significant relationship between chronotype and total physical activity in our sample, ß= -.117, p = .114. These findings are inconsistent with what has been shown in younger samples and suggest that the relationship between chronotype and physical activity may change as one ages. Future research should consider whether particular physical activity intensities (vs. total activity) may have a relationship with chronotype in older adults.

## ADAPTING AN EVIDENCE-BASED PHYSICAL ACTIVITY PROGRAM FOR THE REJOIN TRIAL FOR OLDER BREAST CANCER SURVIVORS

Shirley Bluethmann,[1] Eileen Flores,[1] Meghan Grotte,[1] Jared Heitezenrater,[2] Cristina Truica,[3] and Kathryn Schmitz,[1] *1. Penn State College of Medicine, Hershey, Pennsylvania, United States, 2. Penn State College of Medecine, Penn State College of Medicine/ Hershey, Pennsylvania, United States, 3. Penn State College of Medicine, Penn State Cancer Institute, Pennsylvania, United States*

Purpose: Physical activity (PA) is a recommended part of breast cancer survivorship. PA promotes survival and mitigates symptoms in older breast cancer survivors (BCS), especially in reducing joint pain associated with adjuvant hormonal treatment. The purpose of this report is to describe adaptations to Fit & Strong!, an evidence-based curriculum, to meet the needs of older BCS. Methods: First, we reviewed all educational materials with scientific experts, including specialists in breast and exercise oncology. Next, we conducted semi-structured phone interviews with 3 BCS for an in-depth review of educational materials for the trial. All interviews were recorded and transcribed. Constant comparative analysis was used to identify themes and specify required technical changes. Subsequently, we recruited 3 new BCS to pre-test adapted materials and exercise sessions, complete a follow-up interview to refine our final product and rate acceptability with older BCS. Results: Overall, BCS found the materials and experience very acceptable (mean score of 9.5/10). Content changes included simplifying exercise instructions, prioritizing trial-specific content and updating photographs to be more age-appropriate. Due to COVID, the pre-test activity was conducted by Zoom and participants were given additional time and coaching to participate using this technology. BCS said they would prefer to exercise in person but reported the remote experience as very satisfactory. Conclusion: Our multi-step adaptation process provided an acceptable intervention to meet the needs of older BCS. Lessons learned will be applied to the forthcoming clinical trial, which will also be conducted remotely to maximize safety and access.

## ARE MACHINE LEARNING MODELS USED TO REPRESENT ACCELEROMETRY DATA ROBUST TO AGE DIFFERENCES?

Todd Manini,[1] Chen Bai,[1] Amal Wanigatunga,[2] Santiago Saldana,[3] Ramon Casanova,[4] and Mamoun Mardini,[1] *1. University of Florida, Gainesville, Florida, United States, 2. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States, 3. Wake Forest University, Winston-Salem, North Carolina, United States, 4. Wake Forest School of Medicine, Winston-Salem, North Carolina, United States*

Regular and sufficient amounts of physical activity (PA) are significant in increasing health benefits and mitigating health risks. Given the growing popularity of wrist-worn devices across all age groups, a rigorous evaluation for recognizing hallmark measures of physical activities and estimating energy expenditure is needed to compare their accuracy across the lifespan. The goal of the study was to build machine learning models to recognizing the hallmark measures of PA and estimating energy expenditure (EE), and to test the hypothesis that model performance varies across age-group: young [20-50 years], middle (50-70 years], and old (70-89 years]. Participants (n = 253, 62% women, aged 20-89 years old) performed a battery of 33 daily activities in a standardized laboratory setting while wearing a portable metabolic unit to measure EE that was used to gauge metabolic intensity. Participants also wore a Tri-axial accelerometer on the right wrist. Results from random forests algorithm were quite accurate at recognizing PA type; the F1-Score range across age groups was: sedentary [0.955 – 0.973], locomotion [0.942 – 0.964], and lifestyle [0.913 – 0.949]. Recognizing PA intensity resulted in lower performance; the F1-Score range across age groups was: sedentary [0.919 – 0.947], light [0.813 – 0.828], and moderate [0.846–0.875]. The root mean square error range was [0.835–1.009] for the estimation of EE. The F1-Score range for recognizing individual PAs was [0.263–0.784]. In conclusion, machine learning models used to represent accelerometry data are robust to age differences and a generalizable approach might be sufficient to utilize in accelerometer-based wearables.

## BARRIERS AND FACILITATORS IMPACTING PHYSICAL ACTIVITY AMONG RURAL AMERICAN INDIAN OLDER ADULTS

Maja Pedersen,[1] Kari Harris,[2] Jordan Lewis,[3] Mattea Grant,[2] Chelsea Kleinmeyer,[4] Ashley Glass,[4] Blakely Brown,[2] and Diane King,[5] *1. Stanford University, Stanford, California, United States, 2. University of Montana, Missoula, Montana, United States, 3. Memory Keepers Medical Discovery Team/University of Minnesota Medical School, Duluth campus, Duluth, Minnesota, United States, 4. Confederated Salish and Kootenai Tribal Health Department, St Ignatius, Montana, United States, 5. University of Alaska Anchorage, Anchorage, Alaska, United States*

Background. American Indian (AI) older adults experience pronounced health disparities and demonstrate among the lowest levels of physical activity (PA) of racial and ethnic groups. Nearly half of AI older adults live in rural areas, indicating distinct challenges to participation in PA. Research to identify factors influencing PA among this population is missing from the literature, yet is critical to inform culturally relevant PA intervention development and implementation. Purpose. To identify barriers and facilitators to PA among rural AI older adults using the ecological model and qualitative methods. Methods. A community-based approach was used to conduct semi-structured interviews with rural AI older adults. Interview questions were based on a multi-level ecological model. Content analysis was performed, using an iterative coding process to identify findings. Results. Participants' (n=21) mean age was 66 years. Barriers and facilitators to PA were