positive association of dementia with mortality significant even after all adjustments, HR=2.65 (95% CI: 1.02-6.92), p: 0.045. After subgroup analysis, there was no significant association between mortality and dementia according to frailty status. Our study results suggest that dementia is associated with a higher risk for mortality in Veterans at a Memory Disorders clinic. Frailty did not modify the effect.

IMPROVED HEALTHSPAN AND LIFESPAN WITH LATE ONSET PHARMACOLOGICAL OR DIETARY INTERVENTIONS IN MICE

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While late-onset dietary (e.g. calorie restriction) or pharmacological (e.g. rapamycin) interventions can extend longevity in rodents, whether or not they can be used to reverse or forestall onset of aging-related symptoms (i.e. frailty) remains untested. Here, we employed methionine restriction (MR), a dietary intervention associated with weight loss and longevity extension, or a fumagillin derivative, ZGN-1062, as a pharmacological agent associated with weight loss across multiple species. 21mo Male and female C57BL/6 mice were randomized to one of three groups: control, 0.1% MetR, or ZGN-1062 (1.5mg/kg). There was no difference in frailty index (FI) amongst groups at baseline (21 mo age). MetR and ZGN-1062 treatments resulted in modest weight loss independent of sex. After 6 months, FI increased consistent with reduced healthspan in control males (0.23+/-0.01 to 0.34+/-0.01 A.U, p<0.0001) and females at this age (0.19+/-0.03 to 0.24+/-0.01, p<0.0001). Male MetR and ZGN-1062 mice had significantly lower FI scores after 6 mo of treatment (MetR: 0.28+/-0.04, p<0.0001; ZGN-1062: 0.29+/-0.03, p=0.0002). While female mice were not significantly different from controls, they were, overall, less frail than males at 26 months, suggesting sexual dimorphism in the timing frailty onset in mice. Although the end points of this study have not been reached (survival studies are ongoing), the data obtained to date suggest that late-life treatments can improve healthspan markers, at least in male mice. Such treatments include a pharmacological intervention associated with weight loss, which may be a more practical therapeutic strategy towards mitigation of age-related healthspan decline than dietary restriction-based interventions.

EFFECTS OF A 6-WEEK TASK SPECIFIC POWER TRAINING WITH AND WITHOUT COGNITIVE TRAINING AMONG OLDER ADULTS WITH SLOW GAIT

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Task-specific power training (InVEST) targets leg power and mobility skills that are beneficial for treating slow gait speed for older adults. This study investigated the efficacy of a short-term InVEST training on leg power, mobility performance, and gait characteristics and further examine whether the addition of cognitive training would augment the impact on the outcomes. Mobility limited community-dwelling older Veterans age ≥65 years were recruited. Participants were randomly assigned to either InVEST training (n=10) or InVEST+cognitive training (n=11). Training occurred 3 times per week for 6 weeks. Sessions were either 70 minutes (InVEST+cognitive training) or 40 minutes (InVEST) in duration. Leg power, mobility performance (Short Physical Performance Battery), and gait characteristics (gait speed, stance time, step width, swing time, step length and their variabilities under single-task, simple and complex dual-task walking conditions) were evaluated. Twenty-one men with mean age 76±7 years completed the study and 86% were of white race. Among all participants, clinically relevant and statistically significant improvements in leg power, mobility performance, and gait characteristics (gait speed, step length, stance time under all three gait conditions) were observed. There were no statistically significant or clinically relevant group differences among any of the outcomes based on cognitive training status. Short-term InVEST training led to clinically meaningful improvements in leg power, mobility performance, and gait characteristics. These findings add to the body of evidence supporting the benefits of InVEST training on mobility and do not support the contention that mixed modes of training (cognitive and physical) may augment mobility outcomes.

ASSOCIATION BETWEEN NEIGHBORHOOD CHARACTERISTICS AND DEMENTIA: AN ECOLOGICAL ANALYSIS

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Research has examined the relationship between neighborhood environments and cognitive decline, yet few have investigated the role of neighborhood characteristics specifically on dementia. This ecologic study examined the geographic distribution of dementia incidence and investigated ecologic associations between census-tract neighborhood characteristics and diagnosed dementia case incidence from 2010-2014 in the South Carolina (SC) Alzheimer’s Disease Registry. Analyses took place on the census-tract level (n=1089) with population ≥1. Neighborhood measures came from the Decennial Census, American Community Survey, Rural Commuting Area Code, and County Health Rankings. To estimate the ecologic association between neighborhood characteristics and dementia incidence, we conducted a zero-inflated, negative binomial mixed-effects model. The overall age-sex standardized dementia incidence rate was 2,885.4 per 100,000 people per census tract from 2010-2014 in SC.
In an adjusted model, neighborhood characteristics had a significant association with dementia incidence. Rural and small urban census tracts had 62% (IRR=0.38; 95% CI= 0.27-0.54) and 58% (IRR=0.42; 95% CI= 0.29-0.60) lower dementia incidence, respectively, among ≥50 years old compared to urban census tracts while adjusting for neighborhood median-household income, racial composition, commute time, and age structure. The results from this study show a negative relationship between rural neighborhoods and dementia, contrary to previous findings. However, lower access to care in rural neighborhoods can result in lower detection rates and thus could present a reporting bias. Future research should investigate additional census-tract neighborhood characteristics (e.g. green space, pollution rates or psychosocial stress) that contribute to lower dementia rates in rural areas.

HIGH THROUGHPUT YEAST REPLICATIVE LIFESPAN SCREEN UNCOVERS HISTONE DEACETYLASE HDA AS NOVEL REGULATOR OF AGING
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In this work, we set out to develop a high throughput screening method, SEBYL (SEQUencing Based Yeast replicative Lifespan screen), in order to identify new aging regulators in budding yeast. By utilizing SEBYL on yeast knockout collection, we were able to identify 285 long-lived gene deletions, of which a significant portion was proven to have extended lifespan by previous classical experiments. To demonstrate the ability of our method to discover new genes and pathways involved in aging process, we focused on characterizing one newly identified long-lived candidate emerged from the screening, histone deacetylase complex HDA, and found it regulates aging through mediating stress response pathways, especially DNA damage stress response. Presence of HDA complex inhibits expression of trehalose metabolism genes, which act as stress protectant. When HDA complex is mutated, trehalose genes are de-repressed, enhancing stress response and eventually promotes longevity. In summary, we conclude SEBYL to be time and energy saving, robust, and suitable for discovery of aging regulating genes using various preexisting yeast mutant collection resource.

THE EFFICACY OF CASE-BASED INSTRUCTION ON STUDENT ATTITUDES TOWARDS PAIN AND OPIOID RISK ASSESSMENT IN OLDER ADULTS
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A survey of US medical schools found that only 10-12 hours in a format other than didactic. 200 fourth-year medical students were split into groups of 20, with 2 instructors in each room. A survey was administered pre/post workshop asking participants to rate 10 statements using a Likert scale. The 2 hour workshop involved case studies to work through while using a created pain instructional card. The case-based instruction format demonstrated high efficacy in shaping the beliefs and personal evaluations of medical students. Prior to the workshop, only 34% of students were positive about their pain assessment abilities. 9.5% were positive about their opioid conversion skills, and only 4% were positive about opioid risk assessment skills. After the workshop, these positive evaluations increased to 97%, 95%, and 92% respectively. The McNemar test proved these findings to be statistically significant (p<.0001). Case-based instruction with small-group discussion is a reliable tool in teaching medical trainees about pain management and opioid risk assessment in adults aged 65 and older. This workshop needs to be run with geriatric/palliative care residents to evaluate clinical incorporation of session concepts through resident charting.

CURIOSITY TOWARDS ROBOT: THE ROLE OF AGE AND PERSONAL RELEVANCE
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Being curious has various physical, social and psychological benefits. However, theories like the socioemotional selectivity theory suggest that information seeking goals tend to be overshadowed by emotionally meaningful goals with age. Personality and social psychology research also found consistent decline of curiosity in later adulthood. In contrast, selective engagement theory propose that people simply become more selective on where they allocate their cognitive resources as they age. Particularly, older adults tend to invest in things that have personal relevance. Yet, few studies have explored the interaction between age and personal relevance in the context of information seeking tendencies. We conducted a pre-test-post-test experiment with 50 younger (age 19-34) and 50 older adults (age 60-78). Participants were invited to learn about a robot (Vector by Anki) and freely interact with the robot for about 30 minutes. Questionnaires were filled before and after the interaction. Our results confirmed previous findings that older adults showed lower level of trait curiosity than younger adults (F(1, 98) =21.94, p<.001, ΔR2=). However, older adults actually showed higher level of state curiosity towards robot than their younger counterparts (F(1, 96)=21.94, p<.001). Moreover, there was a marginally significant interaction effect of personal relevance (p = .06). Tukey’s post-hoc test revealed that older adults who perceived increased relevance (M=5.39) after the interaction were significantly more curious than younger adults who also perceived increased relevance (M=4.51, p=.02), but there was no significant age difference when they perceived decreased relevance. Present study offers insights on promoting curiosity among older adults.

COST-EFFECTIVENESS ANALYSIS OF THE COLLABORATIVE STEPPED CARE INTERVENTION FOR LATE-LIFE DEPRESSION
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