Earwax: Friend or Foe?

Earwax can be your best friend or your archrival.

Cerumen is the medical term for earwax. How and why earwax is formed is well documented.

Earwax primarily originates from two types of secreting glands located within the cartilage portion of the ear canal. Sebaceous glands produce sebum, a “fatty” substance. Cerumenous glands produce perspiration or sweat. Sebum and perspiration combine with dried and shedding skin cells (and whatever else happens to find its way into the ear canal) to form earwax.[1]

Upon visual otoscopic inspection, earwax may appear gelatinous and “golden” in color or firm and dark in color. Gold colored earwax is usually newly produced cerumen while dark, hard earwax has been allowed to cure for quite some time. The dark color results from substance dehydration, oxidation, and possible bacterial activity.[2]

We may also generate greater than normal earwax production due to any number of external factors and/or agents. Drugs as Pitocin (commonly used to induce labor in women) and epinephrine are known to increase the production of sweat originating from Cerumenous glands resulting in excess wax. “Sweaty ears”, not unlike “sweaty palms”, may result from emotional stress, fear, and anxiety.[3]

Earwax is a natural defense against foreign bodies and objects entering and becoming lodged in the ear canal. While it is normal to have a certain level of cerumen in the ear canal, excess wax causes discomfort and inhibits the transmission of sound to the middle and inner ear. Additional effects of excess wax are Vertigo (a sensation of spinning and imbalance) and Tinnitus (ringing in the ears).

Excess wax is most prevalent in the geriatric and mentally handicapped populations. Excess wax in the aged population is said to be due to the fact that as we age, the number of Cerumenous glands lessens and the output product of Cerumenous type glands becomes drier (less hydrated). This, combined with a finding of “courser” hair cells in the ear canals of older people makes for easier earwax impaction.[4]

Impacted earwax often leaves a recognizable fingerprint on audiograms. In subjects with less than total earwax occlusion, hearing loss shows up only in the high frequency range (3000 Hz-

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[1] Perry, E.T (1957) *The Human Ear Canal*
[2] Marshall & Attia, (1983) *Disorders of the Ear*
[3] Perry, E.T (1957) *The Human Ear Canal*
[4] Ruby, R.F (1986) *Conductive Hearing Loss In The Elderly*

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8000 Hz). Not until wax totally blocks the ear canal does loss become evident in the lower frequencies (500 Hz-2000 Hz). When total earwax impaction occurs, sufferers complain of sudden hearing loss.

It is always preferable to have an unobstructed ear canal when taking a test. However, subjects with minimal to moderate earwax blockage most often give unaffected hearing test results.

Cerumen extraction and management is best left to the professionals. Cotton swabs are responsible for numerous eardrum perforations and contribute to wax impaction. While over-the-counter earwax extraction kits may offer some relief, it is our advice that patients see an Otolaryngologist (Ear, Nose, and Throat physician) or a *qualified* Audiologist (In recent years, audiologists have been approved to perform cerumen extraction).

The old adage “stick nothing in your ear smaller than your elbow” should forever apply.

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