

Perfect Posture Mechanics: Part I – Dentistry and Your Body

*The following is a transcription that has been taken verbatim from the presenter's audio.
No Edits have been made.*

Video Transcript

Introduction

Hello everyone and thank you so much for joining this two-part series brought to you by Crest. My name is Stephanie Botts. I am a practicing dental hygienist and ergonomic specialist. I'm so excited to be talking to you today about ergonomics. It's such an important topic and you'll never regret learning and investing in yourself. So I'd like to tell you just a little bit about me. So I have been a practicing dental hygienist for over 14 years and without, with the exception of the last year and a half that's all been full time, so four to five days a week. So I'm no stranger to the ergonomic challenges that we have in the operator and also pain, and actually pain is the reason why I started working in ergonomics. I got to a point in my career where my pain was so bad and that it was either get out of dentistry or figure out what the heck is going on. So I started learning about ergonomics and making really small changes into my practice and that's what ergonomics is. It's not rocket science, there's no genius to it. It's very simple concepts, but these very small changes made a dramatic impact and how I feel and my energy levels and it really reignited the joy that I have in practicing dentistry. So with that experience, I decided to do something with ergonomics. So I started my company last year. It's called posture pros and what I'm doing now is ergonomic assessments and coaching and consulting to clinicians and also companies to help improve their ergonomics in dentistry. So it's been really fun. I'm still practicing. I still work about one day a week seeing patients, which I love. I love taking

care of patients, but I also love taking care of clinicians. So it's been very rewarding for me.

So we do have several learning objectives for today's webinar. We're going to talk about the unique musculoskeletal disorders that affect us in dentistry because we are very special that way. We'll also talk about how to incorporate some chair side of micro breaks into your day, and I'll go more into what micro brakes are here in a little bit. And then we'll also talk about the multiple risk factors that are present that are working against us when practicing dentistry and also some strategies on how to overcome those risk factors.

Ergonomics and Musculoskeletal Disorders

So we are the preventive experts in dentistry. We understand the value of prevention. We talk about it all day with our patients. As far as doing your small fillings, flossing the teeth, getting into a night guard, coming in for recare appointments. We understand that they need to take these small actions now to prevent larger, sometimes catastrophic consequences later on. We need to take that same mindset and point it back towards us. We have to start taking the smaller actions now to prevent larger consequences. Later on, and those consequences for us are things like pain, reduce, quality of life, surgery injury, disability, early retirement. These consequences are very common in dentistry and it's my belief that most of the time they're preventable. So let's take that same preventive mindset that we direct towards our patient and turn it back towards ourselves.

Another thing that mirrors what we tell our patients is don't wait until the pain starts. We understand in dentistry that pain isn't necessarily the best indicator of things going wrong. A lot of times things don't hurt until it's too late, right? We almost wish that they hurt earlier, so our patients would be more motivated to do treatment. The same happens with us and our bodies. So we're gonna be talking about musculoskeletal disorders here in a little bit. Those oftentimes start silently. They're kind of like perio in that way. They start at the cellular level, which we can't really feel things happening in the cells and this damage has to accumulate to a certain point for us to start becoming symptomatic. So I tell my students, I tell my clients it's never too early, never too late to start learning these ergonomic principles, whether you're in pain or not. And don't let the lack of pain trick you. I felt like that tricked me and the 1st 10 years of my career I didn't have any pain. I thought I was immune to all of these issues that people were talking about, and I wasn't. The damage just hadn't accumulated yet to a point where I was symptomatic. And once I became symptomatic, it hit me like a ton of bricks. So whether or not you're in pain, definitely be mindful of these ergonomic principles. And again, it's never too early to start implementing these changes.

So what is ergonomics? Ergonomics at the very simple definition of it. It's the science of fitting the workplace to the worker. So we're the worker, we're the individual, and we need to start with ourselves and we'll talk about neutral posture throughout the serious quite a bit. But we need to establish neutral posture, get ourselves in a healthy position, and then we're going to organize everything in our operatory to support us in that neutral posture. So for us in dentistry, the workplace means everything in the operatory that isn't us. So it's our patient chair, it's our chair, it's our stool that we sit on. It's our patient and how they're positioned. It's our delivery system, it's our instruments, it's our layout, everything. But we need to again start with us and then adjust that environment to support us.

The goal of ergonomics is essentially to prevent injury, so we and dentistry are very prone to injury because of things like poor posture.

Our jobs typically are highly repetitive and then we're prone to muscle imbalances because we have overuse and underuse of certain muscles and I'll just let you in on a little secret. Typically when we are experiencing pain, it's because of these underlying muscle imbalances. But it to improve your ergonomics. Sometimes it means making a change to ourselves, our behavior and our habits. Maybe it's our environment as far as reorganizing our equipment or getting new equipment, but oftentimes it's a combination of the two.

So I think we all understand why ergonomics are so crucial for us in dentistry. A lot of times, some of us feel it as far as pain or fatigue, and we know that we've really need to wash our habits. But there have been some studies that have put out. There's not a whole lot of studies put out, but there's a few that I found that also demonstrate the importance of ergonomics. So this report was put out by Business Insider and it seems like there's reports like this put out every now and then as far as the most dangerous jobs are the best jobs or whatever. And these reports all have certain criteria that they take into consideration. So I'd like to list off the criteria for this particular report, and you can just follow along with me and see if it applies to dentistry. Also, the data for this report was taken from the US Department of Labor, just FYI.

So the criteria for this study is exposure to contaminants, exposure to disease and infection, exposure to hazardous conditions, exposure to minor cuts, burns and scrapes, exposure to radiation and then time spent sitting. So as I was listing those off, you were probably mentally just checking them off because they all apply to us in dentistry, right? And the report reflects that. So they found that dental hygienist was the number one most dangerous profession according to these criteria. And then right after that is general dentist, but still within the top ten, you have dental lab tech, dental assistant and prosthodontist. And I'm not showing this to you to scare you or to make you rethink all of your decisions for entering the field of dentistry, but we need to be aware and we need to be educated on these things that are working against us so that we can be empowered to protect ourselves against them.

Another study was put out by the International Dental Journal and they were just looking at pain, and dental hygienists and they found that 96% of dental hygienist report pain due to their clinical work habits. And I would say with my personal experience and also my experience working with many clinicians, I would say this is pretty on point every now and then I run into a clinician that hasn't had any issues at all, that feels great even decades into their practice, which is awesome, but they're an outlier, I would say most of the time, most of us in dentistry experience occasional pain or unfortunately chronic pain because of how we're working.

Another study was put out by the work journal and they looked at a couple different things. They wanted to see. First off, why we experienced so much pain in dentistry and they also wanted to see the difference between dental hygienist and dentist because typically dental hygienist report a higher incidence of pain than that of dentist. So they found that static, awkward posture. And if you don't know what that is, it's anything outside of neutral posture, and we'll talk quite a bit about that during the series. But static awkward posture combined with the isometric contraction of the trapezius muscles is a risk factor for us to develop pain and injury, and we'll also talk about the demands that we place on our upper traps. This is the most overworked muscle in dentistry, and we'll talk about that in a little bit. They also looked at dentist versus hygienist and they found that dentists typically work with the chair side assistant. So when you're working as part of a team and I'm not saying there's not challenges when you're working as part of a team because there is. But when there's two people in the appointment working on a patient, the load of the appointment, so to speak, is shared between those two people, which typically makes it a bit easier on the body. Now, hygienist, most of us work alone. We don't have a chairside assistant, so the entire demand and the entire load of that appointment is all on the dental hygienist. And that's typically why we start to experience more pain than that of dentist.

And then this report was put out by one of the major disability companies and they just did a

meta- analysis of all of their disability claims. And they saw they found that a dentist would have about a 50% chance of early retirement due to ill health. There aren't studies that I found on dental hygienist, but there are on dentists and we can just assume that because dental hygienists experience just as much or even more issues than dentists do, this statistic is probably applicable to dental hygienists as well. But this report, when they're looking at ill health, the first category under that umbrella is musculoskeletal disorders. And then the second is cardiovascular issues. So don't discount these musculoskeletal disorders, these are things like low back injuries, rotator cuff injury, carpal tunnel. These are the career enders for us. These are the things that take us out and dentistry and between you and me, most of these, unless you have a preexisting condition, are preventable with ergonomics. That's what's so exciting to me about ergonomics is yes, we are in a very challenging profession, but we also have a lot of tools if we choose to use them, that can empower us and keep us healthy.

This study was actually put out this year just a few months ago, and the International Journal of Dental Hygiene, and they were looking at MSD's and pain amongst dental hygienists and they found that 91% of hygienists and this was a survey of about 500 different dental hygienists. But they found that 91% referred to be suffering or have had suffered an MSD in the past. And the areas that were most affected in this study were the neck, shoulder and then low back area.

So the CDC and the World Health Organization have stated that MSD, these musculoskeletal disorders that we're talking about, are the number one reason why people in the US are on disability. So that's not just dentistry, that's the population at large. So that just shows you the impact that these injuries can have. Now, if we take our subset of dentistry outside of the general population, we've got a lot more risk factors than the general population does. And again I'm not saying this to scare you, but we need to know what we're up against.

So what are these MSD that I've been talking about? They're exactly what they sound like.

They are injuries or disorders of any part of the musculoskeletal system, and you can think of the musculoskeletal system as the movement system of the body. So anything that it takes us to move through space that's included in the system. So yes, it includes muscles, but it also includes other soft tissue like nerves, tendons, cartilage, spinal disks. All of that is included in the system and unfortunately any part of that can get injured for us in dentistry. There's some other names for MSD's, like work related MSD's or cumulative trauma disorder or repetitive motion injury. These are all essentially the same thing talking about MSD's. Now a note on MSD is I mentioned that they're sneaky like perio. They start silently, they are asymptomatic at first, and it starts with something in the cells called microtrauma, and microtrauma is something that we put on our bodies all day because we're human beings and we're moving around and we're gonna cause microtrauma it just happens. And our body is very good at repairing that microtrauma. But what happens with us, especially in dentistry, because of just the nature of our job, we start to have microtrauma that is outpacing the bodies ability to repair it. And that's when we start experiencing things like pain and fatigue and eventual necrosis of some of our muscle fibers. And then that starts the road to an MSD. So these are not an acute onset injury. It's not like when I'm walking my dog outside and I trip over something and I sprained my ankle and I know immediately something is wrong, MSD's are not like that. So just keep in mind whether or not you're in pain you could be having some of that microtrauma in your cells that you don't even know about yet, and so that's why it's so important to really start developing these habits now as early as possible.

So let's talk about how an MSD progresses and it is different for everyone. And this is just just keep in mind, this is if we're just practicing dentistry, I'm not taking into consideration any preexisting injuries or trauma or anything like that. So when we're in dentistry, it starts with something called awkward static posture, which again is like the chicken wing posture or maybe we're hunched over, that's anything outside of neutral. And then you can start to develop muscle fatigue and muscle imbalance. And

that's when we've got overuse and underuse of certain muscles, which were very prone to. And then you can start experiencing muscular pain and then even necrosis, and that necrosis is because of lack of blood flow and more on that later. Then we can start to develop trigger points and muscle substitution. That's when we have a muscle that is failing or it's doing a job and it's not supposed to, and then we have another muscle group that's trying to take over. It's just a snowball effect that really is not good for our bodies. A trigger point, most of you probably already know it's a bundled up mass of fascia in our muscles and a lot of times when I'm working with dental professionals, they can palpate an area on their upper back or in their traps and they have a trigger points, and it's not just painful at that area, but it causes because of the connectivity of fascia it causes referred pain as well.

But that's not all. So we can have something called protective muscle contraction. This is when something goes out. If any of you have had the joy of having your back go out, you know what I'm talking about. I have, it's very painful and it's very scary, but it's a protective mechanism that your body has because if we have an area of injured for injury, for me it was my low back, I wasn't taking care of it I wasn't resting it. My body did that for me. It shut that area down, made it completely immobile. And that can be a scary time because you don't know what's going on and it's very painful. You can also have lots of motion, nerve compression in your spine, and then you can start to experience spinal disc degeneration, and all of that leads to an MSD. But if we go back, how did all this start? It starts with our posture. If we can really focus on getting out of that awkward static posture and into neutral posture, we can prevent a lot of these symptoms from happening.

So what do MSD feel like? They don't feel good. You could have pain or spasms. You could also have more neuropathy type symptoms like tingling, numbness or weakness. Another indicator is grip strength, if you're starting to not be able to hold on to things as tightly, or maybe you're dropping things more than you used to, that's another sign. And I just want

to encourage you, If you have any of these symptoms, whether it's occasional or it's chronic, none of these symptoms are normal. And I think with us in dentistry, we have conditioned ourselves to think that pain is normal or maybe various parts of our body going numb is normal. That's not normal and we need to start listening to our body. Those symptoms are our body's way of telling us that something is imbalanced something's not right. Don't ignore it, don't pretend it's not happening. That's what I did, and I wish that I would have paid more attention to my symptoms in the earlier phases instead of pretending it wasn't happening and getting to the point where it's very difficult to treat. So don't ignore your body. It's trying to tell you something.

So these are the most common MSD's in dental professionals. So just keep in mind these are the most common ones, but because of the vastness and the complexity of our musculoskeletal system, this list is quite long. So we have carpal tunnel that's still #1 amongst dental hygienists, and then we have various forms of tendonitis, rotator cuff injury, low back injury, muscle strains. I'm hearing more about trigger finger these days. Why are these so bad? Why are we so at risk for these? It's because we have multiple risk factors working against us and also we're not practicing in neutral posture.

So let's talk about these risk factors now. These risk factors are for ergonomic injuries across the board, not just dentistry. These are developed by OSHA and it's for all of the professions. But they've got posture, force, repetition, contact stress and vibration. So those are the five official risk factors from OSHA. I threw in my own unofficial risk factor in asterisk there, and that's a decreased time for rest. I'm hoping at some point this will be an official risk factor, but we all know that our bodies recover when we're able to rest and give it a break. We don't have that luxury in dentistry, we aren't able to kick our feet up or do a yoga routine or take a little nap in between patients. We just can't do that. There are there is an option called micro brakes which can really help with that recovery

process. But again, all of these risk factors, every single one are present in dentistry. And I'm not saying that to scare you. I just want to educate you. Most professions have one or two of these. We have every single one.

And then we also have modifiers. Now these just to put simply is how often you're returning to maybe that poor posture or how long you're holding that poor posture for. Those can both increase our risk for developing an injury. I also want you to know that ergonomic injuries typically happen because of a combination of events. So if we go back to this list, I'm just going to demonstrate this chicken wing posture. OK, this is an awkward posture. And this is really easy because we all do it. So I've got posture, that's one risk factor happening, and then because of I'm a hygienist, I'm gonna pretend that I'm scaling, this is repetition. OK, so I've got repetition and posture happening at the same time. That's going to dramatically increase my risk of an ergonomic injury.

Risk Factors and Microbreaks

So neutral posture is the position of the body that allows the most support with the least amount of muscle engagement. So our skeleton is formed a certain way the bones are stacked on top of each other a certain way to give us stability and resist gravity. I think a lot of us discount gravity. We forget about it because it's always with us, but it's a force that is constantly pulling us down and we whether we know it or not, are constantly fighting against that. So we want to use the strength of our skeletal system to hold us up. And here I'm standing in neutral posture, if I were to stand like this for a long time, I would be able to because my bones don't fatigue like my soft tissue does. So if you're evaluating, your own posture, or maybe someone else's, it's really easy to see it from the side. So the ear should be aligned with the shoulder that should be aligned with the hip, and then that should be aligned with the foot, if you're standing. So I should be able to place a yardstick up to you and it would hit your ear, shoulder, hip, and foot all at the same time. If you're sitting and I'll show some pictures of that and a little bit, the concept is the same. You want the ear in line with the shoulder and hip and then both feet flat on the floor.

What happens is when we start to deviate from neutral posture is then the power of our skeleton is taken away. Our bones aren't holding us up anymore. It's our soft tissue. So if I'm out here in chicken wing, my bones are not holding me up. My soft tissue is. So it's not only holding this fixed static posture, it's also fighting against gravity. And then if we add in that we're drilling something or scaling something that's even more stress for that area. So we really want to try to practice in neutral posture as much as we can.

So posture is probably the biggest risk factor for us if we're not in a neutral posture, we are putting ourselves at risk for injury. And you can see here I'm clearly not in neutral posture in either of these photos and these both of these positions are very stressful for the body.

And then we have forward head posture. I wanna take a minute to talk about this. Forward head posture is a very dangerous position of our head. It's when our ear is out in front of our shoulder. We see this when we are practicing dentistry and most of the time people are in forward head posture. And then we see it with things like cell phones and laptops because we're just constantly looking down. So studies have shown that every inch your ear is out in front of your shoulder that's adding an additional 10 pounds of pressure to your spine. So in the picture here on the left I would say my ear is about 3 to 4 inches in front of my shoulder. So you can imagine I'm holding, I mean theoretically, I'm holding three to four bowling balls worth of weight around my neck and average bowling balls about 10 pounds. So practicing like this for the number of years that I did, it's no wonder that I started to experience the pain and dysfunction in my back. That's why it's so important in the picture here on the right to get your ear as close to in line with your shoulder and your hip as you can, so that your skeleton is holding you up and you're not putting that undue pressure on your soft tissue. Another thing about forward head posture and This is why it's so dangerous. I think most of the time it's preventable, but the longer you're in forward head posture, your body is very adaptive. We all know this and it's going to lay down tissue to hold you in that forward head

posture. To where even if you wanted to keep your head up in neutral, you aren't able to anymore because of those body adaptations that have happened over the years. That's how the dental hunchback forms. It starts with this forward head posture. We don't want that. I don't want that for me, I don't want that for you. And so that's why it's so important to keep our head back. And it's not just when you're practicing dentistry practice it, you know, keeping your head back when you're on your cell phone when you're working on your laptop when you're driving your car, when you're walking down the hallway, working out whatever it is. The more we can remind our body that that's where we want our head, you'll have muscle memory and then it's gonna be easier to hold that position when you're in the operatory.

And then we have force and with us in dentistry force, what I'm referring to is our grip and how tightly we're pinching things. Most of us have a death grip, whether we're grabbing for our suction or our handpiece or air water instruments, whatever it is we want to, we don't want to be dropping things obviously, but we want to be holding things with as little pressure as possible to reduce that force when we're holding things with excessive pinch force we're causing pressure to build up in the carpal tunnel, putting us at risk for an injury here. It also is very straining for the muscles in the forearm, which can then you can start to experience symptoms in your wrist and your elbow, shoulder, neck and it all starts with our grip. So you want to make sure that you have a really light grip.

And then we have repetition. So this especially as dental hygienist's, dental hygiene is very repetitive dentistry and around the restorative side, dentist and dental assistants that it is repetitive, repetitive, but they have a variation in their procedures. And so it's not quite as repetitive as that of a dental hygienist. But in any case either any position that we're in does involve repetition. And I just want people to think about. It's not just the repetition that we have with one patient. It's times that by 8 or 10 or however many patients that we're seeing a day. That's why I put a picture of a schedule in here. So it's the global view of repetition.

And then if you think of that date times how many days, days you're working a week, times, months, years. We can have repetition working either for us in a good way or against us. And so we obviously want to have repetition working for us if we're repetitively doing these healthier habits.

And then contact stress. So this is essentially two objects pushing against each other causing some compression. So I took a picture of my feet because I like to stand when I'm working, I'll talk a bit more about standing later, but I've got my feet pressing down into the floor and then the floor pressing up against my feet.

And so that's a source of contact stress. We can also have our retraction when we're using our mirror or even our thumb, retracting as a tongue or cheek, that's also a source of contact stress. And then our fulcrum finger, anytime we're doing a giving ourselves a rest, that's going to be a source of contract stress too.

And then the last one is vibration. And so we might not have as much damage from vibrations such as someone who's operating a jackhammer all day, but we do have vibration. So we've got our, our polishers, we've got our ultrasonics, our handpieces and just keep in mind that the risk of ergonomic injuries typically is because of a combination of events. So let's say here I'm holding my polisher which is vibrating and let's say I've got that death grip, that really excessive pinch force. Those two things are going to be working against me and raising my risk of an injury.

And then we have our my unofficial risk factor which is little time for breaks. So yes, we are not, we don't have the luxury of really resting in between patients especially these days since COVID. I still practice clinically, our schedules are insane. We see patients back-to-back, but that's when these microbreaks come in. So these micro brakes are very they're very frequent, very quick little stretch breaks that we can take throughout our day. So let's talk a bit about those micro breaks.

So when we're practicing and for example, so this is a good example. This clinician I

worked with last year, she was a relatively new hygienist and she this is her, was her posture all day, every day. With that crazy extreme arm abduction and then leaning forward? But anyways, we worked on it and she's doing much better now. But for example, in this picture, if you're out here in chicken wing that's causing an isometric contraction of muscles in your shoulder and your upper traps. And what happens when we have those isometric contractions is the muscle is contracted for an extended amount of time. The longer that muscle is contracted, you have pressure that's building up on the inside of the muscle and it cuts off blood flow. And we all know the blood carries oxygen and nutrients and removes waste products, right? So if you have this muscle that's under constant load that you're not, it's not getting the nutrition it needs. It is going to start to fail. And it fails with pain, you can have fatigue and eventual necrosis, and potentially an MSD.

So what we want to do is incorporate micro breaks. So these micro breaks are, it's a little bit more than a quick stretch, so you're holding it for about 20 seconds per muscle group. And so the rule of thumb for micro brakes is to take one every 20 minutes for 20 seconds. And I know every 20 minutes, it sounds like a lot because we're so busy, but it's only 20 seconds and we need to start looking at these as our medicine. This is what is going to protect us from these risk factors that we've been talking about. But when you're holding the stretch for at least 20 seconds, that's where the magic happens. You have relaxation of the muscle, you have reduction of that pressure, and then blood is able to flow back into that muscle and start healing that microtrauma and carrying away waste products. So I do have some examples of micro breaks, that I am going to demonstrate for you.

So the first one is this trapezius stretch. So the upper traps are the most overworked muscle for us and dentistry, it's constantly contracted, I mean, we're out here in chicken wing, we're raising our shoulders up to our ear, we've got forward head posture. All of that contracts, the traps. So we want to make sure that we're stretching these several times throughout the

day. Now I designed this chair side stretching program to make it exactly that. So that you can do these stretches chair side, you don't have to get up out of your operatory. It's not disruptive to your appointment. These are very easy to do while you're with your patient. So I have a video of exactly how to do the trap stretch. So let's check that out.

To stretch the traps, you'll point one hand down towards the ground. Take your other hand and pull your head gently to the opposite side. You should feel a nice stretch down along the side of your neck and even into your shoulder. Make sure to keep the tension in that arm that's pointing down towards the ground. Now to switch sides you simply just point the other hand towards the ground and pull your head the opposite direction. Now if you have gloves on, you do not have to touch the side of your head. You can simply just put your head to the side.

We have another stretch and this is stretching the pectoral muscles. So I think a lot of us forget about our pecks, but these guys get very tight because typically we've got forward head posture or we're reaching around trying to see our patient that causes the pectoral muscles to become very short and very tight. We might not be walking around with pectoral pain or feeling, you know discomfort in our pain or in our pecks. But these short tight pecks pull our shoulders forward, which we don't want. We always want our shoulders back, but it pulls our shoulders forward and then it stretches out and lengthens and weakens muscles and our back, which we don't want. And so we start to experience back pain and the source could very well be these tight pecks. So we want to make sure to stretch those out now. This stretch is a really easy one to do chairside. I personally though, like to stretch my pecks in a doorway, and it seems like whenever I'm in an office doing assessments, there's someone stretching and a doorway. It feels really good. So if you have that option, I would stretch on a doorway as much as you can. But if you are chairside, this is a really good option for you. So let's look at the video for that.

To stretch the chest and the front of the shoulders, you're just going to clasp your hands behind your back. Point them down towards the

floor, and make sure your shoulders are rolled back so you feel a nice opening across the front of the chest and also the front of the shoulders as well.

Now this exercise is called the cervical retraction. Some people call it a chin tuck. That's not my favorite title for it because it's a bit more than that, but this is an exercise that will counteract the effects of forward head posture. It improves muscle memory as far as where you actually want your head positioned, and then if you're doing it correctly, it strengthens some of the muscles in the back to be able to hold your head up in that neutral posture. Now, this exercise can be done when you're in the car or on your lunch break, or when you're watching TV. And some studies have shown it only takes one set of 15 reps doing this daily to help counteract some of those dangers of forward head posture and get you more into a neutral posture. So let's watch the video.

So the cervical retraction, you want to think about lifting through the crown of your head as you move your head horizontally back towards your spine. So it's more than just a chin tuck, you're actually moving your whole head back towards your spine. And you wanna feel muscle engagement all the way down the length of your back. Do this 15 times once a day.

So this micro break is something that I recommend for people when, like, for hygienist, if you're doing a lot of hand scaling for dentist or assistance, if you've been gripping that handpiece for a long time. Because we already mentioned that that grip and that pinch force increases pressure here and the carpal tunnel and really fatigues the muscles in the forearms. So this is a great stretch to do after you've been doing a long SRP or a long prep or assistants if you've been holding on to the suction for a long time, you wanna stretch out these forearm muscles. So let's look at the video on how to do that.

To stretch the flexors on the top of the arm, punch your arm out in front of you, make a fist, and pull that fist down towards the floor. You should feel a nice stretch across the top of your arm. To do the extensors on the inside. Put your palm out in front of you and then pull that

palm down towards the floor. You should feel a nice stretch along the inside of your arm.

This is one of my favorite stretches because I personally have low back issues. This is something I recommend for people who have been standing a lot or for assistance. So dental assistants have the highest incidence of lower back pain amongst all of us, and it shouldn't be a surprise because they are usually forced to be in this constant twisted position from the low back. And they're also leaning forward. So this is a really great stretch. All you do is put your hands on the back of your hips and then gently push your pelvis forward. It's not any kind of crazy yoga backbend or anything like that, but let's check out the video on how to do that.

To release the low back, simply put your hands on your low back or on the top of your hips and gently press forward. Hold for 20 seconds.

This prayer stretch is another one that will reduce the pressure in the carpal tunnel and also relieve some of that fatigue in the forearms. And I just wanted to say if you are experiencing tennis elbow tendonitis in your elbow or even some shoulder issues, it could be coming from the the grip and the pinch force that we have. It could be coming from your hands. So it's really important to do either this stretch or the forearm stretch that I showed a couple videos ago, but for this one, let's look at the video on how to do that.

For prayer stretch, hold your hands in front of your face and slowly bring them down in front of your chest. Make sure that you've got some good pressure in between your hands. For reverse prayer, put the backs of your hands together in front of your abdomen and slowly bring them up so that they're in front of your chest, and for this one again, hold it for at least 20 seconds per side.

And there's also vision ergonomics. So our eyes, we can't really do a whole lot if our eyes aren't healthy, right. And we are, whether you're using loops or not, we put a lot of demands on our eyes. We're looking at these tiny little white things inside of a small little black thing. OK. It's very straining for our eyes. So we want to make

sure that we are practicing vision ergonomics and this also can be done when you are looking at a computer, if you're maybe going back to school, taking some classes or doing some work from home. We want to rest our eyes as much as we can, so these are similar to the micro breaks that I've already mentioned. You're gonna take them every 20 minutes. It's for 20 seconds. But this time you're going to be looking at something about 20 feet away, so you can combine this. Like, let's say I'm in the operatory doing my trap stretch. I can combine a vision ergonomic break with this too, that I'm just going to be focusing on something a little bit further away from me, but this is really good. It relaxes some of the musculature in your eyes so you don't experience so much fatigue.

Summary

So we talked about a lot today. Dentistry is unique. We have a very unique profession in more ways than one. But in this case, I'm talking about the, the intense physical nature of our job and these risk factors that are working against us. Our job, whether you know it or not is extremely physically demanding. We are using our body in a way that it's not designed to be used. So we're using our body. We've typically got these fixed, awkward postures which our body is meant to move around dynamically through space. And so if we're not pre-planning, if we're not taking these microbreaks and really watching what we're doing with our ergonomics, we will start to experience some damage in our bodies.

In dentistry, we have one of the highest risk professions for disability and early retirement, but I do not believe that it has to be that way, but prevention is key.

So thank you so much for listening today. This is a good intro course for Part 2, where we're going to talk more about posture and positioning and how to put this all together when you're in the operatory. These are some ways that you can contact me. I'm very accessible. It's probably easiest just to scan the QR code. I want to be here as a resource for you. If you have any questions, if you need help, if you're thinking about purchasing a piece of equipment, please don't hesitate to reach out and thank you so much.