

HAJIN JANG, MPH

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Research Interests

- Obesity and muscle phenotyping using multimodal body composition evaluation
- Cross-cohort data harmonization and longitudinal analyses
- Risk prediction modeling for aging-related health outcomes

Education and Training

2023 – 2026 (expected)	PhD, Epidemiology	University of Pittsburgh, Pittsburgh, PA, USA
2020 – 2022	MPH, Epidemiology and Risk Management	Korea University, Seoul, Korea
2015 – 2020	BA, Health Policy and Management BEcon, Statistics (double major)	Korea University, Seoul, Korea

Publications

Published Articles

1. Kim N*, **Jang H***, and Hawkins H. Chrononutrition Patterns in People Who Attempted Weight Loss in the Past Year: A Descriptive Analysis of the National Health and Nutrition Examination Survey (NHANES) 2017-2020 Pre-Pandemic. *Dietetics*. 2025 Jun 3. 4(2):24. *Co-first authors
2. Byun D, Kim Y, **Jang H**, and Oh H. Screen time and obesity prevalence in adolescents: an isotemporal substitution analysis. *BMC Public Health*. 2024 Nov 12. 24(1): 3130
3. **Jang H**, Cho Y, and Oh H. Recreational screen time and obesity risk in Korean children: a 3-year prospective cohort study. *International Journal of Behavioral Nutrition and Physical Activity*. 2024 Sep 30. 21(1): 112
4. **Jang H**, Kim R, Lee J, Lee D, Giovannucci E, and Oh H. Overall and Abdominal Obesity and Risks of All-Cause and Cause-Specific Mortality in Korean Adults: A Pooled Analysis of Three Population-Based Prospective Cohorts. *International Journal of Epidemiology*. 2023 Aug 2. 52(4): 1060-1073
5. Cho Y, **Jang H**, Kwon S, and Oh H. Aerobic, muscle-strengthening, and flexibility physical activity and risks of all-cause and cause-specific mortality: a population-based prospective cohort of Korean adults. *BMC Public Health*. 2023 Jun 14. 23(1): 1148
6. Byun D, Hong S, Ryu S, Nam Y, **Jang H**, Cho Y, Keum N, and Oh H. Early-life body mass index and risks of breast, endometrial, and ovarian cancers: a dose-response meta-analysis of prospective studies. *British Journal of Cancer*. 2022 Nov 12. 126(4): 664-672
7. Ryu S, **Jang H**, and Oh H. Smartphone Usage Patterns and Dietary Risk Factors in Adolescents. *The Journal of Nutrition*. 2022 Sep 6. 152(9): 2109-2116
8. **Jang H** and Oh H. Trends and Inequalities in Overall and Abdominal Obesity by Sociodemographic Factors in Korean Adults, 1998-2018. *International Journal of Environmental Research and Public Health*. 2021 Apr 14. 18(8): 4162

Working Papers

1. **Jang H**, Crandall CJ, Gore S, Hu C, LaCroix AZ, LaMonte MJ, Liu L, Freeland KS, Cauley JA, Stefanick ML, Schumacher BT, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident Fall Rates: Results from the Objective Physical Activity and Cardiovascular Health in Older Women (OPACH). 2025. (Submitted to *The Journals of Gerontology Series A: Medical Sciences*)

- Heilmann NZ, **Jang H**, Caserotti P, Cawthon PM, Weaver AA, Beavers KM, Ruppert KM, Nindl BC, Cauley JA, and Strotmeyer ES. Associations of Muscle Function with Recurrent and Injurious Falls in Older Adults: A Narrative Review. 2026. (Submitted to *Innovation in Aging*)
- Jang H**, Miljkovic I, Farsijani S, Ding Y, Freeland KS, Heilmann NZ, Langer LR, Roberts JE, Ensrud KE, LaCroix AZ, Schousboe JT, Newman AB, Cauley JA, Strotmeyer ES. Associations of Whole-Body, Abdominal, and Sarcopenic Obesity with Incident, Recurrent, and Number of Falls in Older Adults: A Cross-Cohort Analysis. 2026 (Submitted to *Journal of the American Geriatrics Society*)
- Jang H***, Song Y*, Kim N*, Strotmeyer ES, and Glynn NW. Association of Actigraphy-Measured Rest-Activity Rhythms with Obesity Phenotypes in the Osteoporotic Fractures in Men (MrOS) Study. 2026.
*Co-first authors

Published Abstracts

- Jang H**, Freeland KS, Heilmann NZ, Nye L, Roberts J, Ensrud KE, LaCroix AZ, Leslie WD, Newman AB, Cauley JA, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident and Recurrent Falls in Older Adults: A Cross-Cohort Analysis. *ASBMR 2025 Annual Meeting*. 2025 Sep 6.
- Strotmeyer ES, **Jang H**, Freeland KS, Heilmann NZ, Nye L, Roberts J, Ensrud KE, LaCroix AZ, Leslie WD, Newman AB, and Cauley JA. Age and Sex Associations for Incident and Recurrent Falls from 1992-2016: A Cross-Cohort Analysis in Older Adults. *ASBMR 2025 Annual Meeting*. 2025 Sep 7.
- Jang H**, Crandall CJ, Gore S, Hu C, LaCroix AZ, LaMonte MJ, Liu L, Freeland KS, Cauley JA, Stefanick ML, Schumacher BT, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident Fall Rates: Results from the Objective Physical Activity and Cardiovascular Health in Older Women (OPACH). *ASBMR 2024 Annual Meeting*. 2024 Sep 27.
- Cho Y, Oh H, and **Jang H**. Television, Computer, Smartphone Use, and Obesity Risk: A 3-Year Follow-Up Study. *Current Developments in Nutrition*. 2023 Jul 1. 7
- Cho Y, **Jang H**, and Oh H. Screen Time and Obesity in Adolescents: An Isotemporal Substitution Analysis. *Current Developments in Nutrition*. 2023 Jul 1. 7
- Jang H**, Kim R, Lee DH, Lee JT, Giovannucci E, Oh H. Obesity and Mortality in a Pooled Analysis of Three Prospective Cohorts of Korean Adults: Is Obesity Paradox the BMI Paradox? *Current Developments in Nutrition*. 2022 Jun 1. 6: 1062
- Jang H** and Oh H. Obesity Transition and Inequalities by Sociodemographic Factors in Korean Adults, 1998–2018. *Current Developments in Nutrition*. 2021 Jun 1. 5: 1219

Oral Presentations

- Jang H**, Freeland KS, Heilmann NZ, Langer LR, Roberts JE, Ensrud KE, LaCroix AZ, Schousboe JT, Newman AB, Cauley JA, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident and Recurrent Falls in Older Adults: A Cross-Cohort Analysis. *ASBMR 2025 Annual Meeting*. American Society of Bone and Mineral Research. Seattle, WA, USA. 2025 Sep 5-8.
- Jang H**, Kim R, Lee JT, Lee DH, Giovannucci E, and Oh H. Obesity and Mortality in a Pooled Analysis of Three Prospective Cohorts of Korean Adults: Is Obesity Paradox the BMI Paradox? NUTRITION 2022 LIVE ONLINE, American Society for Nutrition, Rockville, MD, USA (virtual). 2022 Jun 14.
- Jang H** and Oh H. Obesity Transition and Inequalities by Sociodemographic Factors in Korean Adults, 1998-2018. NUTRITION 2021 LIVE ONLINE, American Society for Nutrition, Rockville, MD, USA (virtual). 2021 Jun 7.

Poster Presentations

- Jang H**, Freeland KS, Heilmann NZ, Langer LR, Roberts JE, Ensrud KE, LaCroix AZ, Schousboe JT, Newman AB, Cauley JA, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident and Recurrent Falls in Older Adults: A Cross-Cohort Analysis. *Aging Research Day (institutional research symposium)*. Aging Institute, University of Pittsburgh. Pittsburgh, PA, USA. 2025 Nov 5.
- Jang H**, Crandall CJ, Gore S, Hu C, LaCroix AZ, LaMonte MJ, Liu L, Freeland KS, Cauley JA, Stefanick ML, Schumacher BT, and Strotmeyer ES. Associations of Obesity Phenotypes with Incident Fall Rates: Results from the Objective Physical Activity and Cardiovascular Health in Older Women

(OPACH). *ASBMR 2024 Annual Meeting*. American Society of Bone and Mineral Research. Toronto, ON, Canada, 2024 Sep 27.

3. **Jang H** and Oh H. The Joint Effects of Obesity and Physical Activity on All-cause and Cardiovascular Mortality among Korean Adults: Evaluation of the 'Fat but Fit' Hypothesis. *The 5th Asia-Pacific Cardiometabolic Syndrome Congress (APCMS)*. Korean Society of Cardiometabolic Syndrome, Seoul, Korea. 2022 Apr 29.
4. **Jang H**, Shin M, and Oh H. Alcohol Drinking and Cardiovascular Risk Factors in Korean Adults: Age-Period-Cohort and Association Analyses. *The 4th Asia-Pacific Cardiometabolic Syndrome Congress (APCMS)*. Korean Society of Cardiometabolic Syndrome, Seoul, Korea. 2021 Apr 23.

Appointments and Positions

Center for Aging and Population Health (CAHP), University of Pittsburgh

2023 – Present

Graduate Student Researcher

- Led 25-year cross-cohort harmonization of four major U.S. aging cohorts (Health, Aging and Body Composition Study (Health ABC), Osteoporotic Fractures in Men Study (MrOS), Cardiovascular Health Study (CHS), and Women's Health Initiative (WHI)) and developed a reproducible longitudinal database.
- Conducted generalized estimating equation (GEE) analyses to examine anthropometrics (BMI, waist circumference, waist-to-hip ratio, grip strength), biomarkers (metabolic syndrome, D3-creatine muscle mass), and imaging measures (CT android and gynoid fat, MRI muscle fat infiltration) in relation to falls using the harmonized cohort and the Study of Muscle, Mobility and Aging (SOMMA) data.
- Analyzed associations between circadian behavioral patterns (chrononutrition and actigraphy-measured rest-activity rhythms) and obesity phenotypes using MrOS and the National Health and Nutrition Examination Survey (NHANES) data.
- Contributed to the development of an NIH R01 proposal examining longitudinal trajectories of functional decline following recurrent falls in a 25-year harmonized cross-cohort study, with linkage to Medicare claims to evaluate subsequent non-fracture and fracture fall injuries.
- Collaborated with multidisciplinary teams of epidemiologists, biostatisticians, and clinician investigators to support study design, analysis, and interpretation as part of the Cross-Cohort Collaboration (CCC).
- Authored peer-reviewed manuscripts and disseminated findings through oral and poster presentations at international scientific conferences.

Chronic Disease Epidemiology Lab, Korea University

2019 – 2022

Research Assistant

- Developed and validated prediction models for fat mass index (FMI) and fat-free mass index (FFMI) using nationally representative DXA-derived data, enabling population-level body composition phenotyping without direct DXA measurement.
- Pooled over 150,000 participants across the three Korean Genome and Epidemiology Study (KoGES) cohorts and conducted Cox proportional hazards regression and restricted cubic spline analyses to examine associations of adiposity measures with all-cause, cancer, and cardiovascular mortality.
- Conducted isotemporal substitution analyses using longitudinal panel data to evaluate trade-offs between behavioral risk factors and obesity outcomes.
- Performed hierarchical age-period-cohort cross-classified random effects (HAPC-CCREM) analyses using 1998-2018 KNHANES data to support National Fact Sheets published by the Korea Disease Control and Prevention Agency (KDCA).
- Systematically reviewed the literature and extracted data for a dose-response meta-analysis examining prospective associations between early-life BMI and breast, endometrial, and ovarian cancers.
- Led preparation of annual and interim grant progress reports, authored peer-reviewed manuscripts, and presented findings at international conferences.

- Translated the KNHANES data documentation into English and prepared a pooled dataset integrating KNHANES, NHANES, and UK Biobank data to analyze environmental risk factors for gastric cancer.

Environmental Epidemiology Lab, Korea University
Undergraduate Research Assistant

2016 – 2017

- Conducted a literature review for a proposal submitted to the Ministry of Food and Drug Safety regarding the development of a novel food safety policy evaluation index.
- Performed segmented regression time-series analyses of the K-NHANES food safety surveillance data to support the development of a food safety index.

Honors

2024	Plenary Poster American Society of Bone and Mineral Research
2024	Young Investigator Travel Grant American Society of Bone and Mineral Research
2022	Outstanding Dissertation Award (Master's Thesis) Korea University, Brain Korea 21
2022	Outstanding Abstract Award Winner Korean Society of Cardiometabolic Syndrome
2021	Brain Korea 21 Research Grant Contest Winner Korea University, Brain Korea 21
2021	Outstanding Abstract Award Winner Korean Society of Cardiometabolic Syndrome

Teaching Experience

Teaching Assistant

2025	Principles of Epidemiology (Graduate) University of Pittsburgh (Instructor: Thomas J Songer)
2025	Advanced Epidemiology of Aging (Graduate) University of Pittsburgh (Instructor: Jane A Cauley)
2021	Principles of Epidemiology (English/Graduate) Korea University (Instructor: Hannah Oh)
2020	Case Studies in Epidemiology (English/Graduate) Korea University (Instructor: Hannah Oh)
2020	Foundations and Principles of Health Promotion (English/Undergraduate) Korea University (Instructor: Hannah Oh)

Programming Languages

R, SAS, Python

References

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