Priority Statement Title: Understanding Injury Mechanisms and Musculoskeletal Benefits of Recreational Sport and Exercise

Priority Statement Code: LF4E

Domain: Cell, Joint, Limb, Whole Body, Function

Priority Statement

Background and Relevance

There is an overwhelming drive to engage and sustain participation in physical activity programs across the lifespan:

- Health benefits associated with exercise are significant.
- Millions of individuals of all ages engage in recreational exercise and sport.
- Many people are injured during exercise with short and long term limitations to function and participation.
- Exercise-related injuries can have short and long term sequelae, limiting participation throughout the lifespan.
- Inactivity contributes to disease and obesity at all ages from childhood to elderly.
- Health costs associated with inactivity are significant.

Research support mechanisms have traditionally been directed toward specific populations or disease categories. Support for research investigating mechanisms of injury associated with recreational activities has not been a priority. Understanding musculoskeletal injury mechanisms associated with recreational activities can lead to strategies for prevention or rehabilitation that enable individuals to maintain participation levels.

Objectives

Promote and maintain a healthy musculoskeletal system through the lifespan by:

1. Identifying ways to prevent exercise-related injuries.
2. Identifying effective mechanics that increase capacity to participate while reducing risk of injury.
3. Individualizing the intensity, frequency, and duration of exercise.

Recommended Actions

1. Quantify participation and injury rates in recreational sport and exercise through the lifespan
2. Quantify the costs of exercise-induced injury using “common currency” to place it in the context of other disease processes
3. Quantify the musculoskeletal benefits and cost savings of exercise
4. Identify ways to prevent exercise-related injuries
5. Identify effective mechanics to promote a healthy musculoskeletal system through the lifespan
6. Individualize the intensity, frequency, and duration of exercise to maintain and promote musculoskeletal health