OPACH Study
Progress Report 2020
Objective Physical Activity and Cardiovascular Health (OPACH)

- Ancillary study of LLS: R01 HL105065 (PI: Andrea LaCroix)
- Aims to determine associations of PA and SB with cardiovascular events, total mortality, and incident falls
- Added 7-day accelerometry, self-reported PA (PAQ and CHAMPS) and Falls calendar for a year
- N=7048 participated, 6489 completed 7-day accelerometer and sleep log (2012-2014)
OPACH Publications

• 20 papers published, 7 under review
• 31 published abstracts

Outcomes being studied:

✓ Atrial fibrillation
✓ Congestive heart failure
✓ Diabetes
✓ Physical function/mobility
✓ Cognitive function
✓ Injurious falls (CMS)
✓ Fractures
✓ PA-related cancers, breast cancer
Best of AHA Awards

• Muscular Strength Predicts All-Cause Mortality Independent of MVPA in Women Ages 63-99 Years – M. LaMonte, 2017

• Intensity-specific Physical Activity Measured by Accelerometry and Mortality in Women: The OPACH Study – M. LaMonte, 2018

• Accelerometer-measured Light Physical Activity is Heart Healthy in Older Women: The OPACH Study – A. LaCroix, 2018

• Poor Lower Extremity Physical Function Increases Risk for Cardiovascular Disease Events in Older Women: The OPACH Study – J. Bellettiere, 2019
2020 Awards

• Top-scoring abstract at the 44th Annual American Society of Preventive Oncology Meeting 2020: Humberto Parada, SDSU

• One of the 17 top-ranked and has been accepted for publication in *Cancer Epidemiology, Biomarkers & Prevention*

• The Calle/Rodriguez Memorial Minority Travel Award by the American Cancer Society
OPACH Study Page

https://www.whi.org/researchers/data/WHIStudies/StudySites/AS286/Pages/home.aspx
NIH Grants using OPACH Data

1. WHISH U01 (Kooperberg, LaCroix, Stefanick; NHLBI)
2. WHISH-2-Prevent Heart Failure (Eaton; NHLBI)
3. Novel methods for analyzing accelerometry data (Di)
4. Sedentary Time Interrupted P01 (LaCroix; NIA)
5. Novel Computational Techniques to detect the relationship between sitting patterns and metabolic syndrome in existing cohort studies (Natarajan; NIDDK)
New OPACH Grants

6. Unraveling Physical Activity and Sedentary Behavior Associations with Cancer Combining Two Cohorts (Evenson R01 CA227122-01A1; UNC Chapel Hill) – Awarded 9/2019

7. Non-fracture fall-related injuries (Strotmeyer R01AG061136 - 01A1; U Pittsburgh) – Awarded April 2020

8. Circadian Rest-Activity Rhythms, Metabolomic Profiles, and Incidence of Alzheimer’s Disease and Related Dementia in Older Men and Women (Xiao R01AG063946-01A1; UT Houston) – Awarded April 2020

9. Physical activity across the Lifecourse Study (PAALS) (LaCroix, Godino, Jackson, LaMonte) re-submitted 11/2019 – Score 35
Focus areas

• Relative intensity of PA

• Changes in PA and SB patterns over 10 years (LLS1 – LLS2)

• In relation to incident CVD, changes in SPPB and biomarkers of healthy CVD aging (cardiac troponin, natriuretic peptide, galactin-3)

• Atrial fibrillation, CV reactivity, continuous heart rate monitoring (Solo patch)

• Scored at 46 with overall positive reviews – to be resubmitted in November 2020
“The least movement is of importance to all nature. The entire ocean is affected by a pebble.”

—Blaise Pascal
Junior Faculty and Doctoral Students

- Aladdin Shadyab, PhD (LaCroix)
- John Belletiere (LaCroix)
- Kelsie Full (Kerr, LaCroix)
- Andrew Hua (Buchner)
- Dori Rosenberg, PhD (LaCroix)
- Priya Palta (Evenson)
- Emily MacDonald (LaCroix)
- Nicole Glass (LaCroix, Bellettiere)
- Purva Jain (LaCroix, Bellettiere)
- Ben Schumacher (LaCroix, Bellettiere)
- Brian Boursiquot (Perez, Bellettiere)
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