REFERENCE	DESIGN	RECRUIT-MENT	CASE DEFINITION	SUBJECTS	ASSESSMENT TOOLS	RESULTS	AUTHOR'S CONCLUSIONS
Ruscetta MN, Arjmand EM, Pratt SR. Speech recognition abilities in noise for children with severe-to-profound unilateral hearing impairment. Int J Pediatr Otorhinolaryngol. 2005;69(6): 771–9.	Group comparisons (independent *t*-tests). *3 Tasks:* 1) Child faced signal loudspeaker at 0º orientation; signal presented in noise. 2) Child's right ear faced signal loudspeaker; signal presented in noise. 3) Child's left ear faced signal loudspeaker; signal presented in noise. *Analyses: T*-test comparisons of 1) Average SNR* of controls versus group with UHL* with two speech tests in all conditions. 2) Average SNR needed for HINT-C* and NST* for each group in each condition. 3) Average SNR needed in different conditions for both groups, using both speech tests.	Not provided.	*Controls:* ≤20dB* HL* at all frequencies tested (air .25–8 kHz;* bone .5–4 kHz) *UHL:* PTA* ≥70dB HL in one ear, and normal hearing in other ear 17 UHL subjects severe–profound	*Total:* N = 37 *With UHL:* N = 20 *Controls:* N = 17 Ages 6–14 years. Children with previous diagnosis of develop-mental delay or who exhibited substantive problems with receptive vocabulary eliminated from study.	HINT-C and NST. Multi-talker babble continuously presented at 65 dB positioned at 45º, 135º, 225º, 315º azimuths.	In most listening conditions greater SNRs needed by children with UHL than controls on both speech tests. In every listening condition, both groups needed greater SNRs to perform equally well on NST as on HINT-C. For HINT-C, controls required greater SNRs when facing signal than when signal was presented to one ear (monaural direct). Both tests: Children with UHL needed greater SNRs when facing signal than in monaural direct condition. Both tests: Children with UHL needed greater SNRs when signal presented to ear with loss (monaural indirect) than when facing signal.	Children with UHL required better listening conditions to perform as well as controls. All children benefited from signals delivered in a monaural direct condition. Children with UHL performed best in monaural direct condition when facing the signal at 0º. Greater SNRs needed for both groups when restricted contextual cues were available versus when sentential cues were available.

* SNR = signal-to-noise ratio; UHL = unilateral hearing loss; HINT-C = Hearing in Noise Test-Children; NST = Nonsense Syllable Test; dB = decibel; HL = hearing level; kHz = kilohertz; PTA = pure tone average

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Sargent EW, Herrmann B, Hollenbeak CS, Bankaitis AE. The minimum speech test battery in profound unilateral hearing loss. Otol Neurotol. 2001;22(4):480–6.	Repeated Measures with MSTB* administered in a sound-isolated booth under 4 conditions: 1) Quiet. 2) Speech toward good ear; noise toward ear with loss. 3) Speech toward ear with loss; noise toward good ear. 4) Bilateral speech and noise.	Controls recruited from volunteers who were offered a hearing screening test. Subjects with UHL* recruited from the patient pool of first author.	*Controls:* hearing threshold from .25–8 kHz* ≤25 dB* in both ears. *UHL:* Normal hearing same as controls in one ear; Severe–profound sensorineural loss in contralateral ear (hearing threshold from .25–8 kHz ≥70 dB).	*Total:* N = 20 *With UHL:* N = 10 *Controls:* N = 10 *10 Adult Controls:* No abnormal medical history; English primary language. *10 adults with UHL:* Absence of treatable cause of UHL; English primary language.	MSTB and HINT*	No difference between groups in quiet conditions. UHL group performed significantly worse than controls when noise was directed toward the good ear and in bilateral noise.	The MSTB may be useful in measuring the hearing difficulty of patients with UHL.

* MSTB = Minimum Speech Test Battery; UHL = unilateral hearing loss; kHz = kilohertz; dB = decibel; HINT = Hearing in Noise Test

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Welsh LW, Welsh JJ, Rosen LF, Dragonette JE. Functional impairments due to unilateral deafness. Ann Otol Rhinol Laryngol. 2004;113 (12):987–93.	Group comparisons (subjects not matched on age; other matching variables not discussed).	Not discussed	*Group A:* Normal binaural hearing, i.e. PTA* .5–2 kHz* ≤10 dB* and word discrimination of >90%. *Group B:* Normal monaural hearing and profound hearing loss in contralateral ear. *Group C:* High frequency SNHL* (≥2 kHz) in better ear and profound hearing loss in contralateral ear.	*Total:* N = 55 *Controls, Group A*: N = 19 Ages 9–73 years (mean 40.2 years). *With UHL*: Group B*: N = 16 Ages 7–73 years (mean 48.4 years). *Group C:* N = 20 Ages 54–84 years (mean 71.6 years).	*SIN* consists of single words presented in free field with competing speech babble (10dB). *Compressed Sentence Test*; monaural stimulus presented by earphone.	SIN: *Group A*: impact from 4%–36% on discrimination (mean 14%). *Group B:* Impact from 0%–60% on discrimination (mean 34%). *Group C:* Impact from 4%–76% on discrimination (mean 42%). Statistical analysis confirms that UHL significantly impairs auditory reception of speech in noise (p<.0005). Compressed Sentences*: Group A:* 11 of 19 scored 100% correct; remaining 8 had few errors. *Group B:* 11 of 16 scored 90%–100% correct; 5 of 16 impaired variably. *Group C:* wide range of performance 10%–90%. Mean 54%, 9 scored 50% or less. Statistical analysis confirms that scores of Groups A and B were not significantly different; however, mean difference between groups B and C was significant (p<.0005).	SIN data confirm subjects with UHL did not function as well as binaural listeners in noisy environments. Wide spectrum of impairment in groups B and C suggests uniquely individualized and inconsistent impact of noise on hearing. Neuronal plasticity did not appear to diminish suppressive impact of noise on hearing. For compressed speech, although groups A and B displayed some modest differences, group C was clearly impaired. UHL that is sensorineural and profound results in a communication impairment in noise. By contrast, UHL is not as affected by accelerated speech.

* PTA = pure tone average; kHz = kilohertz; dB = decibel; SNHL = sensorineural hearing loss; UHL = unilateral hearing loss; SIN = Speech in Noise test