

MAY 2021 MEDICAL NEWSLETTER



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Otorhinolaryngology

Ryen Belle Harran

Otorhinolaryngology, ORL, is most definitely a mouthful, so let me break it down:

- Oto- = ear (Gr. *ous*)
- rhino- = nose (Gr. *rhis*)
- laryngo- = throat (Gr. *larynx*)
- -logy = study (Gr. *logia*)

Otorhinolaryngologists, aka. otolaryngologists, head & neck, or ENT (ear-nose-throat) surgeons are physicians who have **subspecialized** in the intricate passages of the human head that connect the **ears, nose, and throat**. In the U.S. and Canada, ORL

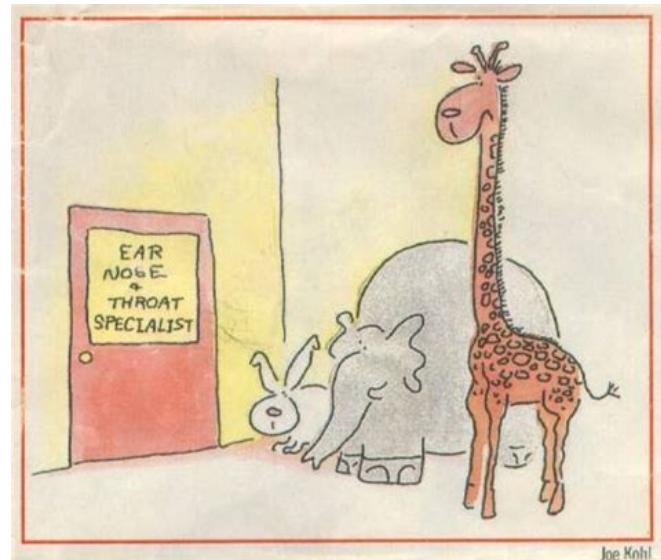
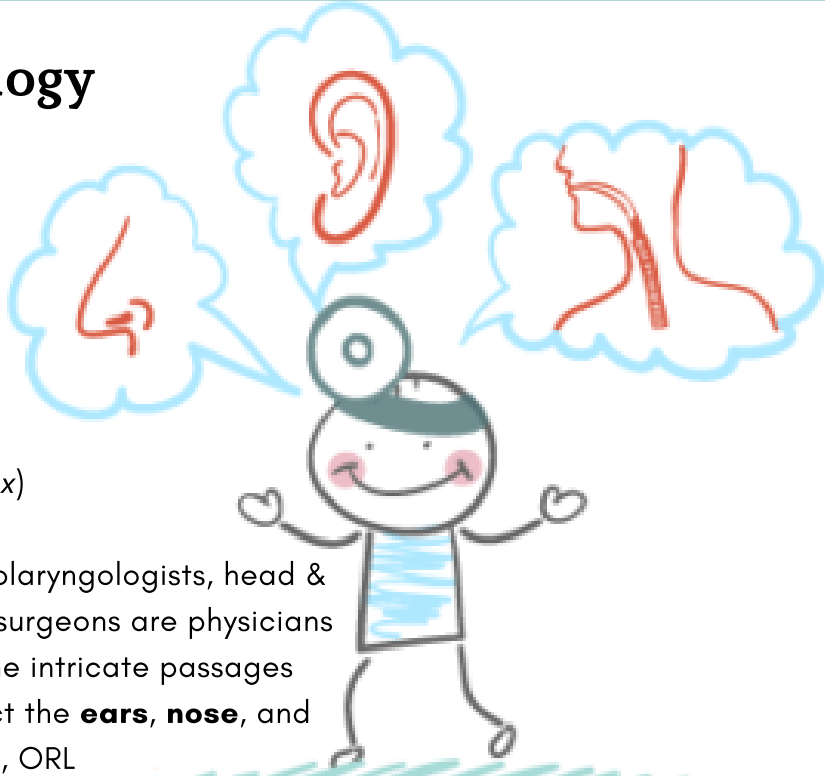
is one of the most competitive medical specialties, although it is also the most highly compensated one, with an average \$461,000 annual income in 2019.

ENT physicians generally have **MD, DO, MBBS, MBChB**, or comparable training degrees, which require **4 years of undergraduate education**, **4 years of medical school**, and an additional **5-7 years of post-graduate surgical training** in this subspecialty.

After residency training, some ENT surgeons decide to subspecialize. **Sub-specialty fellowships** include:

- head and neck surgical oncology,
- facial plastic & reconstructive surgery,
- rhinology and sinus surgery,
- neurotology,
- otology,
- laryngology & voice disorders,
- pediatric otorhinolaryngology,
- and sleep medicine.

ENT's may treat a range of conditions including **ear infections, hearing loss, allergies, sinusitis, tonsillitis, voice issues, obstructive sleep apnea, and ENT tumors & growths** which may be cancerous or non-cancerous. ENT's who sub-specialize in facial plastic and reconstructive surgery may have to use tissue grafts and procedures involving other areas of the body. These procedures include *Free Muscle Transfer, Free Bone Transfer, Free Skin and Fat Transfer*, as well as *Microvascular Reconstruction Repair*.





COPD & Rheumatoid Arthritis?

Ryen Belle Harran

Rheumatoid arthritis is a chronic **autoimmune** disease, which not only inflames the joints but also has the potential to damage a variety of organ tissue, including those of the eye, skin, lung, and heart.

The International Journal of Rheumatic Diseases published an article earlier this month, concerning the **connection** between COPD, chronic obstructive pulmonary disease, and rheumatoid arthritis, RA. Both COPD and RA are **chronic inflammatory** diseases and are often seen hand-in-hand in many patients, however, there are some **demographic differences**, specifically linked to sex. The study of this article used a nationwide data

collection from the **Korea National Health and Nutrition Examination Survey**. The health information of over 12,000 men and 15,000 women, both with and without RA, was analyzed.

The study found that **male patients** with RA showed a **prevalence of COPD of nearly 16%**, whereas for female patients that prevalence was down to about 4%. These numbers for males and females without RA were 8% and 2%, respectively.

The numbers for male patients with RA and COPD were found to be more statistically significant for men with RA, and could not be linked with affected women with COPD.

Proteins that Predict Future Dementia

Srusti Chandra

Dementia is a general term for loss of memory, communication, problem solving, and other thinking abilities. Alzheimer's disease is the most common type of dementia, accounting for 60 to 80 percent of cases. There is no cure for Alzheimer's disease but a study published by researchers at Johns Hopkins University in *Nature Aging* discusses early identification by looking at abnormal blood protein levels.

How was this study conducted?

- Blood samples from over 4,800 middle-aged participants during 2011-13 were collected
- Roughly 5,000 distinct proteins were identified in the samples
- SomaScan was utilized to analyze proteins in the samples

What has the study found?

- The abnormal blood levels of 38 proteins were linked to higher risk of developing Alzheimer's within 5 years
- 16 of those 38 proteins can predict Alzheimer's risk 20 years in advance
- Protein SVEP1 is likely a causal contributor, which can be targeted in future treatment trails. This protein was linked to atherosclerosis.

The purpose of identifying Alzheimer's risk years in advance is to allow individuals to implement preventative measures before symptoms develop. Since Alzheimer's is an irreversible condition with no treatment, this is the best approach.





Heart Problems & Mild Cases: COVID-19 Vaccinations

Sejal Kaushik

In the United States of America, the number of fully vaccinated individuals has hit almost 5.6 million people. It is becoming increasingly common for fully vaccinated people to remove their masks while in public, and social gatherings are becoming more frequent. While this new development is generally welcomed by the public, as it signals a return to pre-COVID life, it is also a concerning sight for some. There are known COVID-19 cases among fully vaccinated individuals. However, most of these cases are mild. In response to these cases in fully vaccinated people, the Center for Disease Control and Prevention (CDC) has recently announced that they would not be conducting investigations into mild cases of COVID-19 in vaccinated individuals. The CDC will investigate cases where vaccinated individuals are hospitalized or die, but other cases will not be investigated. The CDC is currently investigating a potential side effect of the COVID-19 mRNA vaccines, however. Recently, there have been reports of mild heart issues in younger vaccine recipients. This heart condition, myocarditis, is mild, seen after the second vaccination, and is more frequent in men than women. Currently, the CDC is conducting follow-up studies and assures the public that there is nothing to worry about, as cases are **rare** and **mild**. They stress that the seriousness of this side effect is less compared to the effects of COVID-19.

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