

AIRPLANE EARS

Jeffrey Marcus M.D., F.A.C.S.

Summertime to many of us is vacation time. Airplane travel is fast, comfortable, and safe. Unless you have problems with your ears! Normally, you don't have trouble with your ears in airplanes. Sometimes your ears will feel some pressure in them during the flight, but a swallow or two probably will restore them to normal.

How does air pressure affect the ears?

The middle ear (behind the eardrum) has air in it. To keep the pressure in the middle ear equal to the pressure in the cabin of the airplane, air is pumped in or out of the middle ear via the Eustachian tube when swallowing occurs. The only way air can get in or out of the middle ear is through the Eustachian tube. Problems are more common descending than ascending, because it is easier for air to get out of the middle ear through the Eustachian tube than it is for it to get into the middle ear through the Eustachian tube.

Who is likely to get into trouble?

Maintaining normal pressure in the middle ear is dependent on the flow of air through the Eustachian tube. Anyone who has trouble with their Eustachian tube is more likely to have difficulty with their ears during airplane travel. Since the Eustachian tube connects the middle ear to the back of the nose, this means that those people who have nasal difficulties are at the highest risk. Head colds and allergies are common offenders, blocking both the nasal passages and the closely related Eustachian tubes. Children with enlarged adenoids and adults with anatomic breathing problems in the nose also frequently have problems. Babies often have poorly developed Eustachian tubes and cannot equalize the pressure in their ears. That's why babies may start screaming suddenly as the plane descends.

Are ear problems from flying serious?

Most of the time, the pressure in the ears will equalize itself with no serious problems. Sometimes, however, the pressure changes will be severe, and fluid will form in the ears. The pain may become severe, and bleeding into the ear may occur. Sometimes the ear will become infected, and occasionally the eardrum will rupture.

How can I prevent problems?

Don't fly if you have a head cold. Otherwise you are really taking a risk. If you have allergies or other problems breathing through your nose, get treatment for the problem, and don't fly until you can breathe freely. If you have had problems with your ears in the past during air travel, you may want to use a decongestant nasal spray such as Afrin about a half hour before air travel. Don't use these sprays if you have trouble with your heart or your blood pressure.

Chewing gum, yawning, and swallowing all help the Eustachian tube to pump air into the middle ear. Pinching your nose closed while blowing into it also may force air from your nose up the Eustachian tube. Don't do this, however, if you have a cold, because you could spread infection from the nose to the middle ear.

What if I must fly with problem ears?

Some people have given up flying because they have always experienced trouble with their ears. Sometimes they have chronically diseased ears that cannot equalize pressure. Some people may even have an ear infection associated with a head cold. In cases like these, an ear doctor can make a microscopic incision in the eardrum and insert a tiny tube to keep the hole open. This is called a "pressure equalizing," or "PE" tube, because it guarantees that the pressure in the middle ear will always equal the pressure outside the ear. Thus, in the airplane the middle ear pressure will equal the cabin pressure, and the threat of ear pain or pressure problems is eliminated. Placement of the PE tube is generally a simple, painless office procedure. The tube eventually falls out of the ear by itself, or it can be removed at anytime after the airplane flight.

So, even if your ears have had trouble flying in the past, with the proper help they can again enjoy the friendly skies!

September 2007