

Results: Improvements over time in pain interference and 1,5 Ag biomarker were noted for all groups. No significant changes were observed in other physical, functional and physiological measures. Discussion This study illustrated potential benefits of the AFL intervention on the health of lower-income older adults and lessons learned from this pilot will be used to make improvements for a large-scale randomized controlled trial.

ADVANCE CARE PLANNING AND HOSPICE USE AMONG PEOPLE WITH DEMENTIA: A REPORT FROM THE HEALTH AND RETIREMENT SURVEY

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People with Alzheimer's disease and related dementias (ADRD) frequently receive sub-optimal end-of-life care (EOLC), often enduring invasive procedures such as tube feeding, resuscitation, and surgery within days of their death. While advance care planning (ACP) has shown effectiveness in improving EOLC for those with ADRD, there are many barriers to ACP specific to the ADRD population. Research suggests that hospice care is optimal in reducing end of life suffering for ADRD patients. This study aimed to empirically assess hospice utilization and ACP for individuals with ADRD compared to individuals without ADRD, and to assess the impact of ACP on hospice utilization for individuals with ADRD. Data came from the 2016-2018 wave of the Health and Retirement Study (HRS), a national longitudinal study collecting health and demographic data on older Americans. This analysis evaluated survey responses from 1,224 proxy respondents for individuals who died during this period. In this sample, people with ADRD were both significantly more likely to have utilized hospice care (OR=1.37) and to have written EOLC instructions in place (OR=1.19). Those with ADRD were 22% less likely to have discussed their EOLC wishes with their proxy than those without ADRD. Having a written EOLC plan in place significantly increased the odds of hospice utilization (OR=1.37) but discussion around EOLC preferences increased odds of hospice utilization at a higher rate (OR=1.59). These results support policy to advance earlier ACP conversations around EOLC preferences and the implementation of written EOLC instructions to reduce suffering for individuals with ADRD diagnoses.

AN ENVIRONMENTAL CONTRIBUTOR TO PARKINSON'S DISEASE CAUSES A HORMETIC LIFESPAN EFFECT IN C. ELEGANS

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Only 5-10% of Parkinson's Disease (PD) cases have a direct genetic origin; however, exposure to herbicides, pesticides, and interactions with soil are potential risk factors. PD is characterized by the loss of dopaminergic (DA) neurons and the formation of protein inclusions that contain α -synuclein (α -syn). Conversely, a soil bacterium, *Streptomyces venezuelae* (*S. ven*), produces a secondary metabolite that causes age- and dose- dependent DA neurodegeneration in *C. elegans*; it also exacerbates α -syn-induced DA neurodegeneration. Previous studies from our lab determined that exposure to the *S. ven* metabolite caused

oxidative stress, mitochondrial fragmentation and enhanced reactive oxygen species (ROS). Here we report that exposure to *S. ven* metabolite causes a hormetic effect on *C. elegans* lifespan, where low concentrations (5X) extend lifespan in N2 animals, but at higher concentrations (20X) lifespan is decreased. To further examine this hormetic response, we examined *daf-16* mutants in this assay. *daf-16* mutants displayed no significant differences between solvent and metabolite at both high and low concentrations, suggesting the hormetic response is *daf-16* dependent. We also studied *S. ven* metabolite on *C. elegans* aging mutants. We investigated mutants in the AMPK signaling pathway and found when exposed to the 20X concentration of *S. ven* metabolite, *aak-2* mutants displayed no significant difference between solvent and metabolite over lifespan. However, when *aak-2* mutants were exposed to solvent control and the 5X concentration, mutants displayed a decreased lifespan. This suggests that functional *aak-2* might be important for increased lifespan when combating toxicants following chronic exposure.

ARE LONELINESS AND SOCIAL ISOLATION EQUAL THREATS TO HEALTH AND WELL-BEING? AN OUTCOME WIDE LONGITUDINAL APPROACH

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The detrimental effects of loneliness and social isolation on health and well-being outcomes are well documented. In response, governments, corporations, and community-based organizations have begun leveraging emerging tools to create interventions and policies aimed at reducing loneliness and social isolation at-scale. However, these efforts are frequently hampered by a key knowledge gap: when attempting to alleviate specific health and well-being outcomes, decision-makers are unsure whether to target loneliness, social isolation, or both. Participants (N=13,752) were from the Health and Retirement Study- a diverse nationally representative, and longitudinal sample of U.S. adults aged > 50 years. We examined how changes in loneliness and social isolation over a 4-year follow-up period (from t0:2008/2010 to t1:2012/2014) were associated with 32 indicators of physical-, behavioral-, and psychosocial-health outcomes 4-years later (t2:2016/2018). We used, multiple logistic-, linear-, and generalized-linear regression models, and adjusted for sociodemographics, personality traits, pre-baseline levels of both exposures (loneliness and social isolation), and all outcomes (t0:2008/2010). After adjusting for a wide range of covariates, we observed that both loneliness and social isolation have similar effects on physical health outcomes and health behaviors, whereas loneliness is a stronger predictor of psychological outcomes. In particular, behavioral dimensions of the social isolation measure (i.e., participation in social/religious activities, social interaction frequency) were most strongly associated with the largest number of health and well-being outcomes, including all-cause mortality. Loneliness and social isolation have independent effects on various health and well-being outcomes, thus, should be distinct targets for interventions aimed at improving the health and well-being.