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Protect Yourself from Occupational Risks

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By Christopher J. Smiley, DDS
Editor-in-Chief

Protect Yourself from Occupational Risks

Eye safety is a critical concern for patients and providers, as presented in this issue's feature article by Dr. Marie Fluent. Through personal experience, I can attest that much remains unknown about the need for oral health care workers to guard against occupational risks.

In 2017 I experienced a detached retina in my left eye. Following a year of three laser surgeries, I had the same experience with my right eye. Due to many "floaters" that blocked my vision, I required vitrectomies, where they punctured each eyeball to remove the vitreous humor and blood clots. As a side effect of this care, I developed early onset cataracts in each eye, requiring lens transplants following their removal. I was fortunate to be cleared to return to practice, but not without my retinal specialist expressing that he didn't think they would get me back.

That was a frightening realization as a dentist who makes a living relying on my eyes. I have since come across several colleagues who had similar experiences, many of whom could not return to practice. It made me wonder if occupational exposures place a dentist at higher risk of retinal damage.

I investigated this by asking the MDA's endorsed disability insurance carrier if they were experiencing a disproportionate number of dentists with eye-related disability claims. They were not. I then asked the ADA's Science and Research Institute if there was evidence that dentists were at increased risk for retinal damage from occupational exposure. I was told the evidence is inconclusive and that further study is needed.

I remain concerned that the intensity of over-the-patient lights, headlamps, curing lights, and lasers may have contributed to my experience and that of colleagues who suffered retinal damage. Therefore, I urge every new and experienced clinician to wear protective eyewear, use light shields and paddles, and calibrate the intensity of each light source.

Protection from occupational exposure is of equal concern with hearing loss. Again, I can speak from personal experience. An adverse surgical outcome rendered me deaf

in my left ear, and I failed to protect myself from progressive loss in my right despite warning signs early in my career.

Following graduation, I joined the Academy of Operative Dentistry. It was an honor to be part of this organization and attend its annual meeting. Many of the profession's senior statesmen sat in the front rows of the meeting hall. Between presentations, as I went up towards the stage to question a presenter, I was overcome by an awareness of feedback noise from hearing aids worn by the elder dentists seated nearby. This experience motivated me to learn about protecting my hearing. At the time, there were few recommendations, as a properly calibrated handpiece likely didn't emit noise at a level to cause hearing damage. However, many clinicians override manufacturer recommendations to increase the air pressure driving a drill so it can cut faster. Manufacturers note that doing so can damage the turbine, resulting in the generation of dangerous levels of noise. I learned that the high-volume suction tips produce harmful noise levels, particularly if partially clogged. It may be conjecture on my part, but I fear the risks may be additive when considering the use of sonic instruments and airflow devices implemented to mitigate COVID-19 airborne pathogens.

Early on, I saw an audiologist for a pair of custom musician earplugs. These filter out damaging noise while allowing the user to hear sounds in the normal range. Although they are inconspicuous, I found them inconvenient or forgot to put them in. Soon they were lost. I was like that patient who refuses to wear or misplaces their bite splint.

The progressive hearing loss in my right ear occurred slowly over time, masking the need to act. Today, I can hear well enough to communicate with patients in a confined operatory. However, I am at a loss in social and recreational settings.

I wish to convey the overarching message that protecting yourself from occupational risk will preserve your quality of life and professional career. Wear eye protection to prevent traumatic injury and shield you from potentially damaging light exposure. Calibrate your equipment, and see an audiologist to obtain custom musician earplugs. The earlier in your career, the better! ●