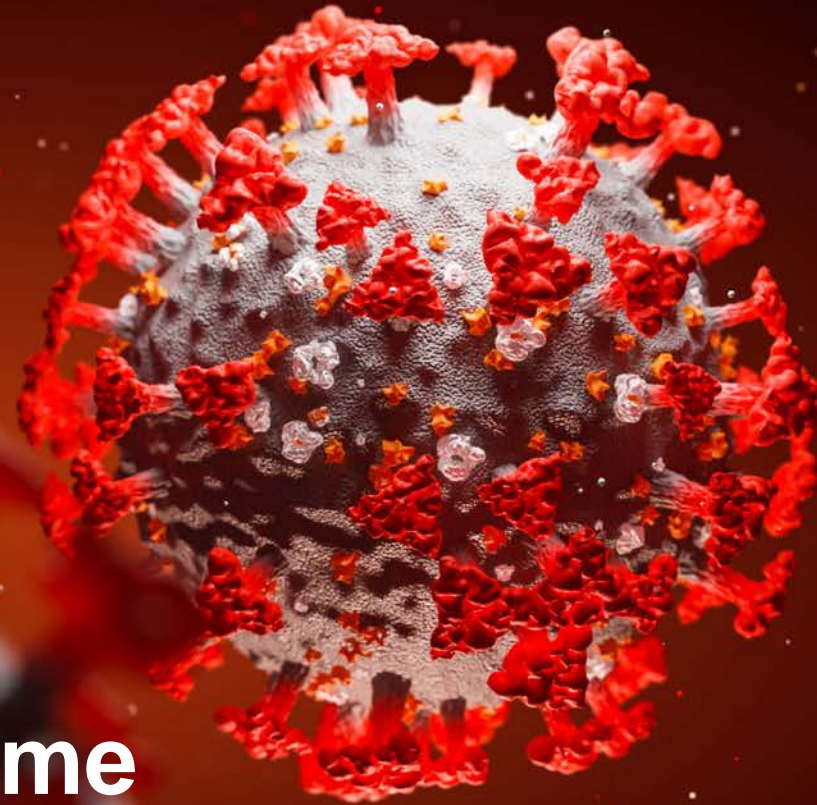


BETA HEALTHCARE GROUP | RISK MANAGEMENT

COVID-19 Task Force

BETA Ergonomics: Tips for Working from Home

*How to Stay Ergonomically Safe, Healthy and Well While Working
From Home During the COVID-19 Pandemic*



The Home Office

Introduction

For some of you this may be your first experience in working from a home office. You may already have a dedicated space where you use your computer to pay bills and perform other non-work activities like social media, entertainment streaming, emails, web-surfing, etc. Many others may be “couch surfers” who grab the laptop and lounge as you interact with your computer.

This short module is intended to give you an overview of how to set yourself up safely for a professional work environment at home which may be different than your computer area for short-term use. This is great for your children as well if doing home school now. Since this may be temporary for many, creativity is a key element, but safety is the bottom line. Let's get started!

General Tips for Working from Home



1. Create a routine.

- Wake up at the same time every day.
- Shower and get dressed.
- Stick to set work hours.



2. Plan your day for focus.

- Create a checklist of what you want to accomplish each day.
- Set a specific time for answering emails.
- Alert your family to your conference calls (so you can have quiet).



3. Schedule Lunch/Breaks (away from desk).

- Use your phone to take a “virtual” walk outside with a co-worker or friend.
- Connect with your family, household members and pets.
- Take frequent “micro-breaks to stretch and move.



4. Eat right and stay hydrated.

- Don't eat at your desk; take time to go sit at your dining table or outside and visit with others or just breathe and relax.
- Stay hydrated; keep water on your desk and get up frequently to refill.



5. Ergonomics is key to comfort and safety.

- Reach out for help if you are struggling to get comfortable (or if you have any discomfort).
- Good ergonomics does not have to be complicated or expensive.

Ergonomics: Getting Started

What is Ergonomics and Why is it Important?

Ergonomics is the science of fitting the job, work task, process, worksite, and tools to the individual person. A good ergonomic setup at home can:

- Help decrease muscle / body fatigue / soreness.
- Reduce the amount of seriousness of work-related injuries to your muscles, ligaments, tendons, joints, nerves, and spine.
- Make your job more efficient and easier to accomplish!

Setting up a Home Office

In setting up a home office, try to select an area that can be dedicated to work and allow you to concentrate: a spare bedroom, hallway nook, a corner of the dining room?

Things to consider:

- Is there good internet/wireless access?
- Is it quiet and private for concentration and meetings?
- What type of surface is available for use as a desk?
- Can I adjust this to my body size?

“Which surface should I use?”

Answer: It depends! Let’s look at the “ideal” set up first.

Work Surface Options:

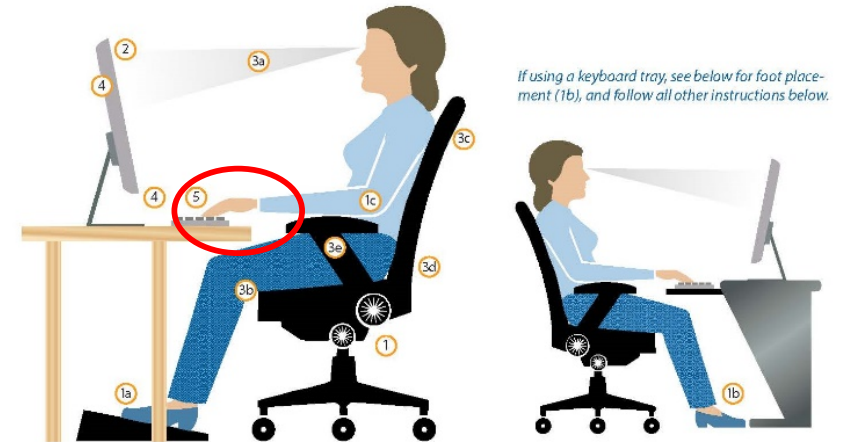
- **Standard Office Desk height:** 28.5 - 30” – often even this is too high.
- **Dining room tables:** 28 - 32”
- **TV Tray standard height:** 26”

Setting Up a Home Office (cont.)

Use the *BETA Office Ergonomics: Sitting Workstation* Handout

- Can help you see how you should look (your posture) when you are set up correctly.
- Everyone is built differently and there is no ideal table/desk height for everyone so you will need to make adjustments for the length of your arms, trunk, etc.
- Once you have selected your work surface, find a comfortable chair. If possible, adjust the chair upwards until your forearm and wrist look like the picture (5).

BETA Office Ergonomics: **Sitting Workstation**



HOW TO SELF-ADJUST YOUR SITTING WORKSTATION

1. Begin by adjusting your chair height using your chair's knobs and/or levers until your arm and wrist are in-line with your keyboard.
 - a If your feet don't sit flat on the floor, use a footrest to bridge the gap.
 - b If using a keyboard tray, adjust the chair so your feet are flat on the floor.
 - c The angle at the elbow should be in the range of 70-135 degrees (approx. 135 degrees is pictured).
2. Adjust the monitor height so that your eye level falls within the top 1/3 of the monitor as pictured. You can use a book(s) or a ream(s) of paper (or a monitor stand if available) to elevate the monitor if it lacks adjustability. If you wear bifocals or trifocals, lower the monitor so you can see out of your glasses without tipping your head or neck back.
3. Start the next steps by sitting back in your chair so your back and shoulders are resting on the backrest:
 - a The monitor distance should be 20-39" away from your eyes.
 - b The back of the knees should have 2-3" of space between them and the front of the seat-back edge.
 - c A slight chair recline is best (5-10 degrees is pictured). Some chairs have an adjustment lever that locks the position into place. Others have a tension knob (usually under the chair in front) that adjusts to support your body weight when you lean back.
 - d Adjust the chair back up or down to fit the curve in your low back for lumbar support.
 - e Adjust the arm rests to support your arms and wrists in-line with the keyboard. Shoulders should be relaxed, not elevated. Some armrests adjust in and out as well.
4. Position documents directly in front of you between the monitor screen and keyboard (using a stand if available). Side placement is acceptable if there is not enough space, or if you are using a single monitor.
5. Place the mouse on the same level as the keyboard.

Now that your chair, monitor, keyboard, mouse and documents are in place at your ergonomic workstation, remember to check your posture while working and take pauses, breaks, and move throughout the day.

Adjusting Your Chair

If you have a height-adjustable chair:

- Adjust the height of your chair by reaching down to find the control (usually located on the right side of the chair).
- Pull on the lever and “unweight” yourself from the chair a little so it will elevate upward (or, let your weight carry it downward to lower).
- Additionally, you may find a lever in the front or side of the seat for adjusting the length of the seat pan.



Adjusting Your Chair (cont.)

If you have a chair with adjustable armrests:

- On the side of the armrest there should be a button that can be pushed to elevate or lower the arm of the chair.
- The armrest should be at the same height as your elbow (when your upper shoulders are relaxed), and the forearm aligned as in the *Sitting Workstation* handout.
- Take care not to “lean” to one side on your armrest as this can lead to postural problems. Both arms should be supported evenly.



If You Don't Have an Adjustable Height Chair:

- A. Try using pillows/cushions to elevate yourself upwards.
- B. Fasten the support to the chair to avoid slippage and sliding off the chair.
- C. Pad the back of the chair with a soft towel or blanket if needed for comfort.
- D. Use a lumbar support (low back) for extra support and comfort.



A



B



C



D

Lumbar Supports

Lumbar supports are available online (see photo), but you can also make one.



A



B

- A. Use a soft belt from a bathrobe and a bath towel.
- B. Roll the towel around the belt to a thickness that feels like the right support.
- C. Tie the support on the chair and adjust to support the low back curve.
- D. Alternatively, tie the support around your back at the waist. That way it won't slip!



C

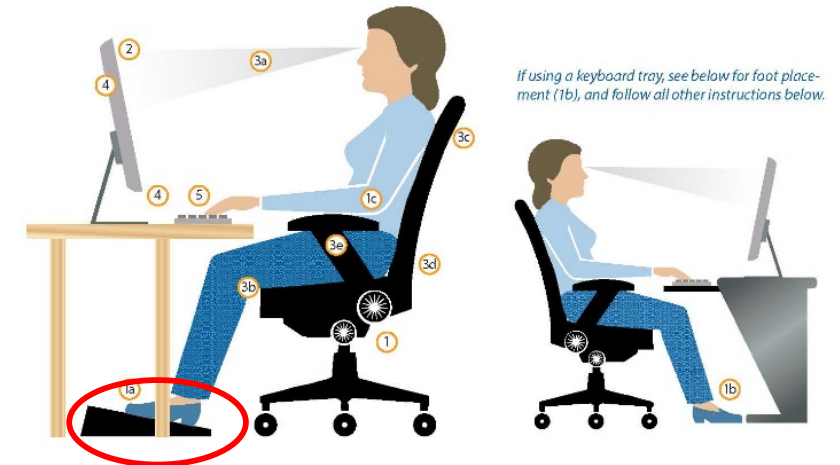


D

Supporting Your Feet

- If elevating your chair (or yourself) leaves your feet dangling, you need a footrest, so your legs aren't pulling you forward.
- Using a footrest supports the low back by keeping the hips in alignment. It also takes pressure of the back of your legs/knees.
- There are commercially available footrests in different heights. You can also try a ream of paper, old books or binders (with a non-skid backing underneath).
- You can also build one:
<https://www.anikasdiylife.com/diy-footrest-under-desk/>

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Monitor Height

- Adjust the monitor so that your eyes are in-line with the top of the screen. With large screens, the eyes should fall within the top 1/3 of the screen.
- If you wear bifocals or progressive lens, the screen should be positioned lower so that you do not tip your neck back to see out of the bottom of your lens.

See the next slide for height and distance recommendations with eyewear.

BETA Office Ergonomics: **Sitting Workstation**








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BETA HEALTHCARE GROUP 1

Monitors and Eyewear¹

If you wear glasses for computer work, the favourable monitor position depends on the lenses		
Step 1: Which lenses do you wear for computer work?	Step 2: Recommended monitor positions!	
	a) Single vision lenses  Far vision glasses For distance vision Computer glasses For computer vision Reading glasses For near vision	a) Single vision lenses <p>If you wear single vision lenses for far vision, computer vision or near vision:</p> <ul style="list-style-type: none"> Look slightly downwards Shift the monitor back and forth until vision is clear 
	b) Bifocal lenses  General purpose bifocals 1. for distance vision in the upper part 2. for near vision in lower part Computer bifocals 1. for computer vision in the upper part 2. near vision in the lower part	b) Bifocal lenses <p>If you wear general purpose bifocals for far and near vision:</p> <ul style="list-style-type: none"> Look slightly downwards Place the monitor farther away (60 –70 cm) Do not place the monitor too low <p>If you wear computer bifocals for computer and near vision:</p> <ul style="list-style-type: none"> Look slightly downwards Shift the monitor back and forth until vision is clear Do not place the monitor too low 
	c) Progressive addition lenses (PAL) Seamless progression of lens power for clear vision at various distances by vertical eye movements  General purpose PAL For clear vision at all distances, however, for near and intermediate distances only in a narrow vertical zone Computer vision PAL For clear vision at computer distance and for near vision. No clear far vision, e.g., no driving possible	c) Progressive addition lenses (PAL) <p>If you wear progressive addition lenses (PAL):</p> <ul style="list-style-type: none"> Place the monitor low and tilt it backwards Place the monitor farther away until vision is clear. If you have to tilt the head back into the neck, the monitor needs to be placed even lower, e.g. with a monitor arm. <p>If you wear progressive addition lenses (PAL) for computer use and near vision:</p> <ul style="list-style-type: none"> Look slightly downwards Shift the monitor back and forth until vision is clear Do not place the monitor too low 

¹ Weidling, P. & Wolfgang, J., (2015). The vertical monitor position for presbyopic computer users with progressive lenses: how to reach clear vision and comfortable head posture. *Ergonomics*, 58:11, 1813-1829, <http://www.tandfonline.com/action/showCitFormats?doi=10.1080/00140139.2015.1035764>

Monitor Distance

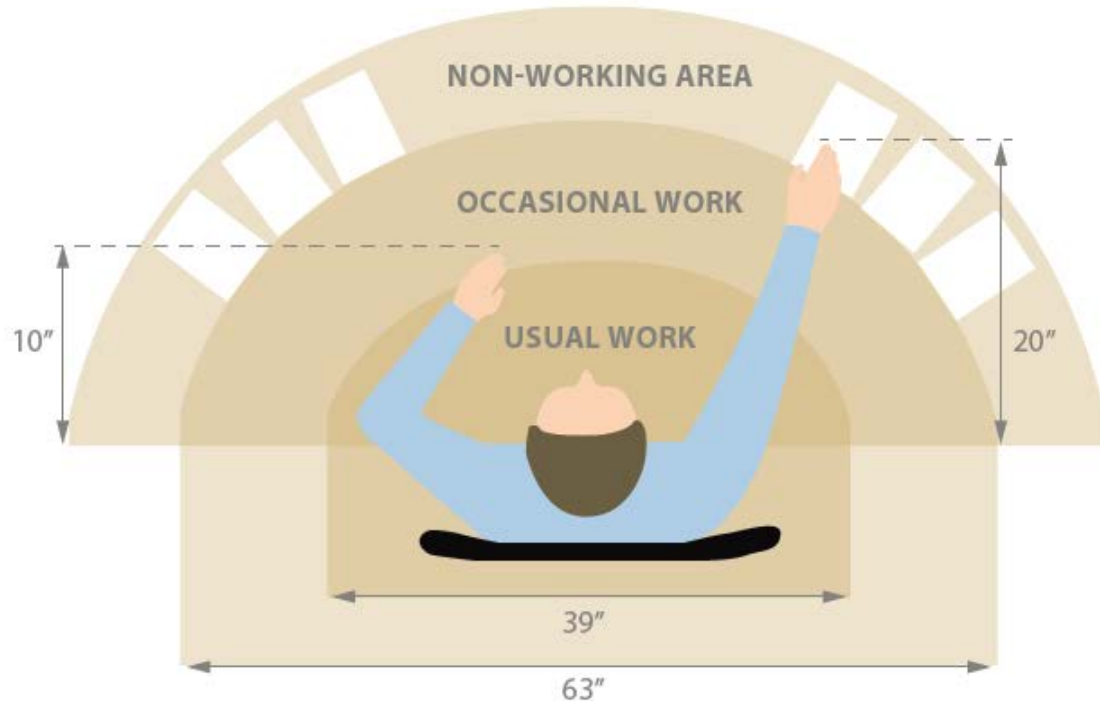


- The monitor should be 20-29” away from your eyes depending on the size of the monitor, the text, and your visual needs.
- An arm’s length is a good rough estimate for distance. You shouldn’t be leaning forward in your chair to see – bring it closer!

For Multiple Monitors:

- If you use both monitors equally, place them side-by-side and pull the outside edges of the monitors slightly inward in a “V” shape. Otherwise, place the most frequently used monitor more centrally and other monitors off to the side for occasional use. Turn your chair if possible (not your neck), to view.

Phone and Equipment Placement



- In arranging your desk and work items, place items in the zones shown (to the left) depending on the frequency of use of the item.
- Frequently used items go in the Usual Work Zone, less frequently used in the Occasional Work Zone and seldom used items in the Non-Working Zone.

Example: If you rarely use your desk phone, but frequently use your cell phone, place the cell phone in the Usual Work Zone and the desk phone in the Occasional Work Zone.

Contact Stress



Wrist contact



Elbow contact



Back of leg / knee contact when seat too short or hard sharp edge

- Contact stress results from resting parts of the body on sharp or hard edges.
- Areas of the body with less body tissue or fat are more prone to contact stress. Exposing your body to contact stress over time can reduce blood flow to areas or cause potential nerve compression/damage or tendon bruising.
- Proper fitting equipment, rounded furniture edges, padding and proper posture can prevent harm from contact stress.

Lighting

To avoid eye strain and difficulty viewing your monitor, the light source in the room surrounding your monitor should be considered. Some tips to help you set up correctly:

- Avoid placing your monitor directly in front of the window as the light coming in will wash out the screen. Likewise, window light coming in over your shoulder will shine directly onto the screen and produce glare.
- Place the monitor perpendicular to the window as pictured in the drawing. If this is not possible, draw the curtains or protect the screen from the light glare.



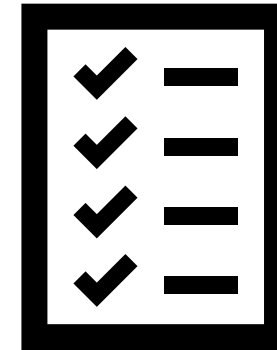
Generally, the computer screen brightness should match the brightness of the area surrounding your monitor work area.

Picture: Courtesy of OSHA e-tool ergonomics

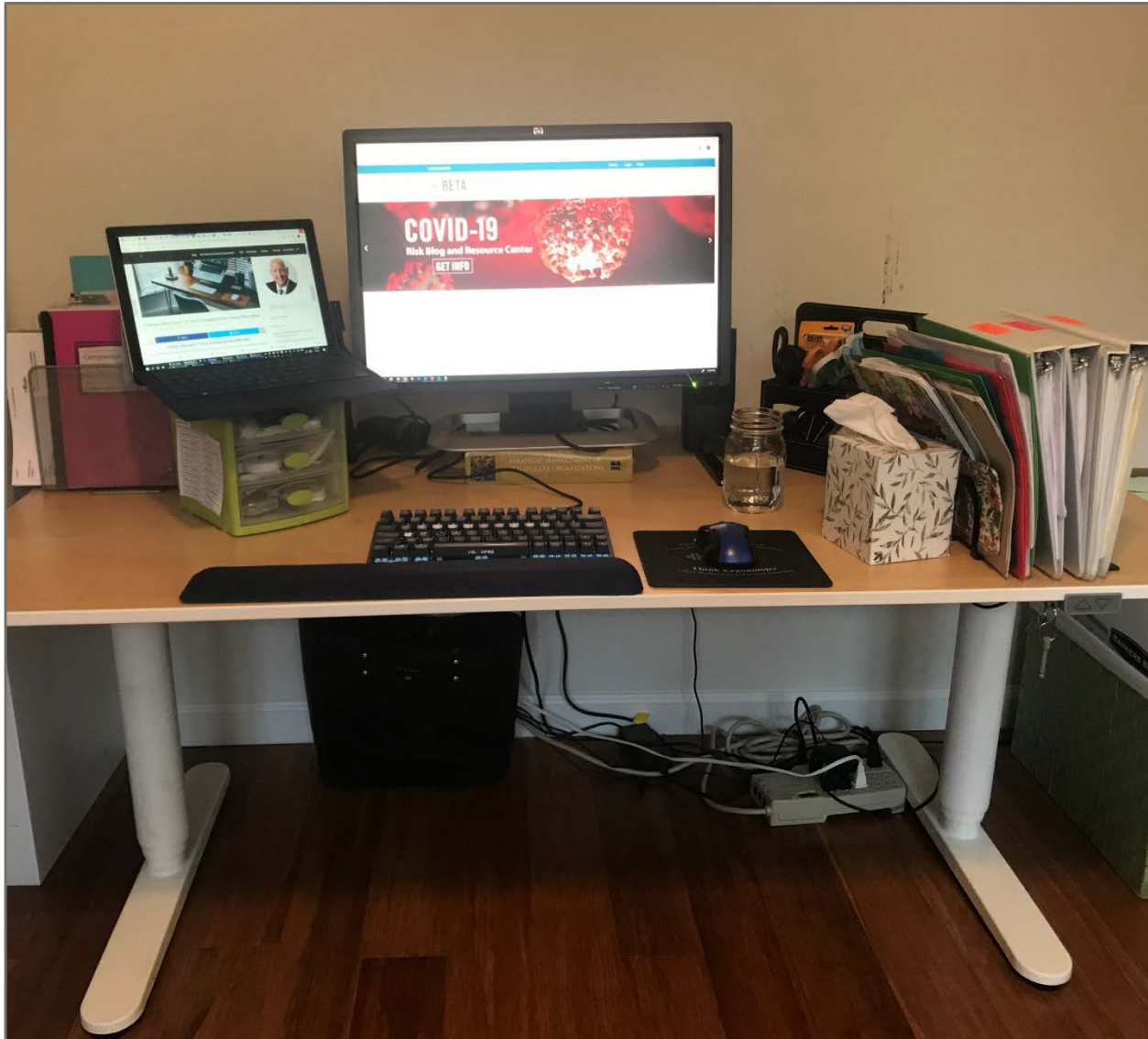
Examples of Home Office Setups

The following slides illustrate how to be creative in finding a suitable spot to work from in your home.

- When you view the pictures, keep in mind that you will need to customize the area to fit your body and job tasks.
- For example, not every monitor needs to be elevated and not everyone needs a footrest. Review the previous slides and the *Sitting Workstation* handout to help you find your best fit.



Home Office: Family Room



- This is an office that is for permanent, full-time use from home. This setup uses one large screen for the type of work being done here, but this may not work well for everyone.
- The laptop is viewed only on occasion, and therefore is more to the side. (Chair turns vs. neck to view) Everything is plugged into a docking station.
- Notice the many cords! The desk is 31" deep so they are pushed back to avoid a trip hazard. Cord ties work best if desk is narrow. This room doubles also as a "family room." The desk height of 26.5" is customized to the user for a good ergonomic fit.



Home Office: Hallway Nook

This photo shows a desk setup at an antique secretary desk in a hallway location.

- This is in an entryway as one enters the front door and is a bright and sunny spot with an overhead light.
- This type of a secretary desk can be quickly converted to a comfortable setup and it can be closed at the end of the day. In this setup, the laptop monitor works well for a comfortable height for the user with computer glasses (vs. progressives). The bottom of the desk has a support that can double as a footrest!

Home Office: Kitchen Table



This photo shows a desk setup at a kitchen table.

- Two reams of paper were used to elevate the laptop monitor. A sturdy cardboard box is used for a footrest (as this chair, boosted up with the pillow was too high for the feet to touch the ground).
- A kitchen can be a good place with lots of light and space. A TV tray off to the side can work well to hold your files, papers, cell, etc. for easy access.

Home Office: Spare Bedroom



This photo shows a desk setup in a spare bedroom at a desk.

- This bedroom desk has a drawer that slides out and is low enough to function as a keyboard tray.
- A commercial laptop holder is used to support the monitor at a good height (this works only with laptops with rigid edges, i.e. not the Microsoft Surface). Reams of paper can also work and can be more stable.

There is an online version of this setup made from a regular desk drawer (by removing the front of the drawer)! With this sort of modified use, be cautious of contact stress at the edge and use padding.

Wellness Tips

Sit vs. Stand vs. Move

Movement Throughout the Day is Key

There is a lot of conversation about how sitting is “the new smoking.”

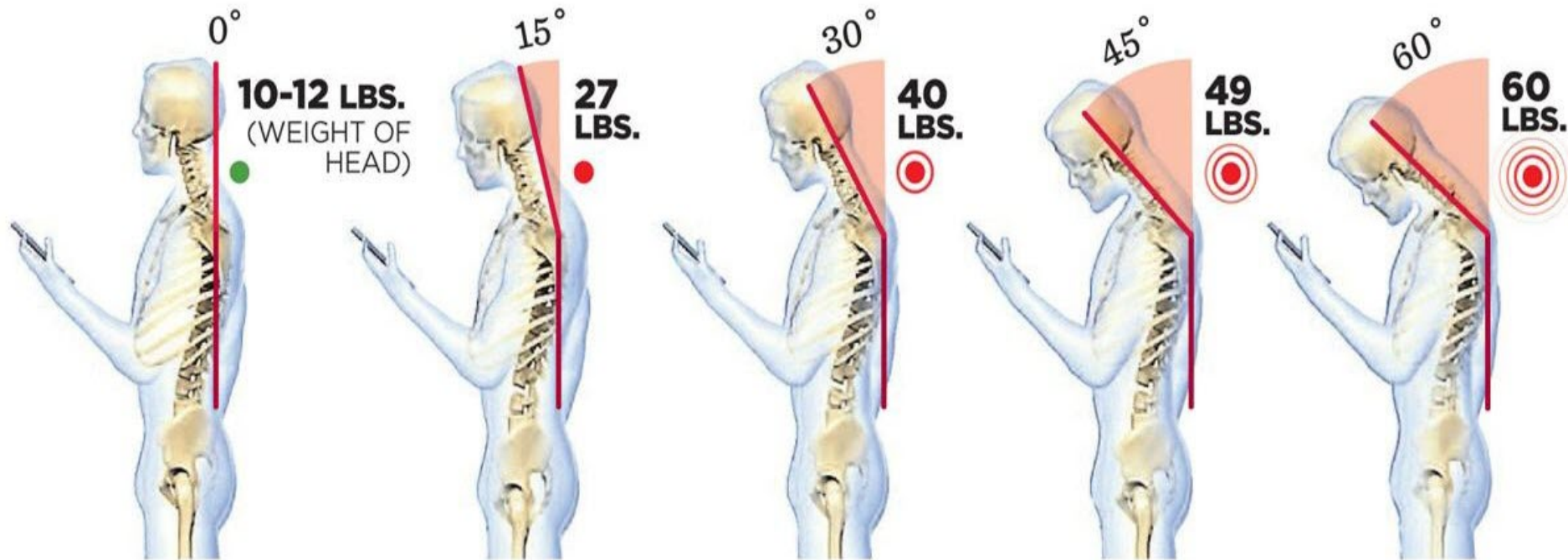
It is a fact that constant, prolonged sitting without breaks is not good for our bodies and health. The research also shows that standing still in one place is not much better – so standing desks aren't exactly the solution either.

More recent research shows that movement throughout the day is the key to staying healthy:

- Take a break every 30 minutes to get water, stretch your legs and just move for 3-4 minutes.
- Moving will improve your circulation, help your focus and mood, and benefit your health.
- Lunchtime and breaks are also a good time to fit in a brisk 10-15-minute walk.

Watch Your Phone Posture

The pressure on the spine dramatically increases when the head is tilted forward. This stress to the spine can lead to early wear, tear and possible surgeries according to research by Kenneth Hansraj at the National Library of Medicine.



SOURCE: SURGICAL TECHNOLOGY INTERNATIONAL

Fitness - Exercise

You need to engage in all four categories of exercise to prevent injuries and stay healthy.

- Aerobic Exercise
- Stretch / Flexibility
- Weight / Resistance Training
- Balance



Getting Creative with Exercise



Gym closed? Get creative.

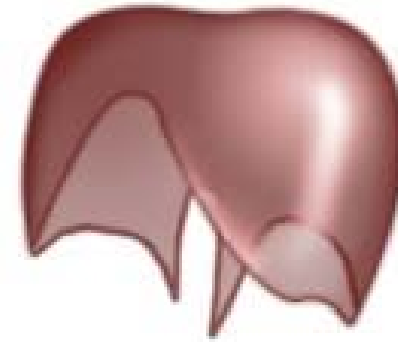
- Walking briskly outdoors (while keeping a social distance of at least 6 feet) gets your heart rate up. Remember to wear supportive shoes.
- The World Health Organization (WHO) recommend adults 18-64 do at least 150 minutes of moderate-intensity aerobic physical activity per week:
https://www.who.int/dietphysicalactivity/factsheet_adults/en/
- Yoga tapes, small free-weights, resistance bands, exercise balls (not to be used as a chair!), balance balls, etc. are all inexpensive and easily available.

Make sure the exercise is right for you. Check with your doctor if uncertain.

Stress Management: Relaxation

Diaphragmatic Breathing:

- Use the stomach muscles to assist with deep breathing, not the chest muscles.
- Bring your chest bone upward, shoulders back, for upright posture and diaphragm expansion.
- Exercise the diaphragm by practicing; it is a muscle, too!



The diaphragm is shaped like a parachute



Link to Diaphragmatic Breathing Instruction:
<https://www.youtube.com/watch?v=kgTL5G1iblo>

Any Questions?

After reviewing this information, if you are still having issues with your home office setup, please contact your supervisor or manager for assistance.