.	Y	N
12.	Monitor distance allows employee to read screen without leaning head, neck or trunk forward/backward.	Y	N
13.	Monitor position is directly in front of employee so employee does not have to twist head or neck.	Y	N
14.	No glare (e.g., from windows, lights) is present on the screen which might cause employee to assume an awkward posture to read screen.	Y	N

wo	RK AREA	Y	N
15.	Thighs have clearance space between chair and computer table/keyboard platform (thighs not trapped).	Y	N
16.	Legs and feet have clearance space under computer table so employee is able to get close enough to keyboard/input device.	Y	N
ACC	ACCESSORIES		N
17.	Document holder, if provided, is stable and large enough to hold documents that are used.	Y	N
18.	Document holder, if provided, is placed at about the same height and distance as monitor screen so there is little head movement when employee looks from document to screen.	Y	N
19.	Wrist rest, if provided, is padded and free of sharp and square edges.	Y	N
20.	Wrist rest, if provided, allows employee to keep forearms, wrists and hands straight and parallel to ground when using keyboard/input device.	Y	N
21.	Telephone can be used with head upright (not bent) and shoulders relaxed (not elevated) if employee does computer tasks at the same time.	Y	N
22.	The employee does not have a need for a telephone head set (Performing computer work while on the phone for extended periods?)	Y	N
23.	Workstation and equipment have sufficient adjustability so that the employee is able to be in a safe working posture and to make occasional changes in posture while performing computer tasks.	Y	N
24.	Computer workstation, equipment and accessories are maintained in serviceable condition and function properly.	Y	N

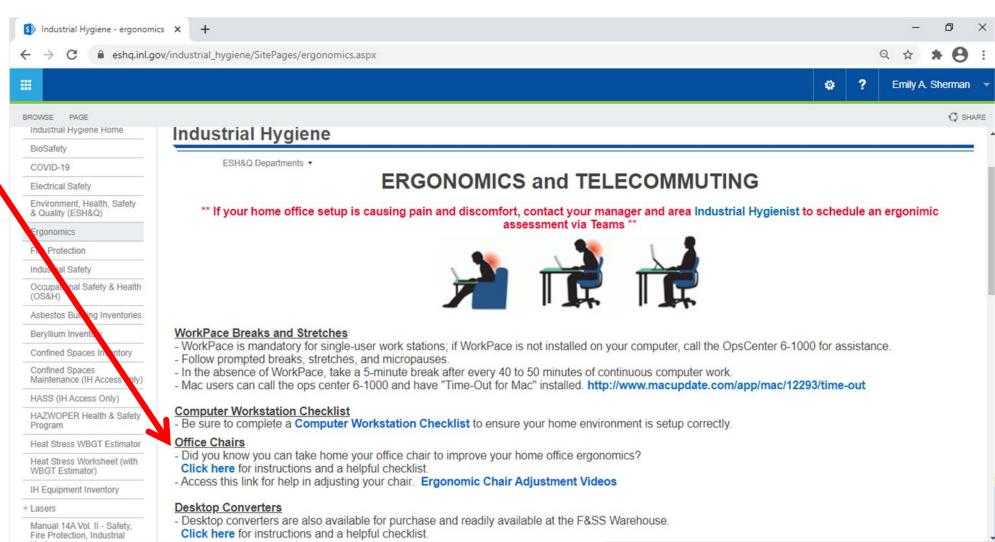
Comments:

INL Office Chairs and Desk Converters

- Let's face it, most people do not have a home office setup that is as advanced as the one at their INL office.
- Two major components of ergonomic office setups include:
 - Fully adjustable ergonomic chairs equipped with lumbar/back support
 - Adjustable sit/stand workstations.
- INL has allowed employees to bring their ergonomic chairs home as well as obtain a desk converter for home use.
 - However, there are specific guidelines to follow to properly acquire office chairs and desk converters.

INL Office Chairs

 Instructions and guidelines for INL owned chairs can be found here:



Chair Instructions and Guidelines

Checklist to Obtain an Office Chair

- 1. Obtain manager approval.
- 2. Submit a move request.

Contact your move coordinator or division administrator to submit a move request form authorizing a chair to be moved from a work location to the F&SS Warehouse. The description of the chair should be detailed enough for easy identification by the relocation team. <u>Click here</u> for move request form.

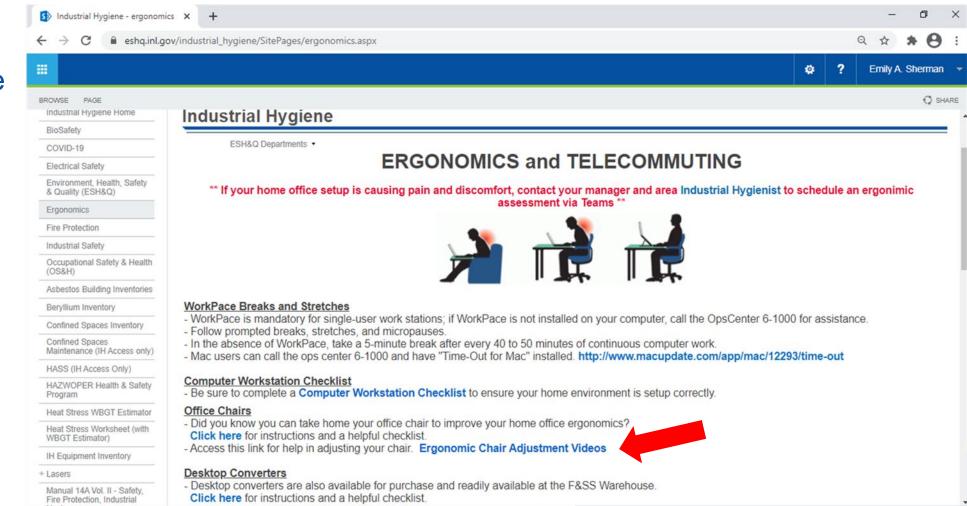
- 3. Submit Property Pass Form for the chair <u>click here</u>.
- 4. Receive an email notification.

When the chair is available for pickup, the Warehouse will send an email notification to the employee. Pickup times are 9 a.m.-11 a.m. Tuesday and Thursday. For more information call 208-526-4600. (see map below for warehouse location)

- 5. Provide approved Property Pass Form to the Warehouse staff at the time of pickup.
- NOTE: Additional chairs are <u>not</u> to be purchased to replace chairs taken from INL facilities for telecommuting use.

Chair Adjustment Videos

 Our INL ergonomic chairs are a great resource! To ensure that your chair is properly adjusted, check out the chair adjustment videos.



Chair Adjustment Videos

Chair Adjustment Videos

BodyBilt

J & R mechanism chair adjustments: <u>https://bodybilt.com/resources/adjustment-videos/</u>

• Herman Miller

Aeron New: https://www.hermanmiller.com/video-gallery/adjusting-classic-aeron/ Celle: https://www.hermanmiller.com/video-gallery/adjusting-celle/ Mirra 2: https://www.hermanmiller.com/video-gallery/adjusting-celle/

• <u>Haworth</u>

Fern: <u>https://vimeo.com/291748321</u> Zody: <u>https://vimeo.com/291750725</u> Very: <u>https://vimeo.com/291751710</u>

<u>Steelcase</u>

Leap: <u>https://youtu.be/ngQjNYx-Eyw</u>

Think: https://youtu.be/JbTm0c5kEEA

INL Desk Converters

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 Instructions and guidelines for desk converters can be found here:

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BioSafety	ESH&Q Departments •		
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+ Lasers	Desktop Converters		
Manual 14A Vol. II - Safety, Fire Protection, Industrial	 Desktop converters are also available for purchase and readily available at the F&SS Warehouse. Click here for instructions and a helpful checklist. 		

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Desktop Converter Instructions and Guidelines

Checklist to Obtain a Desktop Converter

- 1. Complete Office Ergonomics Training 00INL812.
- Complete the Computer Workstation Checklist <u>click here</u>.
- 3. Obtain manager approval for the purchase of a desktop converter. Manager shall send an email approval to HR ADA Coordinator, Stephanie Branch-Hesleph 801-300-5198 <u>Stephanie.BranchHesleph@inl.gov</u>
- 4. Obtain Industrial Hygiene (IH) approval.

Contact IH (<u>click here</u>) for a review of the completed Computer Workstation Checklist and their ergonomic evaluation concurring with need for a desktop converter.

IH shall send an email approval to HR ADA Coordinator, Stephanie Branch-Hesleph 801-300-5198 <u>Stephanie.BranchHesleph@inl.gov</u>

5. Obtain HR ADA Coordinator approval.

Stephanie Branch-Hesleph will validate receipt of manager and IH approval emails and send a final approval email to the employee and the F&SS Warehouse.

G. Submit Property Pass Form <u>click here</u>.

The government property ID will be entered on the property pass during pick-up at the F&SS Warehouse.

□ 7. Contact the F&SS Warehouse 208-526-4600.

The Warehouse will verify email approval from Stephanie. Pickup times are 9 a.m.-11 a.m. Tuesday and Thursday (see map below for warehouse location)

8. Provide approved Property Pass Form to the Warehouse staff at the time of pickup.

Humanscale Quickstand Eco

- Can accommodate 1-2 standard computer monitors
- Monitors are anchored to stand no risk of falling off
- Minimal assembly required by employee
 - Allen wrenches provided, employee needs a screwdriver
- Compact design can be used on many worksurfaces
- Easily adjustable
- Will **<u>NOT</u>** work with Mac or very large monitors
 - If this applies to your situation, contact your area Industrial Hygienist



Safety First!

- Assistance may be provided to load the chair and desk converter into the employee's personal vehicle, however, employees are responsible to secure the load for safe transport.
- Please ensure that the employee has assistance at home unloading the chair and desk converters.
 - -Team lifting!
 - -Chairs and desk converters can be awkward and heavy.

Laptop Ergonomics

Many of our telecommuters were issued laptops for home use at the start of the pandemic. Here are some important recommendations to remember:

- Place the laptop on a desk or table...not on your lap.
- Use an external mouse and keyboard.
- Ensure that the top of the monitor is at eye-level. This will encourage a better working posture.
 - A laptop raiser or books/reams of paper may be used.

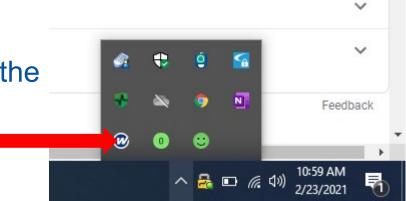


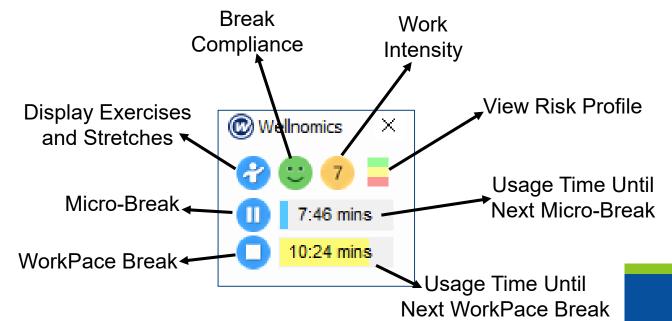
Ergonomic Computer Software

- WorkPace is an ergonomic computer program designed to prompt for microbreaks and breaks from computer work and is required by LWP-14604, "Ergonomics Program."
- WorkPace is mandatory for single-user workstations.
 - If WorkPace is not installed on your computer, call the OpsCenter 6-1000 for assistance.
- Follow prompted breaks, stretches, and micro-breaks.
- In the absence of WorkPace, at a minimum, take a 5-minute break after every 40 to 50 minutes of continuous computer work.

WorkPace – Status Panel

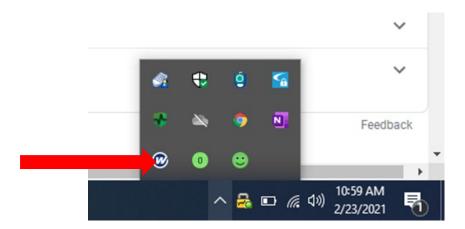
- Check your current status!
- The WorkPace icon can be found in the system tray
- Right click on the "W" icon
- Choose "Display status panel"



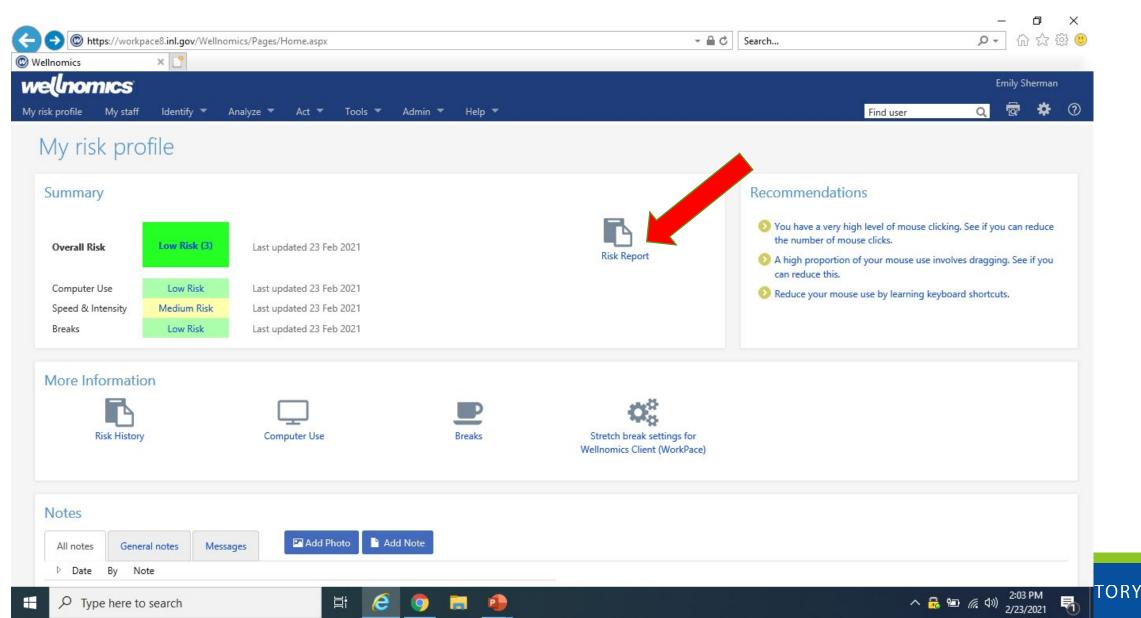


WorkPace – Risk Profile

- Check your Risk Profile!
- The WorkPace icon can be found in the system tray
- Right click on the "W" icon
- Choose "View My Risk Profile"



WorkPace – Risk Profile



WorkPace – Risk Profile



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Too have a cow hisk for this category and no changes are needed.

Speed & Intensity (Medium Risk)

You appear to be an intensive user of the keyboard and mouse, giving you a Medium Risk for this category.

Reduce the intensity of your computer use by following the advice in later sections. If this advice doesn't seem relevant, compensate for your increased risk in this category by reducing your risks in other categories (e.g. Computer Use).

Your level of Mouse Clicks is very high

You perform an average of 3,700 clicks per hour. This is much higher than the average computer user. Such a high level of mouse clicking can cause increased muscle fatigue and tendon loads due to the repetitive actions involved.



Try to reduce your amount of mouse clicking to less than 1,300 clicks per hour. Below this level you will no longer be in the higher risk section of the population. Some tips to achieve this are:

 Change your mouse and application settings so that you can use single clicks instead of double clicks. (See Further Information section for instructions on how to do this).

Your use of mouse drag is very high

A high proportion (23%) of your mouse use involves dragging (i.e. moving the mouse while holding down the mouse button). This is much higher than the average computer user.



Mouse dragging requires a lot more muscle tension than normal mouse use and may increase pressures in the wrist. Try to reduce your proportion of mouse dragging from 23% to less than 10%. Below this level you will no longer be in the higher risk section of the population.

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WorkPace – Exercises

- WorkPace also provides optional stretches & exercises.
- Stretches & exercises can be personalized in the "Advanced Settings" on the Dashboard.



Shoulder Stretch 1

Aim To stretch the back of your arm.

Starting Position

One arm behind your head with the palm touching your back.

Method

Hold onto your elbow with the other hand and gently pull across and down.

Go to the point where you feel a stretch in your shoulder and upper arm and hold this position for 10 seconds.

Lessons Learned

- We noticed that newly hired employees were the least equipped for teleworking, often just issued an INL laptop and used whatever items they had in their home.
- Most lacked the typical ergonomic equipment (INL chair, external keyboard/mouse, wrist rests, standing mat, additional monitors, adjustable workstation, etc.) that seasoned INL employees had access to.
- We now would include INL ergonomic information (such as this presentation) in the new hire process, so that new employees have the knowledge and resources to be more ergonomically prepared to work from home.

Ergonomic Questions?

- Emily Sherman
- 406 253-2900
- Emily.Sherman@inl.gov