

Study: Cotton swabs prove problematic for ear health

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A study by Henry Ford Hospital shows a direct association between cotton swab use and ruptured eardrum.

The study also shows that in most cases the rupture heals on its own and surgery is only necessary for the most severe cases.

"In the past, many otolaryngologists have wondered if surgery is really necessary to treat a ruptured eardrum. The results of this study show that 97 percent of cases healed on their own within two months, proving that most cases do not require surgery," says Ilaaf Darrat, M.D., an otolaryngologist at Henry Ford Hospital and co-author of the study.

The study is being presented April 29 at the Combined Otolaryngology Spring Meeting in Chicago.

More than half of patients seen in [otolaryngology](#) (ear, nose and throat) clinics, regardless of their primary complaint, admit to using cotton swabs to clean their ears. But if the cotton swab is pushed too far in the ear canal, it can cause serious damage, including ruptured eardrum, also known as tympanic membrane perforations (TMP).

Severe TMP can cause facial paralysis and vertigo.

"If a patient is experiencing symptoms such as hearing loss, drainage, dizziness or abnormality in their facial movements they should see a doctor immediately to assess the possible ear damage," says Dr. Darrat.

Study co-author Michael Seidman, M.D., FACS, director of the division of otologic and neurotologic surgery at Henry Ford Hospital, recommends instead of cotton swabs, using these alternatives to clean the [inner ear](#).

- Take cool peroxide, hot tap water and mix equally. Be sure it is body temperature and gently irrigate the ear one or two times per month.
- Take plain vinegar and water and use four or five drops in the ear once a week.
- See a doctor, who can remove ear wax for you.
- Try an over-the-counter treatment such as Debrox.

The Henry Ford study included 1,540 patients with a diagnosis of TMP from 2001-2010. Patients with a cotton swab injury were subdivided into two groups: observation and surgery. Successful outcomes were defined as healed TMP, resolution or improvement of vertigo, tinnitus or facial nerve paralysis, and/or closure of the air-bone gap.

A ruptured eardrum can be treated in one of two ways, depending on the severity of the symptoms. The most common method of treatment is observation of the perforation by an otolaryngologist because often times the eardrum will heal on its own within two months. More severe cases are treated with surgery.

While the study found that most cases of ruptured eardrum heal on their own, neurological deficits, such as facial nerve paralysis, require surgical intervention to repair the eardrum.

Surgical intervention proved very successful, with only one patient suffering mild, but improved vertigo.

Dr. Darrat and her colleagues concluded that proper follow-up with a doctor to test hearing after a case of ruptured eardrum is healed is essential to ensure that no hearing loss was caused from the injury.

Provided by Henry Ford Health System

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