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In addition to her faculty position, she is the director of medical education at Downey Regional Medical Center for the Family Medicine Residency Program and program director for the medical center's neuromusculoskeletal medicine and osteopathic manipulative medicine residency program. She also serves as the medical director at the Amrit Davaa Wellness Center at Golden Bridge Yoga Center in Hollywood, California; she is chairman of the board of the Amrit Davaa World Health Corporation, a nonprofit organization; is a certified Kundalini Yoga instructor; and regularly teaches functional anatomy to yoga and Pilates instructors.

Dr. Nevins served in the United States Air Force, and is currently a major in the Ready Reserve. She lectures for the California Preparedness and Education Network on issues related to disaster preparedness, bioterrorism, chemical and radiological warfare, and emerging infectious diseases. For more information, visit Dr. Nevins' Web site: www.drnevens.net.

Working & Living Pain Free

**By Trisha O'Hehir, RDH, BS
Editorial Director, Hygienetown Magazine**

It is not unusual for dental hygienists to suffer back, shoulder, neck, arm or wrist pain due to working chairside. According to a poll conducted on Hygienetown.com from April 21, 2006-May 18, 2006, 93 percent of 586 respondents reported experiencing back and neck pain, and 84 percent of 479 respondents reported experiencing hand, wrist or shoulder pain. Sixty-seven percent of 435 respondents reported perching on the edge of their stool either sometimes or often. The good news: 78 percent of 419 respondents said they were willing to learn and change to improve their ergonomics.

During my four-decade dental hygiene career, I've never suffered from arm or wrist pain, but I have had my share of neck and back pain. For the past 15 years I've experienced hip, knee and ankle pain, which I never associated with clinical dental hygiene (or so I thought). The pain and restricted hip movement continued to worsen despite receiving treatment from many doctors and physical therapists. I was able to run and do yoga for awhile, but then running became too painful, I could no longer sit cross-legged for yoga and friends started telling me I was limping.

Only recently has my current physician uncovered the real problem that caused the pain and limping – my sitting position while working chairside all those years. When I couldn't get my legs under the patient chair – putting the chair up high enough to accommodate my legs hurt my shoulder and arms, because I would have to reach so high. Instead, I straddled the chair, putting my left leg at a 10 o'clock position and then dropping my right knee to the center of my body and torquing my right hip, to move closer to the chair, thus preventing strain to my back. Added to this compromised position was that I constantly reached for the rheostat with my left foot. Little did I know I'd suffer many years later for sitting that way.

With physical therapy to retrain my muscles, manipulations of the hip capsule to increase mobility and twice-daily exercise to strengthen weakened muscles, I'm determined to overcome the trouble caused by my crazy sitting position. In an effort to get you thinking about ergonomics, I've invited Dr. Natalie Nevins, a physician with an extensive background in anatomy and posture, to share with us her philosophy on ergonomics. Perhaps you can learn from my mistakes. Take Dr. Nevins' advice and protect your body while working chairside.



Brandi Soldano demonstrates proper posture on the Evolution Ball Chair.

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Hygienetown (HT): Welcome to Hygienetown, Dr. Nevins. Your expertise in neuromusculoskeletal aspects of the body can help hygienists recognize problems and prevent pain. It's alarming to see how many hygienists are in pain from working chairside. Is this the way it has to be?

Dr. Nevins: No, pain doesn't have to be a part of providing good patient care. However, pain has become a tradition we think is normal. You've heard the saying "no pain, no gain." It's not true. We are taught to push through the pain by taking medications – aspirin or ibuprofen. Pain is actually your body telling you to stop. Listen to the pain. At first it will be slight, just a whisper in your ear. Next, the pain will increase, like tapping on your shoulder. If you don't listen to the pain, it gets your attention by breaking your arm.

HT: You're right, we don't listen to the pain, instead, we reach for medications. But doesn't that help relieve the pain?

Dr. Nevins: Pain medications address the symptoms, not the cause. Here's an analogy. If your house is on fire, do you set up fans to blow out the smoke? Taking pain medication is like blowing the smoke out of a burning house without ever putting out the fire. Instead of blowing out the smoke/taking pain medications, you should change things to prevent the pain by evaluating your body mechanics. Change the cause – don't treat symptoms.

HT: What sorts of things do you see that cause the pain in the first place?

Dr. Nevins: It's all about compensation. The body wants the eyes to be level and will do what ever it needs to accomplish this. The body will even create a full "s" curve in a person's spine to make the eyes level. If you sit with your legs together, facing the patient and leaning in to see in the mouth, and you're sitting on one butt cheek more than the other, your body will compensate. If one area begins to hurt, you will readjust and rely on other parts of the body. Where you feel the pain is probably not the source of the problem, it's the last of a line of compensations you've made for your first change in posture. You move out of neutral posture into a dysfunctional position, your body compensates, and you move into another dysfunctional position.

HT: How did my crazy sitting position lead to so many problems years later?



Dr. Nevins: It's a matter of muscle memory. If you always sit with one leg stretched out, the longer you hold this position it will create a new neutral and you can't go back to the original neutral without pain. Your crazy sitting position stretched the outer muscles on your leg and contracted muscles on the inner side of your leg. Holding this position for hours every day created a new "neutral" for you so that when you wanted to return to "normal" your body told you it wasn't neutral by registering pain when you stretched the constricted muscles.

HT: Are you familiar with the dental hygiene operatory in the dental office?

Dr. Nevins: Yes, and the dental hygiene operatory is most often organized as a dysfunctional situation from the start, having you lean to one side, sit on one butt cheek and just one foot to anchor with the other running the drills, power scalers and polishers. It's not always easy, but as often as possible, you should sit on both butt cheeks, don't lean, and be in neutral.

HT: What suggestions do you have for hygienists who sit chairside for eight hours each day?

Dr. Nevins: Listen to your body. Is your body happy; is your body comfortable? Stretch when you're uncomfortable. If you have to move into an uncomfortable position for a few minutes, lean the opposite way for an equal length of time. To balance all the forward head tilting you do, tip your head backwards as often as you can. Foot controls contribute to the problem because you have weight on one leg, so try to switch your legs/feet. Be sure you are sitting on both butt cheeks.

HT: Hygienists need to work in all areas of the mouth, which often leads to uncomfortable positions. What should we do?

Dr. Nevins: The patient has to come to you, not you going to the patient. Let's look at a simple example

first – a laptop computer. Hold it on your lap and your eyes, shoulders and neck are unhappy. Set it high enough to accommodate your head and neck and your arms will be raised and unhappy. A laptop is not ergonomically sound – you need to change it into a desktop computer. It's the same with patients. Move the patient to you. Move them and their heads to fit your seated position, not the other way around. The patient is only in your chair for an hour; you are at the chair all day. Move the patient up, down and turn their head side to side, chin up or down. This is better for the patient as well. It's unnatural for them to hold the same position for the entire hour without moving. Human beings are built for motion.

HT: I start out the day with good intentions, but then my old habits take over. It's hard to remember to sit properly after a few hours. What should I do?

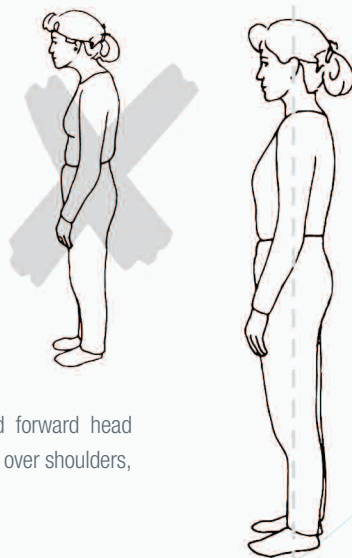
Dr. Nevins: Set your watch to go off every half hour, as a reminder to reset your sitting or standing position. You might have to get into funky positions sometimes to reach difficult areas of the mouth every once in a while, but get out of those positions as quickly as possible. Ask yourself, "Am I comfortable?"

Take two minutes to stretch and drink water between patients. I realize you have a lot to accomplish during each appointment, but take a couple of minutes between patients now and you can add an extra 10 years to your clinical career.

HT: Hygienists spend most of the day sitting down. What do you recommend hygienists do to improve sitting posture?

**Positioning
Posture – Standing**

Good posture is important. Avoid slouching and forward head thrust. Maintain curve in lower back and align ears over shoulders, hips over ankles.



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Positioning Posture – Sitting

Sit upright, head facing forward. Try using a roll to support lower back. Keep shoulders relaxed, and avoid rounded back. Keep hips level with knees. Avoid crossing legs for long periods.

you can't live there in the new unnatural position. Now you will have pain in neutral. To deal with this, shorten the times that you sit in one position. Move as often as possible. Adapting to a new unnatural neutral will bother you when you do anything else, like getting up from a day of sitting at the chair to go home. Sleeping in a stretched out position is painful, so you curl up to the new adapted neutral.

HT: Maintaining a neutral posture sounds so simple, but I'm finding it very difficult. Why is this?

Dr. Nevins: Unfortunately we don't come with an owner's manual. Recognizing normal posture is difficult because with functional proprioception our brains can be talked into a new position. Evaluate your own body. What does neutral feel like to you when sitting or standing? To find neutral, stand in front of a full-length mirror in what feels like neutral with your eyes closed. Then open your eyes. Are both feet planted evenly side-to-side and front-to-back? Where is your center of gravity? Is your pelvis higher on one side than the other? Is your head tilted? Are your shoulders up? Is your butt tucked under? Bring your position back to normal if you are out of neutral and you may feel uncomfortable – you might even feel pain. You can retrain your body to return to a neutral posture. Try this with sitting as well. Sit with both feet on the floor, 90 degree at the knee and ankle. Back support is needed, as we tend to lean forward.

HT: Carpel tunnel problems are common among dental hygienists and many have had surgery. Sadly, many of these cases are not remedied with surgery. Why is this?

Dr. Nevins: Half of diagnosed carpal tunnel cases are mislabeled. They don't really have carpal tunnel problems. First, wrist problems don't happen by themselves. Major muscles moving the wrist go all the way to the elbow. Golf and tennis elbow come from actions at the wrist, but manifest themselves in the elbow. Wrist problems can be due to repetitive motions with a cocked wrist, like wrist rocking. Continual scooping motion without stretching out will cause problems. Stretch between patients, recognize weak areas and strengthen. Recognize tight areas and stretch. Surgeons have these same problems from leaning over the operating table for hours.

HT: Your advice to “listen to you body” will definitely help hygienists identify problems as they begin and prevent postures that can lead to a life of pain. Your message of working and living pain free is important for all dental hygienists. Thank you Dr. Nevins. ■



Exercise Healthy Back Stretch – Hip Roll

Hold back of sturdy chair, with feet well apart. Slowly rotate hips clockwise, making as wide a circle as possible. Repeat counterclockwise.

Do 10 times in each direction. Increase repetitions gradually up to 20.

Exercise Back Pelvic Tilt: Posterior (Standing)

With knees slightly bent, tighten stomach and flatten back by rolling pelvic down. Hold 10 seconds. Relax.

Repeat 10 times per set. Do one set per session. Do three sessions per day.

