"To You and Your Students' Good Health"

Q & A Column

Compliments of the CMS Committee on Musicians' Health

committee page

The Musicians' Health Committee, comprised of medical professionals and music faculty, all strong advocates for musicians' health, is happy to bring you a ***Q & A column*** for this month's CMS Newsletter. If you like this idea, please send us your musicians' health-related questions which we will direct to our committee members, or other professionals with whom we have contact, to be answered in future newsletters. Gail Berenson and Linda Cockey, Committee Co-Chairs.

Q: What are the effects of loud music, stress on musicians… and what is glical excito-toxicity?

Answered by Dr. Marshall Chasin, AuD., Reg. CASLPO, Doctor of Audiology and director of research and chief audiologist of the Musicians' Clinics of Canada. Dr. Chasin has the experience and knowledge to help musicians with their specific hearing needs. As a founding member of the Hearing Instrument Review Panel, he has reviewed many new hearing aids, which allows him to choose from the very best for clients. He is author or editor of eight books on hearing, hearing loss prevention, and hearing aids. He is an adjunct associate professor in Audiology at the University of Western Ontario; an instructor in Linguistics at the University of Toronto; and an adjunct research associate at the State University of New York (SUNY) at Buffalo.

A: The isolation due to COVID19 has underscored how multi-factorial anyone's health can be and musicians are no exception to this vulnerability. The sound levels of the music and the duration – together give us the "dose" - are major issues in hearing health. Recent research has shown that at the smallest molecular level, the effects of loud noise and music are quite similar to that of stress. The physiology of hearing health has only been described for about a decade now but for years both researchers and clinicians have noted that a stressed individual is more susceptible to a wide range of ailments ranging from cardiac and kidney issues to hearing loss.

The process is called "glial excito-toxicity" but the English translation may be more enlightening. A person undergoing stress (or isolation) has higher levels of Cortisol which is a stress hormone emitted by the adrenal glands. These very small molecules can cross the blood-brain barrier and facilitate the creation of Glutamate in the brain. Glutamate, like its more familiar cousins Seratonin and Dopamine, are neuro-transmitter messengers that carry the neural signals from one nerve to another. High levels of Glutamate (which can be brought about by loud noise and/or stress) can be toxic to the hearing mechanism.

During COVID19, isolation and stress caused some musicians to develop a "stress response" which has altered and, in some cases, damaged the auditory pathways required for hearing

speech and music. Stress and isolation can be the big killer—not just for our hearts and metabolic processes, but also for our hearing mechanism. Hearing protection, moderation, and environmental control of loud music is very important, but stress reduction is also a major factor.

We all should be seeking out stress reduction opportunities for hearing loss and musicians as this is just as important as doing our pushups or working on our cardio. See Chasin's blog at www.hearinghealthmatters.org/hearthemusic or www.MusiciansClinics.com for additional information.