than oral delivery of either donepezil or galantamine. GLN-1062 was also found to elevate hippocampal immunolabeling for the synaptic marker, synaptophysin. **Conclusions:** GLN-1062 is an effective neurogenic trigger in the dentate gyrus and CA1 region of the hippocampus of adult rats and is more effective at inducing cell proliferation than other cholinesterase inhibitors currently used for the treatment of dementia.

P2-370 NO TITLE PROVIDED

Janet Hausmann[1], Judith Machts[2], Verena Bittner[3], Notger Mueller[4], Hans-Jochen Heinze[3], Daniel Bittner[3], *[1]University of Magdeburg, Dep. of Neurology, Magdeburg, Germany; [2]The German Centre for Neurodegenerative Diseases (DZNE), Magdeburg, Germany; [3]University of Magdeburg, Dep. of Neurology, Germany, Magdeburg, Germany; [4]German Center of Neurodegenerative Diseases (DZNE), Magdeburg, Germany.*

Background: Although mild cognitive impairment is considered a high risk factor for dementia, there is no pharmacological treatment available for this condition. Some nonpharmacological intervention studies have suggested a benefit of memory functioning and activities of daily living in MCI patients receiving a cognitive and/or physical training regimen. There is growing evidence that plasma brain-derived neurotrophic factor (BDNF) plays an important role in the pathogenesis of AD. **Methods:** Randomized, controlled study using a 12 week combined cognitive-motor intervention in 38 patients with amnestic MCI and 21 healthy controls at the age of 55 to 75 years. Out of the subjects with aMCI 19 were included in the training, 19 were regarded as waiting list. Neuropsychological assessment, consisting of visual and verbal episodic memory tests as well as verbal short term and working memory tests, MRI for hippocampal volume measurements and BDNF plasma analysis were drawn at baseline and at the end of the study. Moreover, short-term BDNF changes were measured at four intervention days. **Results:** Long term assessment showed an improvement in episodic memory in aMCI subjects (AVLT sum: T = -5.0, df = 16, $P < .001$) and healthy controls (AVLT sum: T = -2.3, df = 18, $P = .033$). Memory improvement was associated in both groups with hippocampal growth (aMCI: AVLT sum r = .348, $P = .05$; healthy controls: AVLT sum: r = .550, $P = .03$) and in healthy controls with BDNF increase (AVLT sum: r = .473, $P = .04$), while in aMCI a change of BDNF during the intervention was not observed. BDNF increased in healthy controls during long term follow-up (T = -2.1, df = 17, $P = .05$) as well as in short term effect before and after a single training bout. Contrasting in aMCI short term changes demonstrated an increasing drop of BDNF towards the end of the study. **Conclusions:** These findings support the utility of a cognitive intervention in aMCI that is comparable to that in healthy controls. However it yields evidence that underlying mechanisms are different pointing to an impaired BDNF modulation in aMCI.

P2-371 ELEVATED DIASTOLIC BLOOD PRESSURE PREDICTS POORER VERBAL MEMORY IN MCI ADULTS WITH PREDIABETES

Jeannine Skinner[1], Brenna Cholerton[2], G. Stennis Watson[3], Maureen Callaghan[4], Angela Hanson[5], Suzanne Craft[6], Laura Baker[7], *[1]University of Washington, Seattle, Washington, United States; [2]VA Puget Sound Health Care System, Tacoma, Washington, United States; [3]VA Puget Sound Health Care System, University of Washington, Seattle, Washington, United States; [4]Geriatric Research Education and Clinical Center/VA Puget Sound Health Care System, Tacoma, Washington, United States; [5]University of Washington Medical Center, Seattle, Washington, United States; [6]VA Puget Soud Health Care System/University of Washington, Seattle, Washington, United States; [7]University of Washington School of Medicine, Seattle, Washington, United States.*

Background: In older adults, elevated systolic blood pressure (SBP) is a known risk factor for cardiovascular events and cognitive dysfunction. Diastolic blood pressure (DBP) may also be a risk factor for cardiovascular events. Sub-clinical high-normal glucose levels characterizing pre-diabetes, the prodrome of type 2 diabetes, is also associated with cardiovascular disease and with cognitive impairment. Given well-documented associations between glycemic and blood pressure dysregulation with negative consequences for cognition, we examined relationships between cognitive function and DBP in older adults with and without prediabetes and mild cognitive impairment (MCI). **Methods:** Participants were categorized using standard American Diabetes Association glycated hemoglobin (HbA1C) thresholds as normoglycemic (HbA1C<5.7) or pre-diabetic (5.7>HbA1c≤6.4). The sample included 11 normoglycemic cognitive normal participants (mean age = 63yrs), 27 normoglycemic participants with MCI (mean age = 66yrs), 8 cognitively normal participants with pre-diabetes (mean age = 63yrs), and 15 participants with MCI and pre-diabetes (mean age = 66yrs). Blood pressure was assessed in duplicate following a 10-minute rest period. Immediate and delayed verbal memory was assessed using Logical Memory. **Results:** A significant two-way interaction between diagnostic group and prediabetes status on DBP (ANOVA, $P = .012$) indicated that DBP was elevated for adults with MCI and prediabetes compared to those with MCI alone ($P = .03$), with no difference by prediabetes status for cognitively normal adults ($P = 0.17$). In addition, for adults with MCI and prediabetes, higher diastolic blood pressure was negatively correlated with total recall (immediate +delayed) on Logical Memory (r = -0.53, $P = 0.05$). **Conclusions:** Older adults with MCI and prediabetes have higher DBP than MCI normoglycemic older adults, and for this group, increasing DBP predicts reduced verbal memory. Poor verbal memory is a cardinal characteristic of prodromal Alzheimer disease (AD). Older adults with concomitant MCI, prediabetes, and elevated DBP may be at higher risk for future cognitive decline and dementia. These findings provide a basis for future studies to examine the effects of improved glycemic control on DBP in older adults with MCI.

P2-372 NEUROPSYCHOLOGICAL THERAPY AND MUSIC GERAGOGY FOR PATIENTS WITH MILD-TO-MODERATE DEMENTIA

Jennifer Liesk[1], Annette Petrelli[1], Stephanie Kaesberg[1], Gisela Baller[2], Josef Kessler[3], Elke Kalbe[1], *[1]University of Vechta, Vechta, Germany; [2]Practice for Neuropsychology, Bonn, Germany; [3]University Hospital of Cologne, Cologne, Germany.*

Background: Although first evidence for moderate effects of non-pharmacological interventions such as neuropsychological treatment on activities of daily living (ADL), cognition, and quality of life in patients with dementia exists, there is a lack of randomized, controlled studies in this field. **Methods:** 24 patients with mild to moderate dementia in nursing homes were randomly assigned to neuropsychological (n = 12; age 84.3, sd: 5.4; 1 man; MMSE score 19.7, sd: 5.7) or a music geragogical (n = 12; age 83.6, sd: 5.1; 1 man; MMSE score 20.1, SD: 3.5) intervention. Both programs consist of twelve group-sessions of 90 minutes each over six weeks with two sessions per week. Cognitive function, quality of life and ADL were assessed before and after the training period using a neuropsychological test battery. **Results:** On a group level, no significant improvements of either treatment could be found. However, positive results were evident for a number of persons after analysis on a single-case approach. There were considerably improvements in single cases, for example the general cognitive state (MMSE; pre: 16, post: 18), verbal fluency (FAS; pre: 8, post: 18), attention (Brief Test of Attention (BTA); pre: 8, post: 13), depression (Geriatric Depression Scale (GDS); pre: 3, post: 1) and quality of life (P-DemQoL; pre: 57, post: 88) in one participant (age 88) - and similar improvements in other individuals. For the person, who profited most from the music geragogical program (age 88), increase in the general cognitive state (DemTect total; pre: 4, post: 5), verbal fluency (DemTect supermarket; pre: 1, post: 11), visuo-constructive performance (Rey-Osterrieth Complex Figure - copy; pre: 25, post: 30), cognitive speed (TMT-A; pre: 265 sec., post: 90 sec.), and quality of life (DemQoL; pre: 98, post: 103) were evident. **Conclusions:** The results of the present study suggest that, althouth benefits of neuropsychological therapy or music geragogical programs may not be expected for all or most patients with dementia in nursing homes, significant improvements can be induced in some individuals. Further research with larger samples