



Pediatrics Clinic

EAR INFECTIONS: AIRPLANE TRAVEL

From Up To Date (www.uptodate.com) Beyond the Basics

AIRPLANE TRAVEL — Children with Eustachian tube dysfunction, including those with acute otitis media (AOM) may have pain during airplane descent [77,78]. Most commercial airplanes have pressurized cabins, with the pressure equal to that at 7000 to 10,000 feet. During the flight, middle ear pressure gradually equilibrates through swallowing or absorption of air by the middle ear mucosa. With airplane descent, the pressure in the cabin increases to that at landing altitude. If middle ear pressure does not increase accordingly (ie, if the Eustachian tube “locks in” the reduced pressure, due to obstruction of the nasopharyngeal orifice), the tympanic membrane may be forced medially and stretched, which can lead to painful barotrauma: bleeding into the tympanic membrane ([picture 2](#)), formation of fluid exudates in the middle ear, and occasionally to tympanic membrane rupture [79]. Upper respiratory infection appears to be a predisposing condition for aerotitis (inflammation of the ear caused by changes in atmospheric pressure, also known as barotitis). (See "[Ear barotrauma](#)", [section on 'Etiology'](#).)

Interventions to equalize middle ear and atmospheric pressure have not been well studied in controlled trials. We suggest that children be awake during descent and chewing gum or food (or sucking on a pacifier or bottle if they are too young to chew gum or food) to open the Eustachian tube and facilitate equalization of middle ear pressure [80]. Autoinflation via the Valsalva maneuver (forced exhalation with the mouth and nose closed) or a purpose-manufactured nasal balloon also may be helpful in older children [81]. In younger children, nasal bulb suction may be helpful. We do not suggest pre-flight treatment with antihistamines or decongestants. In a randomized trial, predeparture administration of [pseudoephedrine](#) did not decrease ear pain, but was associated with increased drowsiness [82].

There is little published information describing other adverse effects of airplane travel in children with AOM. However, there are no reports of extratemporal extension of AOM related to flying.

http://www.uptodate.com/contents/acute-otitis-media-in-children-treatment?source=search_result&search=otitis+media&selectedTitle=1%7E150#H93786248