



## Defense Health Agency (DHA) Clinical Communities Speaker Series

### SEPT 2023 CCSS: Innovation-Based Updates in Modern Health Care Practice

#### S02: News You Should Know About Hearing Health: Overview of New 3-D Ear Model, Management Techniques for Hearing Loss, & More

##### Resource List

The [International consensus \(ICON\) on treatment of sudden sensorineural hearing loss](#) (2018) reviews the discussion by experts convened at the 2017 Ear Nose Throat (ENT) World Congress in Paris France. The difficulty, as described by the experts in the panel arises from the wide variety of presentations of SSNHL. This includes the initial hearing deficits and the amount of hearing recovery. The use of systemic steroids is the most widespread primary therapy; however, the evidence of efficacy is still lacking. This therapeutic approach is used to reduce supposed inflammatory response to hyperbaric oxygenation to reverse the lack of oxygen in the inner ear. This article's systematic review of the literature supports this concern over the heterogeneity of the condition; therefore, more precise subject populations may allow for more accurate and efficacious indications of appropriate treatments.

The article [How vision and hearing contribute to service members' readiness](#) (2021) reviews how our senses have an important function due to their interconnectivity that allow us to function, move and communicate. This article introduces key figures in the Department of Defense's Vision Center of Excellence (VCE) and Hearing Center of Excellence (HCE). The combination of these senses allows for a "360-degree threat detection system" that greatly impacts a service member's ability to fulfill a mission.

The authors of [Noise-induced hearing loss treatment: Systematic review and meta-analysis](#) (2022) aimed to determine the efficacy of steroid and hyperbaric oxygen therapy in the setting of acute noise-induced hearing loss through completion of a systematic review and meta-analysis of treatment studies. The studies reported on patients who reported individual frequencies up to 8,000 Hz, who were treatment only with steroids or who were treated with a combination of steroids and hyperbaric oxygen therapy and sustained acoustic trauma. The study indicated that steroids with or without hyperbaric oxygen therapy appear to improve both low and high hearing thresholds after an acoustic trauma.

Emerging reports of sudden sensorineural hearing loss (SSNHL) after COVID-19 vaccination within the otolaryngological community and the public have raised concern about a possible association between COVID-19 vaccination and the development of SSNHL. In the article [Assessment of sudden sensorineural hearing loss after COVID-19 vaccination](#) (2022) a cross-sectional study and case series was conducted with up-to-date population-based analysis of 555 incident reports of probable SSNHL in the Centers for Disease Control and Prevention Vaccine Adverse Events Reporting System (VAERS) over the first seven months of the US vaccination campaign (December 14, 2020, through July 16, 2021). The overall findings from the analysis of VAERS data and a case series of patients who experienced SSNHL after COVID-19 vaccination did not suggest an association between COVID-19 vaccination and an increased incidence of hearing loss compared with the expected incidence in the general population.



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### References

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