Ear Infections and Allergy

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Q: My doctor says my 7 year old son gets ear infections because of his allergies. I'm not clear on what allergies have to do with ear infections.

A: Allergies of the nose can lead to complications in the ear. At the back of the throat, there is a nose-throat cavity where these two parts meet. From that cavity, a small conduit called the eustachian tube (or the auditory tube) conducts air to the inner ear, called the tympanic cavity. This tube allows air pressure in the inner ear to be equalized with the outside air pressure. Muscles surrounding this area can contract, and the tympanic membrane is flexible. This is how the tympanic space can adapt to external changes in air pressure. For example, when the air pressure changes on an airplane, a yawn or sucking a candy can cause the surrounding muscles to contract and readjust the ear pressure.

Since the eustachian tube is connected to the nose-throat area, and since allergies can cause the nose and throat to swell, the eustachian tube can become affected by swollen tissues which encroach upon it. If the swelling squeezes the tube, then air can get trapped behind the tympanic membrane. As the body continues its attempt to pressurize, a vacuum can be created, sucking fluid into the air space. Stagnant fluid in the ear can then become infected. This is more likely to happen in children, because their body parts are smaller. A small amount of inflammation can more easily cut off the air flow in their small eustachian tubes.

Thus, the real cause of an ear infection may not be an ear defect, but the allergic nose. It is therefore important to treat allergies to prevent a recurrence of the ear infection. Your son should be treated with anti-inflammatory medication for this nose, and antibiotics for this ear infection.

