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Work from Wherever: Ergonomic Tips for A Safe &
Healthy Workstation Set Up at Home
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- [Fawn] Today's course is Work from Wherever: Ergonomic Tips for A Safe & Healthy Workstation Setup at Home. Our presenter today is Sara Loesche. She's an Occupational Therapist and Certified Hand Therapist with over 17 years of experience. She has an interest in the role occupational therapy plays in work in industry, and has experience in work conditioning and performing onsite ergonomic assessments. Currently, she is an Associate Professor at Thomas Jefferson University in the Occupational Therapy Assistant Program. Welcome back, Sara. So glad to have you.

- Thanks, Fawn. Thanks for that intro and for having me back. We're working from wherever right now. I think a lot of us are right now. I took one of my three boys bedrooms as my workstation, figuring it was the quietest place to do this right now. I've got a basketball net to one side. I've got a few frogs on my other side, and I'm hoping everybody can stay quiet for the next hour. And I'm sure some of you are in that same boat. So being an occupational therapist, we have so many roles that we can play, and what this current pandemic has done is expanding those roles. And we're capitalizing on some of the things that we can do to help right now. And one of the things that I am thinking about a lot during this time is how we can work from home, not only occupational therapy practitioners, but all types of people in all types of occupations and jobs are having to make this shift right now. So my background being an ergonomics and hand therapy, I really like taking that information and placing it in the home or in everyday life to help. So it's not just taking this information into a job site or into a warehouse or into an office space, but really taking those same principles and using them from home. And I really enjoy trying to make those connections. For me being a full time professor, starting in March, I had to shift from my office in my classroom into the home environment. I had to do that at the same time that my husband was doing that, that my three kids were doing that, and then throw in a dog and some other nonsense, and we had to make this work for several months now. And

it gave me the idea to think that maybe we can take some of the information that we know as occupational therapy practitioners and help some other people in this situation. Only if we can help them to think about their workstation a little bit, to make them a little bit more comfortable, as it seems to be a little bit more of a longterm plan than the short term plan we might have initially thought.

So, here is the disclosure statements for today's presentation and then our learning objectives. So after the course of the things that I would like for you to talk to learn would be to look at the risk areas of a workstation from home. And then taking those risk areas and learning to identify how to make that a healthy work environment, which includes thinking about neutral postures, the equipment placement and design of what you're using and then modifying tasks. And then lastly, looking at simple, upper and lower body stretches or movements that can be done to promote healthy work behavior throughout the day. So occupational therapy has had a long history in work and industry and working with injured workers and maintaining good health while at work. We know that occupational therapy practitioners can also obtain certain certifications that help in this area. I'm a certified in ergonomic assessment specialist. I received that certification to kind of build my skills a little bit more in the area of ergonomics, but it's something that occupational therapy inherently does is work with workers so they can be more healthy. We also know that there's certain jobs that have more risks. They're not as safe and there's hazards while at work.

So if we look at some of these pictures, you think, well, those are risky jobs. Yes, we could help to make that safer. We understand why people might get injured on that job. But if we look at this last picture here, it doesn't inherently look dangerous, right? It doesn't look like there's risks and there's hazards there. However, working from home can pose some challenges that include physical challenges, mental and environmental issues that people might not have anticipated. So let's take a little bit of a closer look at the office environment 'cause office environments in general are changing more

specifically moving to a home office or a more mobile workspace. So prior to our current state with the COVID-19 pandemic, there was a study done in 2018 by Janick and colleagues. And they wrote about designing these mobile workspaces and employing ergonomic principles to do that. Working from home has been increasingly common during this time period and prior to this, in addition to working from home, things like coworking spaces in the community or other types of temporary office setups, there's also a lot of types of office work that we're now figuring out can be done anywhere. They don't need to be done within an office set up, and workers basically are being asked to design their own setups. If it's not in that traditional office environment, they're saying, "All right, you pick your environment, you set it up and you work from that environment."

So now we're seeing this shift happened really rapidly due to the current pandemic and businesses closing down quickly, not just businesses, but classrooms and offices and all kinds of work environments. And it's not just your offices that are closing down, but we're seeing the shift in healthcare as well. So, maybe you guys are seeing it as occupational therapy practitioners in the practice that you are holding right now, or you're seeing family members, but it's not just offices, but healthcare services too. We're looking a lot more at telehealth services. And even the CDC has issued a statement regarding telehealth and it's use now, and then beyond the pandemic, recognizing it as a way to deliver healthcare services, also that it's not just picking up a phone and having a practitioner or call a client or call a patient, it's much more complex than that. We need to be able to visualize things, see things, show things. So it's not just something that a phone call can take care of. We need a little bit better technology set up here in order to be a good provider. Also the policies that are changing to support telehealth services.

So more people will have access to them. And I know some of these policies are including occupational therapy as well. What does Work From Home look like? I gave

you a little bit of an idea of my setup here today, but the picture here is another one of my setup. So, when we first started working from home, I would use my kitchen table thinking it's like the hub of my house. My kids are there. I can keep an eye on them while I'm getting my work done. But what I found more often than not was this scenario you can see in the picture was I would have little visitors underneath my table while I'm trying to work. So, it's not the wonderful thing sometimes you think like, "Wow, this is great. I really only have to do my hair, think of how I look out from the waist up now because I'm on a camera instead of having to go to work every day and my commute so much shorter now." But what's happening is that we have to think a little bit more about this. We need to be prepared. So it feels like everybody's working from home now, but even to prior to the COVID-19 pandemic, there was still a sharp increase of remote work. So there was a study that said there was a 159% increase between 2005 and 2017 with remote work. And it's not just, like I said, those kinds of customer service or phone-based jobs that are working from home now, but other jobs in IT, or in, like we said, medicine or education or sales or all types of industries are now allowing or mandating work from home.

So like I said, it takes an amount of preparation to do this because it requires how you're gonna figure out your work life balance now. It's that 10 second or 10 step commute from your kitchen table to your office space might think amazing, or you might think is amazing. Maybe your kitchen table is your office space. So there's these perks that you think, "Wow, this is great." But then there's also a lot of things to consider when working from home about how are you still gonna be productive? Where are you gonna set up your workstation? Or how many of those workstations do you need to get through your day? And how can you access everything that you had at work from home now. Sometimes it's utilizing new types of technology. Sometimes it's different types of equipment you need in your setup. As we know this all kind of came to a head in mid March of 2020 when employers had to make that quick decision regarding the COVID-19 pandemic. And that meant that there was a very quick

transition from the office to the home environment. There was a survey done during that time period about mid-March and 550 employers answered that saying that now 67% of their employees who would not normally be allowed to work from home were now mandated to work from home. And those employers also felt that that was going to increase in the coming months. And as we saw that did increase, and we're still living in that type of situation now. So several months later, there's really no rush for some businesses and some industries to get back into their offices. And we're seeing that it was much easier to shut down some businesses than it is to open them back up. Working in a university, I see that, shutting down was one thing, but having to get back up and running is a whole new ball game. So basically what happened a lot with this was workers were given a laptop and said... or any type of mobile device and said, "Go home and work." And that's the amount of support that they had to actually set up a workspace from home.

So it was basically a culture of here's what you have, now work with it and figure it out. Some of those issues that are arising with the working from home is that there's no, sometimes no set hours when you're working from home or you're able to work outside those hours. Sometimes you need your commute to decompress before you get back home. I know I had a 45 mile commute both ways, and not having that commute has changed some of the occupations I engage in, or some of those things that I would would get done during that commute or things that I enjoyed because of that commute. So you're kind of always plugged in when you're working from home, you can grab your laptop to respond to emails. You can be getting your emails on your phone at the same time. You can be balancing things you have to do within your home with the things you're doing at work. And that really just kind of changes what your day looks like when you're not in the office. So there's also a different social environment when you're at home than when you're in the work environment and that influences who you collaborate with and how you communicate with your colleagues. So we're doing a lot of this virtual communication. Sometimes you're actually communicating

more than you were in the office, sometimes less, but it's definitely different. There's also home distractions, whether it's kids or pets or that nagging idea of I have to go fold the laundry. I just heard the washing machine go off. Or it's time to start dinner for my family or somebody is at the door or whatever that might be, that the distraction that you might not have had when you were in the office.

And then along those lines, it's people managing multiple roles from home. So not just the worker role at one time, but having to be the worker and then also having to parent or be a caregiver or maintain a household or whatever those other roles are. I know for many people, especially if they did have children at home, you became a teacher, and you were facilitating online learning for various ages throughout the day in addition to worker roles. Looking at workstations from home, a lot of times they're not coming with the adjustable types of features that you might have in your office. So a lack of adjustable features in addition to having maybe multiple workstations, some people are experiencing, and that sometimes creates different areas of discomfort, worsening areas of discomfort, or sometimes fixes some of those areas of discomfort once you get home. So the pictures here on the right are some of, again, my workstations, this is a family affair to put this together because we've all been working together at home for the last few months that sometimes my laptop ends up on the floor while my kids are playing, just so I can get a few, like I said, a few emails answered or a few things done, or sometimes it's learning together, everybody kind of on their devices together, where you can see in the bottom picture, my husband's getting some of his work done while the other kids are playing on devices all with awful posture.

So I snapped that picture real quick to show them, this is what you look like when you're not thinking about your posture while you're working or playing on electronic devices. What this means is that setting up a healthy home office workstation is really key. It deserves a few minutes. It deserves some conscious thought to think about where you're working and how you can support yourself to have a healthy posture.

And the end result being that you're gonna be productive from home and be able to do your job. Also, it's best to be proactive about this. So rather than thinking about after issues start arising or areas of discomfort are creeping up, think ahead and think about how you can set up a healthy workstation so you're not being retroactive after issues have already started. And that brings me the ergonomics and the way to do that is good ergonomic design. Good ergonomic design is going to create a good fit between the worker, that environment they're working in and the job they have to do. So this is more of like this blending process of those three things, rather than the graphic on the right, showing a person that's just dumped into a work role and said, here's your job, do it. Here's the environment, just do the job. That doesn't work as well. And I think that we know that as occupational therapy practitioners, because of being client centered and knowing that there's multiple influences in good occupational performance or finding a good fit.

Also the International Ergonomics Association has said that ergonomics needs to be holistic. So doesn't that sound great to OT practitioners that ergonomics can be holistic by not just looking at the physical, but looking at cognitive and social and environmental factors that can interplay there as well. So I feel like there's a great connection to occupational therapy and it fits ideally with our PEO model, our Person-Environment-Occupation model, which is a commonly used model in occupational therapy practice. One of my favorites to view activity through that lens. So we know that good occupational performance is that blending experience of the person, the environment and the occupations they engage in. What does the PEO model look like with a work from home example? If we're looking at the person, we can think about the things within the person, their posture, what's the musculoskeletal system doing? What's the positioning of the different body parts, thinking about mental things that are within the person, like what's the stress levels going on right now? Other things like is there a visual strain and other client factors that we can look at on that client factor level. Looking at the environment, the things outside the person, we

can look at those things in an office, the desk, the chair, the workstation, what's the lighting look like, the noise and distraction in the environment.

And then lastly, the occupations that need to be performed, what will get the job done? What are the job demands? Outside of the job demands, looking at things like the sleep routine is, is somebody getting enough sleep? That's certainly an occupation, right? And then thinking about healthy diets, and again, going back to that stress level, what are the multiple roles that need to be maintained? And what does that role strain look like during this time? To get started, we can look at some risk factors. So here's a list of common things we would look at as risk factors when looking at a job, and those risk factors we can look at in terms of a home office, they're gonna change based on where you're working and they might look different or worse, or even better than your original home office setup or your work office setup. The problem is that these risk factors could lead to musculoskeletal disorders. They can do things like impact circulation. And we know that circulation is what will deliver all that good oxygen, rich blood to the body, and keep nutrients moved throughout the body. It removes waste products from your body, and it will help with healing any little micro traumas that happen throughout the day. And also if not addressed could lead to even more serious conditions. Our bodies need to work within their physiological and anatomical limits.

So even within with work like office work, we still need to think about what's going on with the tissues and the tendons and the muscles that might be impacted. Also need to recognize that injury from these risk factors is a combination of both the environment and worker habits. So what the person is doing as well. So if there is an injury that happens, it could be a combination, if it's not just the environment set up, that's bad, but the worker habits could be worked on as well. Let's go through each one of those and just see what they would look like in an office environment or in your home office environment. So the first one is an awkward or a static posture. Sometimes it's an awkward posture. Sometimes it's being in one position for a long time, and then

sometimes we can combine those together. And it's an awkward posture that you're in for a long period of time.

So the first one that you can look at is this picture is just a good example of cradling the phone. So when you're on the phone, cradling the phone between the shoulder and the ear, or even that excessive elbow flexion that you have, if you're gonna hold the phone up to your ear. With the wrist, sometimes you get in a static posture, having the wrist extended on the keyboard as you're typing or in a deviated position while typing. The shoulders sometimes in this, depending on what workstation I'm at, this happens to me a lot is that my shoulders will start to creep up toward my ears. So the shoulders being elevated up towards the ears or having to reach while you're keying on the keyboard or mousing. The neck is a big one, depending on your setup that sometimes you might see you're gonna have a lot of rotation of the neck or awkward postures flexing the neck, or having to look down at a screen that you'll get that forward neck flexion. The back also needs to be supported. The back is a big one to feel if you're seated for a long period of time, that especially if there's a lack of lumbar support or that kind of curving forward the excessive thoracic curvature, if you're kind of in that protracted curved position. And then sometimes seats will put you into a posterior pelvic tilt, which is gonna throw all of that in your spine out of whack. I know, the seats that we have at our university, we got this great new classroom set up and they said all these innovative things that we're gonna put in there. And one of the things with this special seat that they had, well, the seat had this big curve in the pan of it. And whenever students are sitting in it, it just puts them into a posterior pelvic tilt.

So it's impossible for them to sit up with good posture while they're in the classroom. So it was just funny how that was designed and came about that these are the seats in our OT lab now. So that's through your spine. And then lastly, looking at the lower extremities. In this picture, again, the lady has her legs crossed. Sometimes you're sitting on your legs or your criss-cross applesauce in your chair, or sometimes your

feet are below, you on the casters of your chair. And all of those things are not the optimal posture and are actually not good if they're gonna be held for a static period of time. You can also think about forces. It seems silly to think about the forces, but there are forces that can be put through the tendons and muscles, even if it's just the little ones in the fingers and the hands. So your finger flexors while keying can be a strain on the small tendons of the digits. You can have keyboards that have reduced force, or you can retrain the worker to have reduce that habit of heavy keying. But if you type about 50 words a minute for seven hours a day, so you do a lot of typing throughout your day, and you still use less than one ounce of force while typing over the day, you're generating about 700 pounds of force per finger. So when you put it in the numbers of what strain the fingers have to withstand, remember I said, you need to work within your physiological limits and your anatomical limits. Well, that is actually extending them to do an awful lot, your fingers to do an awful lot throughout the day.

Another thing you're sitting at the table and you have to kind of push and pull yourself up from the desk often and getting up and down, up and down, that can be forced through the upper extremity and through the hands. I know when I used to work in hospital settings, and when we still have the big binders of patient files, you have to grab those and hold them and carry them through and to chart. But a three to four inch binder can weigh anywhere from five to 10 pounds and having to reach and hold and carry that, generates a good amount of force through your grip. Even if you're pushing a stapler regularly can generate a force in those small tendons of the hands. Another thing that will impact not only the tendons but the other structures in the upper and lower extremity is contact stress. You'll see contact stress when we put stress over a small part of the body that could lead to discomfort or even worse areas of compression. But the areas of the home office where you might see this is again, when you're keying at the keyboard or mousing, especially if you're using some type of a mouse pad, sometimes resting your arms on the arm rest of your chair, and even where the pan of the chair meets the back of your knees can be an area of contact

stress over time. One interesting thing is that as your workstation is higher, that risk for contact stress will increase. You have more opportunities for contact stress with a higher workstation, a higher desk or table. So let's get into what a neutral posture is. Neutral posture will help alleviate a lot of those risk factors. And I can't give you a black and white recommendation.

One of the things that is you'll still read about, but is falling a little bit more out of favor is that you must be at a 90, 90, 90 angle. And that's a good recommendation, but not always again, the black and white recommendation, because we need to be client centered and look at the person and people are all different sizes. So there's no standard workstation, standard heights. There's no one-size-fits-all remedy here because all bodies are different shapes and sizes, but it's important to know what will put somebody into a neutral posture. And what that means is that you're putting their anatomy in the safest position so the physiology can work well. And you're at the optimal levels of that. It also reduces risk of injury, whether you're sitting, whether you're standing wherever you choose to work, if you can try to maintain neutral postures, it will allow for movement while holding good stability of things like the trunk so your distal features can work. So your arms can work.

So here's what neutral posture is. We know this as OT practitioners, right? We think about this. We teach this with body mechanics, and all kinds of things when we do a task analysis, we think about neutral postures and keeping the body safe. But when in general, you're going to be have your head straight, not deviated in any way. And there will be a slight downward gaze about 15 degrees of a downward gaze. And that means that your monitor usually falls about eyebrow level. That makes it easiest on your cervical spine and those neck extensors in the back that they're not going to get either stretched out or tensed up that you can have a comfortable visual field. The next thing is something I said I do all the time is my shoulders. So the shoulders should be relaxed, not up by the ears, but relaxed and then slightly protracted because when

you're sitting at your workstation, you don't bring the shoulder blades back to type in front of you. They're gonna be a little bit protracted to be able to reach and type in front. The elbow should be flexed about 90 to 100 degrees. I like to call this a little bit more of a floating posture. It should not be static at 90 degrees, but the ability to kind of move a little bit, but in general, about 90 to a 100 degrees of elbow flexion, which means that your desk surface should be below the elbow.

So when you're sitting, the desk surface should be below the elbow and it typically is not. They should be a neutral. So meaning the wrists aren't gonna be extended. They're not gonna be deviated. It's typically owner deviation. You'll see to reach that backspace key that enter key or to mouse, and then supporting the lower body is very important as well. When you look at the environment and those supplies or those structures, the things that you... the equipment you would have in an office, here's what you would call the big three. So you'd have a chair or a workstation, which includes the keyboard and mouse and your monitor. So in order to achieve that neutral safe posture, I just talked about, you have to look at these big three and how they can either promote or inhibit that posture. And if you can accommodate about two of the three of these things, you're in great shape. I'm not saying that all three of these have to be in perfect ergonomic position for you to be comfortable, but if you can get two of the three in good position, you should be in good shape. If you can only really adjust one of these things or none of these things, then that's gonna be a problem.

So remember, it's not just how you adjust the environment, but how the worker uses the environment as well and their habits. In terms of the big three, you always start with the chair. So, if the chair is adjustable, you wanna find that out. If it's adjustable, do you know how to adjust it? If it's adjustable, are the features working? So that's one of the big things is how adjustable is your chair? My office chair's barely adjustable. My kitchen table chair is not. So you have to think about that. Are there armrests and are they even useful armrests? So armrest should be for resting. They should not be to

hold your body in position while you're typing or working because there've been EMG studies that say that, will cause some of that contact stress rather than be helpful in postures. Or is there a lumbar support within the chair? Do you need to create it? If the chair doesn't have lumbar support, it's fairly easy to create some with a towel roll, a pillow or there's certainly commercial products available to put a lumbar support on a chair.

Make sure that when you're seated in the chair, you can keep those neutral postures I just talked about. And then thinking about your lower extremity, this is so important. I find in a lot of the workstations I set up in my home, this is the caveat that I... this is the thing that I need to address, probably because I'm short, but also because it provides stability to the rest of your body. So the first thing you wanna look at is do the back of your knees come in contact with the chair. You should have about two or three inches between the back of your knee and where the chair starts. Also, what's the edge of that chair look like? Is it kind of one of those chairs that has a very angled end or does it have that nice waterfall edge that will reduce the risks of contact stress? You also wanna think about your feet. You never want to hang your feet. So they need support. Your support doesn't have to be fancy. There are certainly products out there that are footstools and things like that, but the casters on your chair are not there for support. So I find myself doing that as well.

I'll pull my feet back and set them on the casters of the chair because I'm too short to put my feet on the ground, but that is not a good idea. When you have that lower extremity contact, when your feet are on the floor, that's gonna support your pelvis, which is going to support your spine. And that's going to create this nice, closed supported chain from head to toe. And when you do that, when the trunk muscles are engaged and supported, then you can again use those distal muscles to do their job. So bending your legs underneath you, if you find yourself doing that, you wanna cross your legs a lot, or you wanna bend them underneath you to sit, that means you need

more stability. So your body's seeking and craving stability and that's why it's trying to find that. The problem with that is that you're actually gonna make your upper body work harder if you don't find that stability by putting your feet on the ground. Also, if the height of your chair is an issue, you can always increase or put a cushion on your chair to sit on the cushion or put a cushion behind your back to support it. There's a lot of things you can do to make a chair more comfortable.

Looking at the keyboard workstation. So if you're typing on a keyboard, it could be a laptop keyboard or an external keyboard. You wanna think about where you're setting that, what's your workstation look like? Are you sitting at a table? Are you sitting at a desk? Are you sitting on the floor? Are you sitting on your bed or couch? So obviously your bed, your couch are not recommended. Although initially they're gonna feel really good and comfortable, but that's a short term feeling that's gonna lead to some longterm issues. So the other thing I wanna look at is what stuff do you need? I know when I set up my workstation, obviously I need my keyboard, I need a mouse. I usually need my phone close by, whatever, if I'm working from documents, they're going to be there. My cup of coffee is never far either or maybe a glass of water. So you have to think about where's your stuff and do you have enough room for that stuff? And to organize it, we'll talk about that in a second, about how to really organize the work zones around your desk. But for the keyboard, what's most important is that you need a neutral wrist. So in both of these pictures, there's a neutral wrist. There's some deviation in that first picture. But one of the things that people don't know, because keyboards are made those little feet, that you can flip up, what a great design, right? Wow, I can angle my keyboard. You shouldn't angle your keyboard.

As soon as you put those feet up, it's putting your wrist into extension to type, and that's going to strain those extensors, those tiny tendons in your fingers. So the keyboards should go down right away. I know when I used to do job site, when I would go to people's workstations and look at that, the first thing I would do is look and I'd

flip those things right down, and then look at wrist angles that they can be as neutral as possible after that. So keyboards should be flat. Wrists should be in neutral, neither extended nor flexed. Shouldn't be in the least amount of deviation possible. And if that's still an issue, you can consider one of the ergonomic keyboards. They're like the wave keyboards, because they actually reduce a lot of that deviation. The other option there is to get a split keyboard and the split keyboard comes in two pieces. So you can actually keep the keyboard together. You can also gradually split it apart so you can get used to it. 'Cause sometimes it's hard to change your habits. If you're used to typing on keyboard and all of a sudden you get this crazy ergonomic keyboard, it might be uncomfortable. So using the split keyboard allows you to actually gradually get used to typing in a different way. So that's an option.

Another option would be to use a keyboard tray. So obviously and if you're using a laptop, but if you have an external keyboard, you can use a laptop tray, which makes it more adjustable to how your wrist position will be and how close you can bring it to you. And also that keyboard tray should also have an area for your mouse as well. Most people are gonna sit with their elbows about 25 to 27 inches from the ground. And unfortunately, most desks, commercial desks are about 29 to 30 inches from the ground. So you're already putting yourself at a disadvantage for ergonomic design. If you're going to just try to sit in a regular chair at a regular desk without doing a little bit of modification. So again, if we look at these pictures in the first picture on the left hand side, one of the things I noticed is the contact stress through the upper extremity. You can see in the forearm there, and there's also some deviation. The shoulders are a little bit abducted. There's some flexion at the elbows, and you can see there's gonna be some deviation at the wrist. The second picture we adjusted it. We pulled that keyboard forward, neutral wrist here, still no contact stress. And it was as simple as pulling that keyboard forward and still maintaining the rest of the neutral wrist and posture. The other part of your workstation that goes with the keyboard and then it's going to be the mouse. And with a mouse, it should definitely be on the same surface

as your keyboard. Sometimes people will have the keyboard and they have their mouse somewhere where they need to reach for it. And that's not okay. So a mouse and keyboard should be together, and the mouse should fit in the hand comfortably.

There's so many options out there in terms of a mouse. It's a find what works for you situation. I'll give you the names of a few and kind of what the differences are, what you'd be looking for, but really you just would need to get one and try them out with your clients or try them out with yourself and see what works for them. So one that's out there is called the Penguin Mouse. The Penguin Mouse will not put your hand in pronation, but actually put your hand in a neutral position to be able to mouse. And it's also an ambidextrous mouse so you can flip from the right to the left throughout the day if that's a recommendation that's being made to switch hands, you can do that with this mouse. It also comes in three different sizes to accommodate different sizes of hands. Another mouse is called the HandShoe Mouse. This you need to get in either a right or left size, but it also has different sizes available. And this allows you to have a little bit more of a floating hand on your mouse. There's a RollerMouse, which actually sits in front of your keyboard. It doesn't look like a mouse at all. It sits in front of the keyboard. You're still in pronation when you're using it, but you're using a different type or set up a totally different set of muscles to be able to manipulate the mouse with that. A Vertical Mouse is another kind that puts you in neutral versus pronation. You'd be in a more neutral position of the wrist. And then there's a track ball mouse, which is like an upside down mouse, which is again, just another option, depending on what's comfortable for your wrist position and does not put contact stress through that volar wrist area.

One solution, people always come up with a mouse is, get the mouse pad, get the mouse pad with that padding on it. And that could be okay, but would need to be looked at and make sure that it's not again, increasing the contact stress through that important area of the volar wrist where the carpal canal is. Also the mouse, I always

recommend a wireless mouse because it allows more freedom and how you position that mouse. And then the last thing, which is one of the easiest things you can do is think about what jewelry you're wearing. So a lot of times I'll have to take off my watches or bracelets or whatever to make sure that that's not getting in my way when I'm typing and mousing 'cause it's one simple thing, but silly thing, but simple thing you can do to be more comfortable at your workstation. Here's what the work zones look like. I keep mentioning that we need to avoid reaching, but really you need all the things there, right? You sometimes need things at your workstation.

So that requires prioritizing. So what's you need and how often do you need it? With work zones, your primary work zone. If you bend your elbows at 90 degrees, and you kind of do this windshield wiper thing with them, create a little arc there, anything that you use constantly should be within that arc of motion. So elbows bent at 90 at your sides and do that arc. That is your keyboard. That's your mouse. Those are those constantly used things. Secondary is if you can extend your arms out and do that same kind of windshield wiper, that same arc motion, anything that you use frequently, you should be able to reach while extending your arms, but not bending forward at all. The tertiary work zone is for things that you don't use very often, but are helpful to have close by. These are things you either need to bend forward to reach, or you need to get up to reach. So you wanna make sure that those things are not things you need to reach for frequently.

Here's what this looks like in one of my work zones in the house is that my primary work zone is gonna be my keyboard and my mouse, sometimes I'll keep it like a little post it notes and my pen there. My secondary work zone will have my cup of coffee or my drink. Sometimes, maybe other pens that I use or a stapler. And then the tertiary work zone would be maybe my plan or something I need to reach for infrequently throughout my day. That light is there to turn on and off things like that would be in the tertiary work zone. The last thing in the big three is your monitor. So if you're using a

laptop, you should consider using a separate monitor to get better position if you can keep your workstation in one spot, we'll talk about a laptop in a second, but check your monitor. See if it's adjustable. Does it rise up at all? If it doesn't, it's very easy to put something underneath to raise it up a little bit.

So commercially, they will sell things that are monitor risers, but also there's a lot of low tech options out there. There's textbooks, boxes, anything you can find to raise up your monitor height, if that's what you need. But overall, again, your head should be in about a 15 degree tilt, 15 degree of neck flexion, or a downward gaze so that, that puts the monitor again about eyebrow level. It should also be about an arms length away about 18 to 30 inches from the eyes or a full arm's length. And then if you wear bifocals, then you probably want to angle it down even a little bit more. So you can utilize those bifocals when reading and not reading. If you're leaning forward to read from your screen, that probably means that either the font size is too small on your screen or that's too far away. So if you find yourself leaning forward to read what's on your screen, that could be the issue. If you find yourself turning your head to read from the screen, it's probably too close. So if I'm really close and I have to scan to read what's on my screen, I should probably push it back a little bit. All of this falls under the umbrella of, you have had your vision checked, you're wearing the corrective lenses, and everything is good there. Another recommendation for the monitor is just make sure you keep it clean. So it's easier to see sharply that acuity and what's on the screen if you keep your monitor clean.

Some people are gonna use dual monitors. So if you use dual monitors and you use both of them simultaneously, so really often at the same time, you wanna pull them together as close as possible, and then you want to have that again at the same about an arms length away. If you use dual monitors and one of them you don't use quite as often, you can actually put one straight in front of you, and the other one on about a 30 degree angle from that. So there's less neck rotation, but you can keep that main

monitor in a good spot there. So that takes us through the big three. But the other thing to talk about is laptops. So I mentioned earlier, a lot of employers are like, "Here's a laptop, go home and use it." Laptops are not meant for longterm use. And they violate pretty much all ergonomic design. They're not adjustable, right? They're very fixed. If you adjust the height of your keyboard, or if you adjust the height of your screen, then your keyboard is out of whack. And if you the keyboard, then you're usually looking down at your screen. So there's no way to make these adjustable. So the best option when you set up your workstation is to consider external devices. So can you get an external monitor or can you get an external keyboard hookup to that?

Additionally, can you get the external mouse to use? Because sometimes the touch pad is not the most comfortable. I personally don't like the touch pad at all. So, I know my husband says what's wrong with it. I can use the touch pad. I don't like it. I just don't like it. So I have an external mouse that I use, but if you're going to use that touch pad mouse on the laptop, use multiple fingers, just to think about our joint protection principles, multiple fingers are going to have less stress through those digits. So if you choose to use your laptop as is, you're gonna be using a lot of small muscles in your wrist and hand. You're also not gonna be in good neutral posture for the most part. That's okay if it's for the short term, again, that's what the laptop was designed for. There's also products that can help with laptops set up a little bit. There's a popular one is the Aviator Laptop Stand, but all kinds of places are selling them now, by both and beyond we'll have them. And what it does, it just gives you a little bit of a positioning device to put your laptop on. Some of them are basically kind of like glorified binders. So if you have a three inch binder laying around, and you can set your laptop on it, and then adjust the screen, you might be in a better position. It's just a try again, not one-size-fits-all. It's try and see what works as long as you're trying to keep your neutral postures. In terms of accessories, it depends on your job.

So if you're constantly working off documents, you're gonna want to have a document holder or a document stand. A silly thing. But one day I needed a document holder, and I didn't have a document holder at home. So one of my sons plays the drums and I went to get his music stand. And I used his music stand as my document holder and just placed it close by so I would not have to rotate my neck too much. So you can come up with modifications for sure. A big one is the headset. So using a headset, if you're going to be on the phone at all throughout the day or in longer conversations, you don't want to be holding a phone to your ear because with that, again, that excessive elbow, flexion is not good for cubital tunnel. And then if you're gonna do cradling the phone between your ear and your shoulder, that's awful for your neck. It feels awful after about three seconds. So you wanna be able to use that headset so both hands are gonna be free, that you can utilize those. Also there's the ability there to get a headset that might be noise canceling to reduce outside distractions. You can get wireless headset, so you're not attached to and plugged into your workstation.

So those are some of the benefits of those accessories that will help with those postures, whether it's your neck or your spine. So standing desks are alternative sitting and standing is a pretty trendy topic and a good talking point. The rule of thumb is that you're going to be sitting for 20 minutes, standing for eight minutes, and moving for two minutes. So you can make that ratio work within a half hour or within an hour, but it's not good to stand all day just as it's not good to sit all day. So it should be a ratio. It should be breaking into a little bit of a schedule. So it's not standing all day, not sitting all day. And again, being adjustable is great. So when you're standing, your standard countertop is about 36 inches. So you can't obviously adjust the countertop, but you can adjust other items based on that. Another thing that's recommended as a footstool. So this, again, a footstool, but for a different reason that you can alternate having one foot up on the footstool as if you're standing for a longer period of time, and that will actually help to reduce the strain through your low back. There is sit to stand converters that are commercially available. Again, I'm seeing them pop up

everywhere. They can be anywhere from fairly inexpensive. I've seen a few under \$100, some 100, \$200, and then there's very elaborate ones as well, but it's good to have this extant converter just so you can not just again, be sitting all day or standing all day.

Here, when I was teaching my classes over the summer was my workstation. I found my adjustable sit to stand workstation in the form of my ironing board. So an ironing board is something that you can really easily adjust, right? So if I'm sitting on the ottoman here, and I can sit and adjust that, so I'm typing on my laptop, but also if I need to adjust it to stand up, I can do that fairly comfortably. And I have room for some of the things that I need, like my mouse or my papers. Also I was teaching a class, I was teaching an anatomy and physiology class, we needed to do some movement activities where sometimes I was sitting and sometimes I was standing, and this allowed me that adjustable feature with something I just had at home that most people have in their home. So I'm a big proponent of using the ironing board as your workstation. Here's at our kitchen counter. So when I said about the one-size-fits-all thing, not being accurate, this is true in that. Here's my husband and I both working at our countertop where we would find ourselves working quite often while the kids are eating meals or we're doing things in the kitchen that needed to get done.

So on the left hand side is me working on the laptop and you can see that I have more neck flexion than you would want to look down. Obviously, that screen is not at eyebrow height. So looking down on the screen will cause excessive neck flexion for me. Also, my wrists are not in great position. There's a little bit of bend on my elbows, but certainly that's not 90 degrees bend at my elbows. If you look at the right picture, my husband who's taller than me. He's got no bend in his elbows, excessive neck flexion again. So you're gonna have to work if this is your workstation, you're going to have to work with what you have, which is the height of that countertop. And either raise up the laptop height a little bit, or maybe putting a stool there, to sit down a little

bit. I would do that sometimes to be able to work at that height. Other things you wanna consider outside of the big three would be lighting. So there's a window in the room where you're working, you wanna sit perpendicular to that window. You don't want in front or behind you, that will just cause glare. You also don't wanna sit right under overhead lights. If they're very bright lights, you wanna kind of move your way in between those. Consider working in lower lighting levels to decrease eyestrain or adjust the brightness on your monitor. If you work from documents a lot, you might want to consider a little light to spotlight those documents or highlight those documents so that they can be brighter than what you would have at your screen. And there's a lot of myth versus reality right now about vision and visual eyestrain and blue lights. So what does screens do division? They definitely will strain your eyes because as you look at screens, you're blinking less looking at the screen, which is causing some eyestrain.

One easy thing you can do to help your vision. Like I said before is make sure your monitor is clean. Make sure you have the right prescription glasses or contacts in there. So you'll want to kind of do that housekeeping first to make sure that within the person, your eyes are in good health. The other thing that comes up a lot is blue light. So screens do give off blue light, but the sun gives off blue light too. And what the blue light does actually is not cause I stream but stimulate the nervous system. So there's no evidence to say that blue light will damage your eyes, but what it can do is, things like impact your circadian rhythm so it could impact your sleep. It could impact how you wind down at the end of your day. There's nighttime settings on screens. There's also that habit training to stop screens two or three hours before your bedtime. But the rule of thumb, if you are in a job where you have to look at your screen for a good period of time is you should stop every 20 minutes. Look at something 20 feet away for 20 seconds. So this is what they call the 20/20/20 Rule. So again, every 20 minutes stop, look at something 20 feet away for 20 seconds to help reduce some of that eye strain you might get from being on a device for long periods of time. Lastly, let's look at

some of workstations. Again, these are my workstations from home. So the easiest thing to assess, here's a desk workstation that I have set up. It's not very comfortable, but it's one that I can use sometimes to get a little bit of work done.

As you can see, my feet are definitely not touching the ground here, but I had the chair raised 'cause it puts me in better position to access my keyboard. So because the desk can't be modified, but the chair can be modified, I would raise the chair. I also am looking downward at the screen. The screen is a little bit low below eyebrow level, not by a lot, but by a little bit, I do not have lumbar support in this chair. The pan of this chair is very, very wide. So if I would sit all the way back in the chair and it's even angled back anyway, then I would have a lot of contact stress. My feet would be even further off the ground. And then lastly, I need to reach forward for that keyboard 'cause I don't have the chair pushed in because at the height I have it at, I can't really push it under my desk very well. So this causes me discomfort if I'm sitting at this spot doing work. So here's the things we just went over, feet not touching the floor, monitors little low, lumbar supports not there and reach forward for the keyboard. Also there's contact stress through my wrist, through my upper extremity when accessing the keyboard and no waterfall edge on that desk, for sure. So let's fix them. These were really easy fixes. I looked around the room and I made a couple changes, and I can tell you, 'cause I experienced it made a really big difference for me.

So the first thing I did was out of footstool. That was the biggest thing I could have done. It's a box of my kids' toys that I found in the room. So put them under my feet. Gave me a more stable base of support. I probably need to raise up my monitor a little bit higher. Still I put a small box underneath it. I could probably do that a little bit more. I just put a pillow behind my back for a short term fix there. And then I pulled the keyboard close to me and pulled my chair in a little bit so I didn't have to reach forward. You can see I've got the 90 degree, 90, 90, 90 angle when sitting so I can maintain a neutral posture, such a big difference when I made some small fixes. Here's

another, excuse me, area that I use a lot. And this is my kitchen. Again, nothing's adjustable here. I don't even have the option of adjusting the chair height. My feet still don't touch the ground. Because of the table height being higher, I'm now hiking up my shoulders to be able to access my keyboard. Now I'm using my laptop. I'm also reaching forward for my keyboard, which causes contact stress, oops, which causes contact stress through my forearm. This is not a comfortable position, but sometimes it's a quick way for me to sit down and get a little bit of work done. And then I still have no back support in this chair.

So quick fixes here, which don't take me long if I'm going to be sitting there for longer than a few minutes is to again, put a little footstool in there so I have that stable base of support through my lower extremities. I actually sat on a pillow this time to raise me up a little bit. And that made the world of difference for typing on my keyboard no longer on my shoulders coming up to my ears, but I can relax them and type. There are still some issues in this picture that if I had to go back, I could fix again. I'm still looking down on my monitor. There's not a whole lot I can do about that with a laptop, but I'm still reaching forward for my keyboard. I can pull that chair in further now that I'm set up, pull the chair on further, give myself some lumbar support and not have to reach for my keyboard. The other thing you wanna do is take a break. So just as important in deciding how your workstation is set up, you wanna make a conscious effort to take a break from that workstation as well. And it was funny 'cause I was in my kitchen doing whatever. I don't know, cooking dinner. And I looked over at our Alexa and our Alexa said, Alexa remind me to stretch in 30 minutes. And that just, I had to take a picture really quick. So it was funny because that would be a great way. If you're sitting there to have a reminder of, hey, it's been 30 minutes, get up, let's move. So I had to snap that picture 'cause even Alexa was reminding me that I needed to move if I was in one position for a longer period of time. So even in the best position at your workstation, you gotta move. This is going to decrease the strain on your low back or other areas of your body that don't like those static positions, your body is meant to move. There is a

lot of benefits to moving. It helps restore tissues. Again, we talked about little micro traumas that happen throughout the day. Movement is good for that. It will remove waste products from your joints in your body, bring nutrients through the bloodstream. That's all good stuff.

So believe it or not moving also will help with fatigue. So increased fatigue will lead to decreased concentration and moving actually makes you less tired. So will increase your concentration. My favorite way to explain moving throughout the day is that when you're in postures, you need to undo those postures with movement. So if we're sitting at our laptops or computers, and we're kind of in that position of looking down and typing, we need to stretch that out and undo whatever posture you're doing throughout the day. Some stretches that I recommend, not an all inclusive list, certainly, and I don't like giving like prescriptions that are very hard and fast, but in basically here's some good stretches you can use during that movement break and think about doing a stretch to stretch and cause some stretch, but not cause discomfort. Stretches should never be really painful or have a lot of discomfort. Hold them 10 or 15 seconds. Again, I don't like real strong prescriptions for that. Sometimes it's gonna feel good to hold it longer. Sometimes you're like 10 seconds, I'm good. But some of the stretches that I think are really good that will undo some of the postures that you do throughout the day when sitting at a workstation would be to stretch out the wrist flexors and extensors. So stretching out your wrist flexors on the anterior surfaces of the forearm is gonna be done by coming into extension and then holding. Extensors would be the opposite on that dorsal surface of the arm, You can see that extensor was sticking up, and you're gonna do wrist flexion hold that. You can even do reflection tilt towards your pinky if you don't feel like you're holding, feeling enough of a stretch yet, if you're just going to extend the elbow and stretch. Neck range of motion needs to be done in all directions.

So we don't move our necks very often. If we're on a screen and what you need to do is go through full range of motion, do the entire rotation to the right and left and hold. I'm not gonna hold for the sake of time. Bring your ear to your shoulder, not your shoulder to your ear, but your ear to your shoulder as much as you can go, I can even feel imbalances in me that one side, it has better range of motion less strain than the other. And then bringing your chin all the way down to your chest and all the way in extension, looking up to the ceiling. So moving through full range of motion of your neck. Low back stretching can be done either by standing up, putting your hands on your hips and stretching back, and try to stretch out that low back. It can also be done by laying supine on the floor and bringing your knees into your chest. Sometimes that feels really good. Hamstring stretches, standing up straight, extending the knee, kicking it out and bending over to feel that stretch through the back of the leg or the hamstrings. Chest stretches. We never stretch our chest, I feel, and we do so much in this forward posture that you can simply stretch out your chest by bringing your arms out and pulling back. You can also, and this is even better. If you can find a corner in your house. I very few, but if you can find a corner in your house where you can put one hand on each corner and stretch into the corner, it feels amazing. So that would be a great stretch to do, do again. We're in such forward posture so much of our day that to be able to stretch that out is great.

Along with that, doing scapular retraction, trying to pull those shoulder blades together in the back is going to, again, undo that posture of the slight protraction that that's usually in during the day. And then the shoulder next stretch that I love that. I think it's a couple of these, and it's easy to do sitting at your desk throughout the day and you can do it with me. As you wanna bring your hands so you can see the palms, put them up on your forehead, pull your elbows back a little bit and hold there. Then what you're gonna do is you're gonna actually bring your elbows down to your side. You can actually turn your palm so they're facing out. You'll feel the scapula start to retract and have a downward rotation, hold it there. And you can just gently look up. And that

should feel good if you did that with me. And we've been sitting here for 55 minutes now. That should feel amazing. Just again, undo some of those postures that you do throughout the day. Again, not an all inclusive list, but some things to get you started if you're making recommendations for clients.

Other things you wanna consider with wellness sleep is very important. So to be healthy in general and be well in general, thinking about the type of sleep you're getting, think about your sleep routine. This is an area that occupational therapy can work on. It's an area of occupation, certainly there's that benchmark of seven to nine hours a night, which some people think is crazy and some people can absolutely meet, right? Another thing would be your diet and healthy eating, making healthy choices with your diet, exercise is fantastic. Not just good cardiovascular exercise, but working on some of those postural muscles, working on the rhomboids and the traps in the back to create a good strong posture, the core muscles, and then reducing stress. So thinking about how you can unplug, how you can do some relaxing things, meaningful activities, mindfulness, turn off devices. I think about relaxation as another way for wellness when working from home,

Here's some free resources that I think are really great. If this is a topic you wanna learn more about, the OSHA has a reference about an eTool for computer workstations, which is we'll walk you through those risk factors, how to fix them. Cornell University Ergonomics. I used some of their information. They do research in this area and have done some studies. I pulled some of the statistics from there. The sit to stand rule, that 28 to rule comes out of Cornell University's Ergonomics. And then the Back School is another resource. They have a lot of good free resources to check out in addition to some certifications and ergonomics. And again, just for resources to learn more about this topic. And then lastly, just to summarize here, sometimes the impact is very quick. So you make one change. Like when I put that footstool underneath, I was like, "Oh, so much better." So sometimes the impact can be very

quick. And then sometimes if it was an issue that gradually came on, it's an issue that's gonna gradually go away so consider that. But overall, try for as many neutral postures as you can in the spine and the upper extremity, lower extremity. Look at those big three of the chair, the desk or the chair, the chair, the workstation of the keyboard, and the mouse. And then also the monitor make moving a habit, get out of the workstation. And every 30 minutes, try to do a quick stretch break or a movement break and think about what small changes you can make that again, they can just have a big impact. So that's all I have. And I'm more than happy to answer questions if I can, if you have any.

- [Fawn] Thank you so much, Sara, for a great talk today. I know I learned a lot and adjusted my postures several times during your talk based on what you were thinking. We have one question so far, Maria is asking to clarify when determining what eyebrow level height is for the monitor, is this height targeted for the eyebrow level to be at the vertical center of the screen?

- The eyebrows should be at the top of your screen. So you can have a little bit of a downward gaze as you're looking down. You shouldn't be looking up and there shouldn't be of excessive neck flexion but slight downward gaze.

- [Fawn] Okay. And then another question is... And Maria said thanks so actually she did get that answer. And then why is normal crossing of legs bad and also sitting criss-cross in a chair bad for you? And what time limits would you suggest?

- So my understanding is that the better support you have, again, through the lower extremity, you have to think of your body as a chain. Thinking of the vertebrae as that posterior chain that supports the body, and that you're going to put more stress through that core if you're not going to stabilize and close the chain up through your feet. So criss-cross applesauce, obviously you're in extreme external rotation with

good flexion of the knees, which is going to increase some of either the contact stress or also just the compression through those joints. Think about what happens at the cubital tunnel with the ulnar nerve, when you're in an extreme postures, criss-cross applesauce or crossing your legs can be in one of those extreme postures. Crossing your legs is going to decrease circulation through the lower extremities and not allow for the best optimal blood flow. So crossing the legs for periods of time, you're going to feel it. And if you find yourself doing that stuff, which I do all the time, it is your body craving more stability. So it might in the short term make you feel better, but the longterm impact of that is not as good as just getting your legs on the floor. I hope that answered it.

- [Fawn] Okay. Is there a place to find the stretches explained? It would be great information to share with my friends and coworkers. Thanks.

- So if you go to the Back School website, they have some air go break handouts that I believe are free, and you should be able to use. Certainly, you can do a Google search for this, but then you also need to be the gatekeeper of the good information there and make sure that it's accurate and healthy. But I would say to go to the Back School website and there you can pull off some ergonomic break sheets that show some of the stretches. Most of those I showed today are on there.

- [Fawn] Okay. Joan asks how to make quick adjustments for activities such as Zoom meetings?

- A lot of the times when you're on these meetings, you're not typing simultaneously as you're on the meeting. My Zoom meetings, I use the ironing board. I'm using the ironing board right now. So that would allow me to adjust where my screen was and be really mobile with it. So if that's the answer of how to adjust your webcam, sometimes you need to tilt your laptop a little bit or use an external webcam and try to fix that.

Also looking at your lighting ahead of time. I know a lot more is coming out now about how to really look good on Zoom, but I don't know as much about that as just to create an adjustable workstation. And the good thing again is you're not normally kind of typing simultaneously for long periods of time while you're on a Zoom meeting.

- [Fawn] Here's another good question. When you spoke about using a mouse, you mentioned pronation and a neutral position. Can you demonstrate how your wrists would look in a pronation versus a neutral position on a mouse?

- So one of the problems when you're in pronation is sometimes the wrist extensors, you can see the extensors as they pop out on the back of your hand there, there are tiny little tendons, and they can get overworked really easily, especially if you're missing a lot, clicking a lot and moving a lot. So when you're in a pronated position, you're going to put them more at risk for more force through them. Whereas if you're in forearm neutral, you are... I don't have one of those masses, but in forearm neutral, you're actually in a better position that they're resting, okay? They're not working against gravity right now. They're hanging out. So you're actually transferring to different muscles and tendons to be able to mouse when you're in that neutral posture that usually your clickers on, on the fingers in your mouth. Your thumb is doing some of the movement work, sorry, I'm not good with mouse terminology, but really with the mouse, it's just finding something that feels good when you're using it. And sometimes that more neutral wrist helps a lot to reduce some of the forces again, through the little extensors and little wrist muscles that are being used when you're in a pronated position. It might take a little bit of time to get used to an emails, but you can over time, something that may feel a lot better in the longterm.

- [Fawn] Here's another, what are your thoughts on wrist pads used on the desk with the keyboard or mouse? Do these increase carpal tunnel pressure?

- Yeah, I hate them. So I don't know how diplomatic I'm supposed to be about that, but I don't like them because they get misused so much. If they're there just to kind of, okay, I'm not typing, I'm gonna rest my hand for a minute here. Okay. But if they're there to anchor and support your hand and while you're typing, typically they're being used incorrectly, and they are going to cause more pressure through that carpal canal and could lead to a compression or even soft tissue type injury. And just again, discomfort over time where people it's not working well, it's not working because it's actually causing more harm. Like I said before, less static and more floating postures are better, I feel when working at a workstation.

- [Fawn] What should we be looking for when assessing desk height and wrist position?

- So when you're sitting your desk height should be lower than your elbows. Now that could be hard, which is why using the external keyboard with a keyboard tray sometimes it's helpful 'cause that can get below the desk then that you can get in a better posture for typing and mousing that you don't have to bring the arms up. If you can't do that, you really need to raise the seat up higher. So you can get to the fact that the desk is going to be up or below your elbow level.

- [Fawn] Using a laptop, do you want to prioritize adjusting the screen or the keys or do you switch between the two?

- I don't know. I usually go for adjusting the keys. So I find it more comfortable if I'm doing a lot of typing to adjust my keys. And then I just have a downward gaze. When looking at the screen, if I'm on a meeting like this, then I typically opt for the screen and I'll raise the screen up. And because I'm not typing as much, but my personal it's gonna be a personal preference 'cause you can't adjust the both of them. Unless you're gonna go for an external keyboard or an external monitor, you're gonna have to

pick one. I typically pick, especially if I'm typing, I'll pick the keyboard and make the typing area comfortable for my upper extremities and sacrifice a little bit of neck flexion to be able to look at my screen.

- [Fawn] I don't see any more questions coming in. So thank you so much today.

- Thank you. Those were great questions and I hope that you found it helpful.

- [Fawn] I hope everyone has a great rest of the day. You join us again continued and occupationaltherapy.com. Thanks everyone.