**Appendix Table R1. Characteristics of eligible studies: other interventions in adults with normal cognition**

| **Intervention Type** | **Study****DesignCountry****RoB** | **N=** | **Population****Inclusion****Age (mean)****Sex****Race****Education****Baseline Cog** | **Intervention****Mode****Components****Frequency****Duration** | **Comparison****Mode****Components****Frequency****Duration** | **Outcome** **timing** | **Outcome** **Domain [Instrument]** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Other Medications** | Newhouse 20121RCTUSMedium | 74 | Non-smoking adults >55 with MCI (determined by subjective and objective impairments in cognitive function)Age, Mean (SD)76 (7.6)39% Female Race NRYears of Education, Mean (SD)15.9 (2.7)MMSE, Mean (SD)27.4 (2.0) | Transdermal nicotine patch 15 mg/day for 6 months | Placebo | 6 months | Diagnosis [CDR]Multidomain Neuropsychological Test Performance [Cognitive Drug Research Battery]Executive/Attention/Processing Speed [Connors Continuous Performance Test][Immediate and Delayed Paragraph Recall Test, NYU Version] [DSST] |
| Forlenza 20112RCTBrazilMedium | 45 | Community-dwelling adults >60 diagnosed with amnestic MCI per Mayo criteriaAge, Mean (SD)72.5 (5.9)Sex NRRace NRYears of education, Mean (SD)10.5 (5.3)ADAS-Cog Score, Mean (SD)10.9 (5.9) | Lithium titrated to serum levels 0.25-0.5 mmol/l (lower than dose for affective disorders); daily doses for 12 months | Placebo | 12 months | Diagnosis [CDR, Sum of Boxes]Biomarker [Amyloid-Beta] [Phosphorylated Tau At Threonine] [Total Tau]Multidomain Neuropsychological Test Performance [ADAS-Cog]Executive/Attention/Processing Speed [TMT A] [TMT B]Memory [CERAD Delayed Recall] [CERAD Figure Recall]Memory [Sequence of Letters and Numbers Score](Cognitive Performance outcomes compared only baseline to endpoint within group, not between group) |
| **Music Interventions** | Hars 20143Secondary analysis of RCTSwitzerlandMedium | 134 | Adults >65 at increased risk of fallingAge, Mean (SD)75 (7)96.5% FemaleRace NREducation, 15% primary, 67% middle, 18% highschool MMSE, Mean (SD)26.1 (2.9) | Weekly 1 hour supervised group class; multitask exercises to rhythm | Inactive control | 6 months | Brief Cognitive Test Performance [MMSE]Executive/Attention/Processing Speed [TMT A]Visuospatial [CLOX-1] |
| Bugos 20074USRCTHigh | 31 | Musically naïve older adults Age, Mean (SD)70.5 (5.6)81% FemalesRace NRYears of Education, Mean (SD)16.4 (NR)No baseline cognitive screen | Individualized piano instruction ½ hour per week and independent practice 3 hours per week for 6 months. (Music theory instruction component) | Inactive control | 9 months | Multidomain Neuropsychological Test Performance [WAIS]Executive/Attention/Processing Speed [TMT A] [TMT B] |
| **Sleep interventions** | Lucassen 20145USRCTHigh | 121 | Short-sleeping (<6.5 hours/night), obese (BMI 30-55 kg/m2) adultsAge, Mean (SD)41.1 (7)76% Female60% BlackYears of Education NRNo baseline cognitive screen | Sleep extension (up to 7.5 hours/night) with life-style modifications using personalized sleep plans | Continue current sleep habits; habits reviews every 2 months | Median 14 months | Multidomain Neuropsychological Test Performance [WAIS]Executive/Attention/Processing Speed [TMT A] [TMT B] [Wisconsin Card Sort Test]Memory [RCFT] [CVLT]Language [Verbal Fluency]Visuospatial [RCFT]Motor [Grooved Peg Board] |
| Sun 20136RCTChinaHigh | 80 | Adults >60 years with reduced sleep quality (Pittsburgh Sleep Quality Index >5)Age, Mean (SD)69 (8)74.7% FemaleRace NR1.3% high school or aboveMMSE, Mean (SD)24.2 (3.7) | Sleep hygiene educational pamphlet; guided progressive muscle relaxation tape (unclear frequency and duration; presumably daily for 12 months) | Sleep hygiene educational pamphlet | 12 months | Brief Cognitive Test Performance [MMSE]Memory [Weschler Memory Scale, Chinese Revised] |
| **Social Engagement** | Lam 20157RCTChinaHigh | 276 | Older adults with MCI (determined by subjective and objective impairments in cognitive function) and without dementiaAge, Mean (SD)75.4 (6.5)78.2% FemaleRace NREducation Level (Years), Mean (SD)3.9 (3.6)Catonese MMSE. Mean (SD)25.6 (2.3) | Cognitive group (board games, reading/discussing newspapers) at least 3, 1-hr sessions/week | Social activities -At least 3, 1-hr sessions/week | 12 months | Diagnosis [CDR, Sum of Boxes]Brief Cognitive Test Performance [MMSE]Multidomain Neuropsychological Test Performance [ADAS-Cog, Chinese Version]Memory [Delayed Recall]Language [CVFT] |
| Mortimer 20128RCTChinaHigh | 74 | Adults age 60-79 with an education-adjusted Chinese MMSE score greater than 26Age, Mean (SD)67.8 (5.8)67% FemaleRace NRYears of Education, Mean (SD)11.7 (3.4)Mattis Dementia Scale Score, Mean (SD)137.6 (7.6) | Group social interaction for 1 hour 3 times per week at a neighborhood community center | Inactive control with 4 check-in calls over 40 weeks | 40 weeks | Biomarker [Whole Brain Volume, % of Total Intracranial Volume]Multidomain Neuropsychological Test Performance [Mattis Dementing Rating Scale, Total Score]Executive/Attention/Processing Speed [DS Forward] [DS Backward] [SCWT, Word] [SCWT, Color] [SCWT, Color-Word] [WAIS Similarities] [TMT A] [TMT B] [Mattis Attention Score] [Mattis Initiation Score] [Mattis Conceptualization Score]Memory [RCFT, Copying] [RCFT, Recall] [AVLT, Immediate Recall] [AVLT, Delayed Recall] [AVLT, Delayed Recognition] [Mattis Memory Score]Language [Category Verbal Fluency, Animals] [BNT]Visuospatial [Bell Cancellation Test] [RCFT, Copying] [RCFT, Recall] [CLOX-1] [Mattis Construction Score] |
| **Transcranial random noise stimulation** | Snowball, 2013{Snowball, 2013 #795}United KingdomRCTHigh | 29 (4 excluded due to drop-out) | Adults with normal or corrected-to-normal vision, no history of psychiatric illness.Mean age (SD): 21 (SD~2.7)59% FemaleRace: NREducation: NRNo baseline cognition | Transcranial random noise stimulation by DC stimulator-Plus device, noise in high-frequency band, for 20 minutes per day for 5 days | Sham procedure: current applied for 30 seconds after upward ramping and then terminated for 5 days | 6 months | Executive/Attention/Processing Speed [Arithmetic Calculation And Drill] [Mental Rotation Task] [Attention Network Test] |

3MSE=Modified Mini Mental Status Examination; AD=Alzheimer’s disease; ADAS-Cog=Alzheimer’s Disease Assessment Scale-Cognitive Subscale; CERAD=Consortium to Establish a Registry for Alzheimer’s Disease; CVLT=California Verbal Learning Test; CDR=Change in Dementia Rating; COWAT= Controlled Oral Word Association Test; DSM=Diagnostic and Statistical Manual of Mental Disorders; MMSE=Mini-Mental State Examination; NINCDS-ADRDA=National Institute of Neurological and Communicative Disorders and Stroke-Alzheimer’s Disease and Related Disorders Association; N=sample size; NR=not reported; RCT=randomized controlled trial;RoB=risk of bias; SD=standard deviation; TMT=Trails Making Test (A and/or B); WAIS=Wechsler Adult Intelligence Scale; WMS=Wechsler Memory Scale