

Six point seven percent of children may have tube reinsertions.

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### Population-based studies in otologic epidemiology (N813)

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#### Sudden sensorineural hearing loss: evidence from Taiwan

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**Learning Objectives:** Using the The National Health Insurance research Database to explore the risks of sudden hearing loss in Taiwan.

Taiwan's National Health Insurance program was implemented in March 1995. The National Health Insurance research Database contains registration files and original claim data for reimbursement. The databases are provided to researchers in Taiwan for study proposes. The Taiwan National Health Research Institute has validated the representativeness of the LHID2000 relative to the whole population of NHI enrollees in terms of gender distribution. In addition, several studies have demonstrated the high validity of the data taken from the NHI programme.

Possible causes of SSNHL may include viral or bacterial infection, circulatory disturbance in the area of the anterior inferior cerebellar artery, acoustic tumor, peri-lymphatic fistula, environment, diet or weather. SSNHL is also occasionally preceded by a common cold or upper respiratory tract infection, as reported in patients with vestibular neuritis or Ménière's disease.

We find that for the period under examination, gender-specific incidence rates per 100,000 of the population were 8.85 for males, and 7.79 for females, and that there was an increase in age-specific SSNHL incidence with age. After adjusting for seasonality, months and trends, there is no significant relationship between monthly SSNHL incidence rates and weather conditions. There is indeed a relationship between physician and hospital characteristics and the LOS for SSNHL patients. Risk of sudden sensorineural hearing loss did not increase following a recent herpes zoster attack. Male patients with SSNHL had a higher proportion of prior OSA than non-SSNHL-diagnosed controls. There was an association between AMI and prior SSNHL.

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### Population-based studies in otologic epidemiology (N813)

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#### Risk of Sudden Sensorineural Hearing Loss in Stroke Patients: A 5-year Nationwide Investigation of 44,460 Patients

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**Learning Objectives:** Post-stroke sudden sensorineural hearing loss (SSNHL) can hinder communication between patients and healthcare professionals, thereby restricting participation in rehabilitation programs and limiting improvements in physical performance. However, the relationship between stroke and SSNHL remains unclear. This study employed a nationwide population-based dataset to investigate the relationship between stroke and SSNHL.

**Objective:** Post-stroke sudden sensorineural hearing loss (SSNHL) can hinder communication between patients and healthcare professionals, thereby restricting participation in rehabilitation programs and limiting improvements in physical performance. However, the relationship between stroke and SSNHL remains unclear. This study employed a nationwide population-based dataset to investigate the relationship between stroke and SSNHL.

**Methods:** The Taiwan Longitudinal Health Insurance Database was used to compile data from 11,115 stroke patients and a comparison cohort of 33,345 matched non-stroke enrollees. Each patient was followed for 5 years to identify new onset SSNHL. Stratified Cox proportional-hazard regression analysis was used to examine the association of stroke with subsequent SSNHL.

**Results:** Among the 44,460 patients, 66 patients (55,378 person-years) from the stroke cohort and 105 patients (166,586 person-years) from the comparison cohort were diagnosed with SSNHL. The incidence of SSNHL was approximately twice as high among stroke patients than among non-stroke patients (1.19 and 0.63/1000 person-years, respectively). Stroke patients had a 71% increased risk of SSNHL, compared to non-stroke patients (adjusted hazard ratio (HR) = 1.71, 95% CI = 1.24–2.36). We also observed a remarkable increase in risk of SSNHL in stroke