



Meeting 2

Subcommittee 1 Aging

Chair: Loretta DiPietro

Members: David Buchner, Wayne Campbell, Kirk Erickson, Abby King, Ken Powell

Question 1



What is the relationship between physical activity and *risk of injury due to a fall*?

- **What is the nature of the dose-response relationship?**
- **What type(s) of physical activity are effective for preventing injuries due to a fall?**
- **What factors modify the relation between physical activity and risk of injury due to a fall?**

Analytical Framework

Subcommittee: Aging

Systematic Review Question

What is the relationship between physical activity and the risk of injuries from falling?

Target Population

Adults, 50 years and older (Lower age range for included data must be a minimum of 50 years)

Comparison

Adults, 50 years and older, who participate in varying levels of physical activity, including no reported physical activity

Intervention/Exposure

All types and intensities of physical activity

Intermediate Outcomes

- Balance
- BMI
- Bone health
- Disease diagnosis
- Falls
- Functional limitations
- Mobility
- Strength

Endpoint Health Outcomes

- All/Any injuries from falls
- Fractures
- Head injuries
- Intraabdominal injury
- Limitation of daily activities
- Medically attended injury
- Neck, back, and spine injuries
- “Pooled” injuries
- Reduction in routine activities
- Sprains

Key Definitions:

- Fall: The act of moving without control from being upright to not being upright
- Injury from a fall: An injury resulting from a fall
- Risk of injury from a fall: The statistical odds of experiencing an injury from a fall

Common Inclusion/ Exclusion Criteria

- **Language**
 - **Exclude: Studies that do not have full text in English**
- **Publication Status**
 - **Include: Studies published in peer-reviewed journals, PAGAC-approved reports**
 - **Exclude: Grey literature**
- **Study Subjects**
 - **Exclude: Studies of animals only**

Inclusion/Exclusion Criteria



- **Date of Publication**
 - **Original Research: No criteria**
 - **Existing Sources: Include 2006 - Present**
- **Study Subjects**
 - **Include: Adults, 50 years and older**
 - **Exclude: Nonambulatory only, Hospitalized only, Athletes only**
- **Study Design**
 - **Include: Randomized controlled trials, Non-randomized controlled trials, Prospective cohort studies, Retrospective cohort studies, Case-control studies, Systematic reviews, Meta-analyses, PAGAC-Approved reports**
 - **Exclude: Narrative reviews, Commentaries, Editorials, Cross-sectional studies, Before-and-after studies**
- **Exposure/Intervention**
 - **Include: All types and intensities of physical activity**
 - **Exclude: Missing physical activity, Single, acute session of exercise, Therapeutic exercise, Physical fitness as the exposure**
- **Outcome**
 - **Include: All/Any injuries from falls, Fractures from falls, Head injuries from falls, Intraabdominal injury from falls, Medically attended injury from falls, Neck, back, and spine injuries from falls, “Pooled” injuries from falls, Sprains from falls**

Draft Search Terms



- **Physical Activity Terms:**
 - **Activities of daily living, Activity of daily living, Aerobic activities, Aerobic activity, Balance training, Cardiovascular activities, Cardiovascular activity, Chi Gong, Chi Kung, Endurance activities, Endurance activity, Exercise, Free living activities, Free living activity, Functional training, Leisure-time physical activity, Lifestyle activities, Lifestyle activity, Muscle stretching exercises, Physical activity, Physical conditioning, Qigong, Recreational activities, Recreational activity, Resistance training, Sedentary, Sedentary lifestyle, Strength training, Tai chi, Tai ji, Walk, Walking, Yoga**
- **Falls Terms:**
 - **Accidental falls, Fall, Falls, Slip, Slips, Trip, Trips**
- **Outcome Terms:**
 - **Bruise, Bruises, Concussion, Concussions, Fracture, Fractures, Injury, Injuries, Internal bleeding, Limitation of daily activity, Limitations of daily activity, Limitation of daily activities, Limitations of daily activities, Limitation on activity, Limitation on activities, Limitations on activity, Limitations on activities, Reduction in routine activity, Reduction in routine activities, Sprain, Sprains**

Prioritized Questions



- 1. What is the relationship between physical activity and *risk of injury due to a fall*?**
 - What is the nature of the dose-response relationship?**
 - What type(s) of physical activity are effective for preventing injuries due to a fall?**
 - What factors modify the relation between physical activity and risk of injury due to a fall?**

Prioritized Questions



2. What is the relationship between physical activity and *physical function*?

- What is the nature of the dose-response relationship?
- What type(s) of physical activity are effective for improving or maintaining physical function;
- What factors modify the relation between physical activity and physical function?

Prioritized Questions



3. What is the relationship between physical activity and *risk of frailty*?

- **What is the nature of the dose-response relationship?**
- **What type(s) of physical activity are effective for preventing or delaying frailty?**
- **What factors modify the relation between physical activity and risk of frailty?**