Session #312

Functional Training Facelift

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Introduction: Functional training continues to be a necessary focus in training programs. Helping clients move through their world with greater power, strength, speed and agility is critical to keeping them fit, healthy and injury-free. When creating the ideal functional training platform, you must take a systematic approach to exercise planning and progressively challenge the status quo. Let's take the guesswork out of program design.

Main focus across all ages: FUNCTION

Train for power, train for life

- Muscular power has a closer relationship with functional performance than muscular strength.

What is Functional Training?

- Exercises that aid an individual in performing daily movements with ease and with correct anatomical and postural alignment.

What is the long game?

- Lifelong physical activity combined with specific functional training is the key to maintaining a high level of movement ability (across the ages) and physical independence (as we age).

To be effective as a trainer:

- The goal is to individualize each exercise program with a focus on outcome-based functional training.
- Where to start? Top-down thinking. Training for health, fitness and performance.

Defining 'your' clients ADL's?
What does the client do day to day? What do they continue to want to do day to day?
What do they enjoy doing? What do they need to be able to do?

The Younger vs Older Client = Different goals at different stages

Six Functional Domains of Training (Source: Sipe, Cody. Functional Aging Institute)
Neuromuscular Musculoskeletal Balance Mobility Cardiorespiratory Cognition

Getting Started:

1. Assessment and Goals – Starting point, specificity, goal attainment, re-evaluation
2. Individualization – The snowflake philosophy
3. Movement – Types, patterns, complexity, integration, etc.
4. Progression / Regression – The right exercise for ….

Periodized Approach: Joseph F. Signorile, PhD. describes a periodized model in which a physiological training cycle is followed by a translational motor learning cycle.

1. The physiological training cycle focuses on improving primary components of fitness, such as strength, flexibility and aerobic capacity, through traditional methods.
2. The translational training cycle focuses on increasing functional capacity through multidimensional motor-

control tasks of increasing complexity.
3. Strategies for increasing task complexity include using multiple joints, shifting to dynamic tasks, altering the base of support, adding object manipulation, using multiple directions and multitasking.

Functional Demands: To prepare for functional demands, integrate more movement. Train in 3 planes (frontal, sagittal, and transverse) with integrated movement patterns to help prepare the body for the functional demands of real life (reach, bend, lean, turn, twist, etc.)

- A multi-planar approach to improve motor control with additional components of functional training are necessary
- Isolation movements are still important but are more complimentary (i.e. we still need the biceps to be strong to hold a bag of groceries)
- Training for power should also be included in functional training plans.

Many daily functions require POWER.

- Power is required for the successful completion of everyday movements; i.e. climbing the stairs, lifting out of a chair, picking up a box
- What is Power? Power = Force x Velocity

A muscle loses its power over time more quickly than it loses strength

- Studies have shown that sedentary males experience a decrease in type 2 (fast twitch) muscle fibers by 50% by age 80
- By speeding up resistance training safely, more fast twitch muscle fibers are activated
    - These fibers are involved in higher levels of strength such as ascending and descending stairs and getting into and out of a chair
- Keiser pneumatic strength equipment creates a safer way to power training across the ages
    - Consistent resistance at any speed; negligible stress to muscles, connective tissue and joints

Train for Power, Train for Function

- Progressive resistance training (PRT) is not functional training, but simply one component that contributes to functional ability.
- An extensive literature review determined that there is *limited evidence* to show that PRT as a single intervention improves balance in older adults (Orr, Raymond & Fiatarone Singh 2008).
- "The data consistently show that muscular power has a closer relationship with functional performance than does muscular strength.
- Power training is a potentially more effective intervention than PRT for improving function." (Sayers 2008; Hazell, Kenno & Jakobi 2007; Porter 2006)

What to Do? For a program to be well-rounded, know 'why' you are doing an exercise and how to best perform it (equipment, sets, reps, resistance level, speed, body position, etc.). Focus on the why to your what.

Consider a 3-Stage Approach to Training

1. Foundational Movements (i.e. squat, lunge, hinge, push, pull, rotate, plank, lift, gait)
2. Multi-Planar / Multi-Complexity Approach (i.e. to improve motor control and train additional components of function)
3. Power Training (i.e. increasing load and/or velocity)

Exercise Ideas

Sources: The Significant 7: Functional Training for the Mature Adult. Cody Sipe, PhD and Dan Ritchie, PhD, IDEA Fitness Journal, 12/11.

Thank you!! www.keiser.com