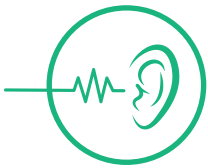


Rush Eustachian Tube Surgery Program



The Eustachian tube can be the breeding ground of many hearing issues, including infections in the middle ear (otitis media), fluid trapped in the middle ear (otitis media with effusion), negative pressure or vacuum in the middle ear that stretches and damages the eardrum (atelectasis), and trapping of outer ear skin in the collapsed middle ear forming a growing cyst (cholesteatoma). If the Eustachian tube is open all the time because it is too wide then disturbing symptoms of popping and voice sensitivity can occur, which is called Patulous Eustachian Tube, referred to as PET.

Rush Otolaryngology's Eustachian Tube Surgery Program progresses the diagnosis of these conditions by performing a nasal endoscopy, allowing the observance of Eustachian tube swelling or narrowing, which can be seen in patients with allergies, gastric reflux, or sinus diseases. Medications can be used initially to decrease Eustachian tube narrowing, but if medical treatment is not successful then surgical widening of the tube may be beneficial.

Eustachian Tube Balloon Dilation. To help restore function to a narrow or blocked Eustachian tube the surgeon can place a specially made balloon in the opening of the Eustachian tube and inflate it for a short time, which stretches the opening to a more normal size. This is typically done with a brief general anesthesia.

Patulous Eustachian Tubes. PETs are a chronic condition of abnormally large Eustachian tubes. Patients with PETs have several disturbing symptoms, including autophony (hearing your own voice loudly), respiratory-synchronous tinnitus (hearing your own breathing), and distorted perception of sound. The symptoms may occur continuously, while others might only have intermittent symptoms, sometimes

worsened by exercise. PET can be caused by rapid weight loss, autoimmune disease, or sometimes happens spontaneously.

Multiple treatments for Patulous Eustachian Tubes are available. Conservative therapies like weight gain or transnasally administered medications are common first steps. Surgical repair of the eustachian tube can be performed if these measures do not improve symptoms.

From Rush's 2017 findings of Cartilage Implantation for Patulous Eustachian Tubes, results showed that out of 25 participants 62% of the operated ETs had improved or completely resolved autophony at their latest evaluation and no patients developed obstructive symptoms.¹

62% of the operated ETs had improved autophony



**Ranked No. 34
in the nation.**

Patulous Eustachian Tube Reconstruction. Elias Michaelides, MD, is one of the few surgeons able to perform this surgery, which is designed to restore normal function of the Eustachian tubes. A small piece of cartilage is inserted into the Eustachian tube surgically. This narrows the unusually large opening, so that the tube closes normally at rest. This procedure takes about an hour and is typically done as an outpatient, same-day procedure under general anesthesia.

Our Specialist



Elias Michaelides, MD
Otolaryngology - Head and Neck
Surgery
Neurotology

Medical School:

Stony Brook University Medical Center
School of Medicine

Residencies:

Virginia Commonwealth University
Virginia Hospital Center

Fellowship:

Michigan Ear Institute

- 1 McGrath AP, Michaelides EM. Use of middle ear immittance testing in the evaluation of patulous eustachian tube. *J Am Acad Audiol.* 2011 Apr;22(4):201-7. doi: 10.3766/jaaa.22.4.2. PMID: 21586254.
- 2 Salehi PP, Kasle D, Torabi SJ, Michaelides E, Hildrew DM. The etiology, pathogenesis, and treatment of objective tinnitus: Unique case series and literature review. *Am J Otolaryngol.* 2019 Jul-Aug;40(4):594-597. doi: 10.1016/j.amjoto.2019.03.017. Epub 2019 Apr 5. PMID: 30981445.

Locations

Rush University Medical Center

1611 W. Harrison St. Suite 500
Chicago, IL 60612

Rush South Loop

1411 S. Michigan Ave.
Chicago, IL 60605