**COVID-19 Creates Hearing, Balance Disorders, Aggravates Tinnitus Symptoms**

*Pandemic-related stress and anxiety may increase auditory and vestibular effects associated with COVID-19.*

**\*\*\*\* EMBARGOED UNTIL JUNE 10, 2021 AT 1:15 P.M. EASTERN U.S. \*\*\*\***

MELVILLE, N.Y., June 10, 2021 -- The physiological impacts of COVID-19 seem almost limitless. Complications can range from loss of taste to respiratory distress, with many effects lasting for months. Evidence suggests auditory and vestibular effects should be added to the growing list of symptoms.

During the 180th Meeting of the Acoustical Society of America, which will be held virtually June 8-10, Colleen Le Prell, from the University of Texas at Dallas, will talk about hearing and balance disorders associated with coronavirus infection and how pandemic-related stress and anxiety may aggravate tinnitus symptoms. Her presentation, "Hearing disorders secondary to infection with SARS-CoV-2," will take place Thursday, June 10, at 1:15 p.m. Eastern U.S.

The factors that may play a role in the relationship between COVID-19 and hearing are multifold. COVID-19 is known to have inflammatory effects, including in neurological tissue, which can exacerbate other problems.

"Inflammation can damage the auditory and vestibular pathways in the peripheral and central nervous system, just as it damages smell and taste pathways, and other neural systems," said Le Prell.

In addition to new injury, there are several studies suggesting the mental anxiety caused by the pandemic, such as lockdown-related stress and concerns about the negative impacts of masks on audibility and communication accessibility, may magnify the auditory impacts of the virus. This is especially so for people who already had tinnitus, prior to the pandemic.

"Increases in tinnitus bothersomeness were associated with reports of pandemic-related loneliness, sleep troubles, anxiety, depression, irritability, and financial worries," Le Prell said. "In other words, participants who experienced general increases in stress reported their tinnitus to be more bothersome than before the pandemic."

Some early experimental treatments, like chloroquine and hydroxychloroquine (which are not recommended by the National Institutes of Health), can also have auditory side effects, particularly in patients with kidney problems.

"When the kidneys are not functioning properly, the drug may not [be] metabolized and eliminated from the body as quickly, which can increase physiological drug concentrations and risk of side effects," Le Prell said. "Old age is often accompanied by decreased renal function, and COVID-19 can cause renal dysfunction, which increases the risk that a patient who is given an experimental therapy for COVID-19 will be at risk for ototoxicity."

The presentation will also present more details on the possible ototoxicity of COVID-19 and investigational COVID-19 therapeutics.

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**----------------------- MORE MEETING INFORMATION -----------------------**

**USEFUL LINKS**

Main meeting website: <https://acousticalsociety.org/asa-meetings/>

Technical program: <https://acousticalsociety.org/technical-program-and-special-sessions/>

Press Room: <http://acoustics.org/world-wide-press-room/>

**WORLDWIDE PRESS ROOM**

In the coming weeks, ASA's Worldwide Press Room will be updated with additional tips on dozens of newsworthy stories and lay language papers, which are summaries of presentations written by scientists for a general audience and accompanied by photos, audio and video. You can visit the site during the meeting at <http://acoustics.org/world-wide-press-room/>.

**PRESS REGISTRATION FOR MEETING SESSIONS**

We will grant free registration for credentialed and professional freelance journalists who wish to attend the meeting sessions. If you are a reporter and would like to attend, contact the AIP Media Line at [media@aip.org](mailto:media@aip.org). We can also help with setting up interviews and obtaining images, sound clips or background information.

**VIRTUAL MEDIA BRIEFINGS**

Press briefings will be held virtually during the conference. Credentialed media can register in advance by emailing [media@aip.org](mailto:media@aip.org) and including your full name and affiliation in the message. The official schedule will be announced as soon as it is available, and registered attendees will be provided login information via email.

**ABOUT THE ACOUSTICAL SOCIETY OF AMERICA**

The Acoustical Society of America (ASA) is the premier international scientific society in acoustics devoted to the science and technology of sound. Its 7,000 members worldwide represent a broad spectrum of the study of acoustics. ASA publications include The Journal of the Acoustical Society of America (the world's leading journal on acoustics), Acoustics Today magazine, books, and standards on acoustics. The society also holds two major scientific meetings each year. For more information about ASA, visit our website at [http://www.acousticalsociety.org](http://www.acousticalsociety.org/).

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