

Call to Action for Adaptive Athletes and Inclusive Fitness Trainers

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Introduction

- More than 56 million in the U.S. living with a chronic condition and/or disability
 - Affect activities of daily living (ADL)
 - Increase risk for certain diseases
 - Lower quality of life (QoL)
 - Unique to the individual
- Numbers will continue to increase as population ages

(Okoro, Hollis, Cyrus, & Griffin-Blake, 2018; Washburn, Zhu, Mcauley, Frogley, & Ficoni, 2002)

Physical Activity for Health

Physical Activity (PA) recommend to improve / sustain health

- PA Guidelines for America 2nd edition
 - Previous emphasis on cardiovascular training
 - Only counted if active 10 minutes at a time
- Adaptive and inclusive populations
 - As much activity as possible

(Center for Health Statistics, n.d.; ICF, Geneva:World Health Organization, 2001)

Strength Training

- Muscular Endurance
 - $\leq 65\%$ of 1RM
 - Multiple sets of 8-20 repetitions
- Muscular Strength
 - 80-90% of 1RM
 - Multiple sets of 5-7 repetitions

(U.S. Department of Health and Human Services, 2018, Westcott, 2009)

Inclusive Training (Adaptive) Programs

- Goals are to address PA barriers through:
 - Access
 - Participation
 - Adherence

(Wilson & Clayton, 2010; Yazicioglu, Yavuz, Goktepe, & Tan, 2012)

ACSM/ National Center on Health, Physical Activity and Disability (NCHPAD) Resource

- Provides:
- Recommendations for ADA compliance
 - Guidelines for adaptive physical activity



(Wing, American College of Sports Medicine, National Center on Health, & American College of Sports Medicine, 2013)

Universal Design

- The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Common Inclusive Fitness Groups

- Athletes with lower limb impairments
- Athletes with upper limb impairments
- Wheeled athletes
- Athletes with invisible wounds

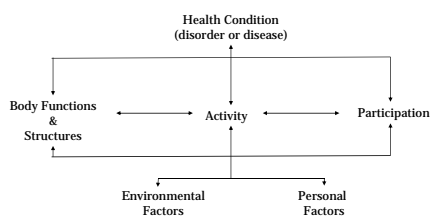
A New Shift

- Athletes with impaired vision
- Athletes with invisible wounds
 - TBI / PTSD
 - Arthritis

Classification of Function

- International Classification of Functioning, Disability, and Health (ICF)
- Assists with decision making on whether to and how to adaptive physical activities.

ICF Model



(Atkinson & Nixon-Cave, 2011; Rimmer, 2006)

Areas of Emphasis

- Flexibility and Balance
- Strength and Endurance
- Cardiovascular Endurance

Barriers to Participation

- Seeing the disability and not the individual
- Educators for the individual
- Inclusive public view
- Inclusive community

Overcoming Barriers

- Time allotment
- Monitor each sessions time for each week
- Have 30-minute PA goals with room for adjustments
- Promote activity into daily routines
 - Focus on basic human movements (squat, push, pull, hinge, rotate, lunge)
- Set goals constantly

Program with Universal Design in Mind

- Program to a "Gold Standard"
 - Scale
 - Modify
 - Adapt

High Intensity Functional Training (HIFT)

- Type of exercise that emphasizes functional, multi-joint movements that are modified to any fitness level, designed to improve general physical fitness.
- Inclusive through modification, scales, and adaptations.

(Crawford et al., 2018; Fatta, Heinrich, Butcher, & Preston, 2018; E.M. Heinrich et al., 2015; Katie M. Heinrich, Crawford, Johns, Frye, & Gilmore, 2019)

Sample Adaptive HIFT



Goodleg Project, 2018



Wheelchair to Walking Canes



Examples

- Older adult involved in car accident with fused spine and limited mobility.
- Woman who recently retired and wanting to be health focused. Limited ankle and knee flexibility.
- Older adult with limited vision and prefers contrast.

Resources

- Challenged Athletes Foundation
- CrossRoads Adaptive Athletic Alliance
- Wounded Warrior Games
- ACSM Inclusive Trainer Manual
- National Center on Health, Physical Activity and Disability (NCHPAD)
- NSCA Special Populations Manual
- CrossFit Adaptive Trainer Course

Questions?

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