



# Singers at Increased Risk for Developing Voice Problems, Miller School and Frost School of Music Researchers Report in Newly Published Study

With time and intense use of their voices, some musical theater, contemporary, and classical singers develop vocal fold findings, such as nodules and polyps, according to a study by University of Miami and Miller School of Medicine researchers.



(From left) Mursalin Anis, M.D., Ph.D.; Michelle Bretl, M.S., CCC-SLP; Adam Lloyd, SLP-D, CCC-SLP; Jennylee Diaz, M.S., CCC-SLP; David Rosow, M.D.

The study, published in *The Laryngoscope*, is the first to compare prevalence of vocal pathologies in the three singing genres over time.

“We focused on evaluating the vocal health of undergraduate students studying classical, contemporary, and musical theatre vocal performance,” said study author Adam Lloyd, SLP-D, CCC-SLP, who is a voice pathologist and singing health specialist



and a clinical assistant professor in the Division of Speech Pathology at the Miller School.

Changes that occur with time to singers' vocal folds – the folds of tissue in the voice box that produce sounds used for speech or singing – had not been well understood. But this study of 57 singers suggests that nodules and polyps are common, and that the risk may vary according to genre.

“We found that in the first year of study, 32% of musical theatre, 18% of contemporary, and 0% of classical singers had evidence of vocal fold pathologies, such as vocal nodules and polyps,” Dr. Lloyd said.

By year three of the study, the findings became evident even in classical singers, with 39% of musical theatre, 27% of contemporary, and 22% of classical singers showing vocal fold pathologies.

“This study is part of a longitudinal study we are conducting at the University of Miami in collaboration with the Miller School of Medicine Department of Otolaryngology, the Frost School of Music, and the Department of Theatre Arts,” said Dr. Lloyd. “We are now in the seventh year of data collection and plan to continue this study for a total of 10 years.”

## **Collaboration on a Complex Problem**

This work illustrates a collaboration among different disciplines that is fundamentally important in academics, especially when trying to understand a complicated problem, according to study author David E. Rosow, M.D., director of the Division of Laryngology and Voice and associate professor of otolaryngology at the Miller School.



“We are extremely fortunate to have such a good working relationship with the Department of Vocal Performance at the Frost School, as we work together to understand the problems that face performing artists and their voices,” Dr. Rosow said.



Yi-Chun Tsai, first-year doctoral student in vocal performance and pedagogy

The implications of the study’s findings suggest that singers are at risk for physical “hazards” of the profession.

“Professional voice users, also known as vocal athletes, are at an increased risk for developing voice problems due to the extent to which they use and rely on their voices. The results of this study show that singers are more at risk for developing problems over time,” Dr. Lloyd said. “At the University of Miami, we not only take care of collegiate singers, but professional voice users at all levels, from hobby singers to elite recording artists and opera singers.”

There is a need to educate singers to improve and maintain vocal health over their training and career to reduce the risk of the development of vocal fold pathologies, the authors write.

“The results of this study help voice care teams to educate students and professionals singers and design vocal health protocols to help keep these artists singing,” Dr. Lloyd said.

Michelle Bretl, M.S, M.M., CCC-SLP, speech pathologist and voice specialist in the Division of Speech Pathology, led the



study.

Content Type Article