| Table E3. Sound treatment/technologies intervention and outcomes (n=5) |
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| **Author****Year****Setting** | **Population Description** | **Intervention** | **Outcome Measures**  | **Results** |
| Davis,462007Australia | Baseline sample: Total n = 35Stage1 n = 16; Stage2 n = 19Setting: ClinicMean age (SD): 58.5y(13.4)Stage1: 61.3y(8.9): Stage2: 56.1y(16.2)Gender: 74%malePresumed etiology of tinnitus: NRDuration of tinnitus: 11.0y (11.3)Severity of tinnitus: moderate to severeNumber of dropouts: 1Reasons for dropouts: NRAudiological factors: decreased sound toleranceComorbidities: NR | Participants were provided with a high fidelity personal sound player with earphones and an acoustic stimulus that had been spectrally modified according to their individual audiometric profile. They were instructed to use the acoustic stimulus for at least 2 hr per day, particularly at those times when their tinnitus was usually disturbing.Each group had equal amounts of clinician time for education, monitoring, and support.Complete covering of perception initially, then intermittent perception (Stage2)Comparator: intermittent perception throughout (Stage1)Duration of treatment: 12mNumber of followups: 2,4,6 and 12 mDuration of study: NR | TS-QOL(TRQ, VAS)Loudness(VAS) | Improvements increased with time over the first 6 months of therapy, at which time 91% of all subjects across the two groups reported an improvement in tinnitus disturbance (as measured by the TRQ) of at least 40%, with a mean improvement of 65%.Inter-group differences were not statistically significant measuring tinnitus disturbance.Adverse events: NR |
| Dineen,82,83 1999, 1997Australia | Baseline sample: Total n = 96Group I: n = 28; Group ID: n = 20Group IR: n = 28; Group IDR: n = 20Setting: Hearing Clinic, UniversityMean age (SD): 54.37y (13.86)Gender: 66.1% male Presumed etiology of tinnitus: NRDuration of tinnitus: NRSeverity of tinnitus: NRNumber of dropouts:25Group I: 10 (36%); Group ID: 7 (35%)Group IR: 5 (18%); Group IDR: 3 (15%)Reasons for dropouts: 12 returned questionnaires, 2 in hospital; 2 away; 5 couldn’t attend clinic; 3 tinnitus not a sufficient problemAudiological factors: NRComorbidities: NR | Tinnitus management training designed to characterize common components of published tinnitus management programsGroup I: Information OnlyGroup ID: Information plus long-term low-level white noise (LTWN) – Starkey TM devices, 2 3- hour sessionsGroup IR: Information plus relaxation therapyGroup IDR: Information plus LTWN plus relaxationDuration of treatment: 2.5 hours per subjectNumber of followups: 3m, 12mDuration of study: NR | TS-QOL (TRQ, VAS)Loudness(VAS)G-QOL (DSP) | Subjects who initially had low ability to cope with tinnitus and preferred a more active coping style reported significantly greater benefit from LTWN stimulation than subjects whose primary approach to coping was to regulate the emotional impact of tinnitus.Adverse Events: NR |

| **Table E3. Sound treatment/technologies intervention and outcomes (n=5) (continued)** |
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| **Author****Year****Setting** | **Population Description** | **Intervention** | **Outcome Measures**  | **Results** |
| Hiller,89 2005GermanyStudy 1 | Baseline sample: Total n = 136Int1 (CBT+NG) n = 33; Cntrl1 (CBT only) n = 33Setting: Outpatient Department, UniversityMean age (SD):Int1 (CBT+NG): 51.0y (13.2);Cntrl1 (CBT only): 51.4y (10.9)Gender: Int1 (CBT+NG): 68% maleCntrl1 (CBT only): 41% malePresumed etiology of tinnitus: > 25% had sudden hearing lossDuration of tinnitus: at least 6 monthsSeverity of tinnitus: chronic Number of dropouts:Int1 (CBT+NG)= 2; Cntrl1 (CBT only)= 4Reasons for dropouts: external reasons; insufficient motivation; unknownAudiological factors: NRComorbidities: NR | CBT: subjects score 40 or more on TQ (severe), training consists of 10 120- minute sessions. Treatment was strictly manualized.All therapies conducted by two clinical psychologistsInt1 = CBT + Noise generatorCntrl1 = CBT onlyDuration of treatment: up to 10 weeksNumber of followups: 6, 18mDuration of study: NR | TS-QOL (TQ, T-Cog)Loudness(VAS) Anxiety (WI) | No additive effects due to the NGs could be demonstrated.Adverse Events: NR |
| Hiller,892005GermanyStudy 2 | Baseline sample: Total n=136Int2 (TE + NG)= 34; Cntrl2 (TE only) = 36Setting: Outpatient Department, UniversityMean age (SD):Int2 (TE + NG)= 52.5y (15.3)Cntrl2 (TE only) = 45.2y (14.1)Gender: Int2 (TE + NG)= 52% maleCntrl2 (TE only) = 61% male Presumed etiology of tinnitus: > 25% had sudden hearing lossDuration of tinnitus: at least 6 monthsSeverity of tinnitus: chronic, Number of dropouts:Int2 (TE + NG)= 3; Cntrl2 (TE only) = 3Reasons for dropouts: external reasons; insufficient motivation; unknownAudiological factors: NRComorbidities: NR | Tinnitus Education (TE): patients with mild to moderate distress as scored by the TQ – abridged version of CBT 4 90-minute weekly sessionsAll therapies conducted by two clinical psychologistsInt2 = TE + Noise generator Cntrl2 = TE onlyDuration of treatment: up to 4 weeksNumber of followups: 6, 18mDuration of study: NR | TS-QOL (TQ, T-Cog, VAS, Diary)Loudness(VAS) Anxiety (WI)G-QOL (SCL-90R, PSDI) | No additive effects due to the NGs could be demonstrated.Adverse Events; NR |
| Parazzini,1002011Italy, United States | Baseline sample: Total n=91Interven (OE-HA) n=49; Cntrl (SG) n=42Setting: Tinnitus clinics in Milan, BaltimoreMean age (SD): 38.8y (1.9)Gender: 51/91 (56%) male Int: 57.1%male; Cntrl: 54.7% malePresumed etiology of tinnitus: bilateral symmetrical hearing lossDuration of tinnitus: 69.5m (9.4)Severity of tinnitus: NRNumber of dropouts: 10Reasons for dropouts: NRAudiological factors: borderline between category 1 and category 2 (according to the Jastreboff classification) with HL ≤25 dB at 2kHz and HL ≥25 dB at frequencies >2kHzComorbidities: No participant treated with TRT before; No previous use of hearing aids  | TRT with open hearing aids (OE-HA)Comparator: TRT with sound generator (SG)Duration of treatment: 1 yearNumber of followups: 3 (3m, 6m, 12m)Duration of study: NR | G-QOL (VAS)TS-QOL (THI)Loudness(subjective) | TRT was equally effective with sound generator or open ear hearing aids: they gave basically identical, statistically indistinguishable resultsAdverse Events: NR |

\*Indicates the test used to measure outcomes which were selected to represent the domain in the forest plots (and subsequent SOE decisions)
**Abbreviations:** A/E = Adverse events; AMT = active motor threshold; CBT = cognitive behavioral treatment; DSP = Derogatis Stress Profile; ENT = ear, nose and throat; grp = group; G-QOL = global quality of life; HADS = Hospital Anxiety and Depression Scale; intervention = Interven; month = month; N/A = not applicable; NR = not reported; QOL = quality of life; RCT = randomized Controlled trial; SD = standard deviation; TCT = Tinnitus Coping Therapy; THI = Tinnitus Handicap Inventory; TMJ = temporal mandibular joint; TRQ = Tinnitus Reaction Questionnaire; TS = tinnitus specific; TSQ = Tinnitus Severity Questionnaire; VAS = visual analog scale; week = week; WI = Whiteley Index; WLC = wait list Cntrl; yr = year