ILLUMINATING THE SPORT OF CROSSFIT

Presented by:
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SESSION OBJECTIVES

• Learn the brief history and background of CrossFit

• Gain a greater understanding of CrossFit methodology, prescription, and implementation

• Be able to identify the credentialing requirements to open a CrossFit affiliate and coaching requirements

• Understand what current research is stating about CrossFit related injuries, particularly compared with other sports
WHAT HAPPENS INSIDE A CROSSFIT GYM
WHAT REALLY HAPPENS INSIDE A CROSSFIT GYM
ORIGINS OF CROSSFIT

• Founder Greg Glassman, ex-gymnast
• Formally founded in 2000 when the first affiliate was formed in Santa Cruz
• In 2005 there were 13, and today there are more than 13,000 affiliates worldwide
  • 72% are located within the US
  • 23% in Europe, Canada, & Australia/New Zealand
• Participant demographics
  • 40% range from ages 25-34
  • 40% hold post-graduated degrees
  • 50% of CrossFitters have an annual income of $150,000
  • 50-50 Male vs. Female
CREDENTIALING

- Affiliate owners are required to hold at least a Crossfit Level 1 Certification and pay an annual fee
  - Crossfit certifications are acquired through a weekend course and passing a written exam
    - Certifications have a 5 year renewal date
  - Continuing education required to maintain certification
  - CFL4 is the highest personal training cert to date
CROSSFIT CULTURE

• “Jack of all trades, Master of none” approach
  • Aim has been to forge a broad general and inclusive fitness program
  • Prepare athletes for not only the unknown but unknowable (i.e. general physical preparedness)
    • What awaits us all is challenge- that is for sure
• CrossFit Prescription
  • Virtuosity
    • Doing the uncommon commonly well
CROSSFIT PRESCRIPTION

- Constantly Varied
  - Randomized program so the athlete’s body doesn’t fall into a routine
  - Always strive to keep the mind and body challenged
- High Intensity
  - Intensity is relative to the athlete’s power
  - Adaptation is necessary for progress
- Functional Movements
  - Universal motor recruitment movement patterns
    - Core to Extremity, Big to Small muscles, Proximal to Distal
  - Compound Movements, Multi-joint Exercises
CROSSFIT METHODOLOGY

- Crossfit is entirely empirical
  - Driven by measurable, observable, and repeatable facts
    - Data collection

- Crossfit’s goal is to achieve “greater work capacity across broad time and modal domains”
  - i.e. Health

- Fitness
  - Measure of health
10 GENERAL PHYSICAL SKILLS IN CROSSFIT

- Cardiovascular/Respiratory Endurance
- Stamina
- Speed
- Strength
- Flexibility
- Power
- Coordination
- Agility
- Balance
- Accuracy
PROGRAMMING & SCALING

• Structure
  • Cycle recommendations: Three days on, one day off with unique stimuli to never be repeated day in/ day out
    • Keep your regimen routine free
    • Allow the body and mind to progress
  • Workouts allow for wide variance of mode, exercise, metabolic pathway, rest, intensity, sets and reps
    • What does this mean for a beginner
    • On-ramp
# Template for Programming

## Table 1 - Template Macro View

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### Modalities

- **M** = monostructural metabolic conditioning or “cardio”
- **G** = gymnastics, bodyweight exercises
- **W** = weightlifting, powerlifting and olympic lifts
A trainer's ability to coach others rests on capacity in six different areas:

- Teaching
- Seeing
- Correcting
- Group Management
- Presence and Attitude
- Demonstration
TEACHING

• Ability to effectively articulate and instruct the mechanics of each movement
  • Teaching functional movements
    • Ability to define proper mechanics
    • Ability to understand what causes poor movement
    • Must know ideal positions
  • Main job is to teach athletes how to improve on poor positions and movement patterns
SEENING

- Ability to discern good from poor movement mechanics
  - Identify gross and subtle faults whether the athlete is in motion or static
  - Dynamic positions
  - Static positions
- Necessary first step for a trainer to bring about changes in clients mechanics
  - Rests on one’s “teaching” capacity (knowledge)
CORRECTING

• Ability to facilitate better mechanics for an athlete through cues
  • Visual
  • Verbal
  • Tactical

• Three-step process for developing short, specific, and actionable cues
  • Identify the fault
  • Identify what is out of place (specific: body part)
  • Give direction to that body part
GROUP MANAGEMENT

- Ability to organize and manage at the micro level (class) and macro level (gym)
  - Managing time well
  - Organization of the space
  - Organization of equipment
  - Organization of participants for optimal flow/experience
PRESENCE AND ATTITUDE

• Ability to create a positive and engaging learning environment
  • Recognize each individual responds differently to instruction and critique
  • How best to relate to and motivate each individual regardless of background and ability
DEMONSTRATION

- Ability to provide athletes with an accurate visual example of the movement at hand
  - Using himself or herself as example or by choosing another athlete to demo
  - Requires a strong awareness of one’s own movement mechanics
- Powerful visual tool
  - Demonstrate points of performance
  - Show range-of-motion standards
  - Explain movement corrections
TUNDRA’S CLASS STRUCTURE

- Athlete Intro
- Overview of Workout
- Modifications and Scaling
- General Warmup
- Specific Warmup
- Workout
- Cool Down
INJURIES ASSOCIATED WITH CROSSFIT

• Lower Back Pain/ Strain
• Anterior Knee Pain
• Rotator Cuff Tendonitis
• Rhabdomyolysis
CONTOVERSIAL SPORT

• By now, CrossFit is known as one of the most controversial activities in the sporting industry
• Hypothesized that CrossFit workouts *might* inherently be more dangerous than other sport
  • Dangerous Movements
  • Inappropriate Levels of Intensity
  • Decentralized Business Model
• What is the research actually showing....
INJURY RATES

• Overuse and Musculoskeletal Injuries
  • Injury rate per 1000 hours of training (Hak et al, 2013)
    • CrossFit = 3.1
    • Triathlons = 1.4 – 5.5
    • Running = 2.5 – 12.1
  • Best to train with a qualified coach and good technique
    • However, it boils down to personal responsibility
  • Food for thought
    • “Is the risk of injury a better alternative than an obese lifestyle?”
    • Last year 1.8 million died from sedentation and malnutrition
RHABDOMYOLYSIS

• Dispelling the CrossFit = Rhabdo myth
• Example Cases:
  • Rugby player performs intense set of squat jumps on a hot day
  • Soccer player runs a series of 100m sprints at near maximum intensity
  • A highly fit marathoner holds a 6:30 pace for 26 miles but collapses a few feet from the finish line
  • 27 yo CrossFitter. 90 minute heavy leg workout. Admitted to ER
RHABDOMYOLYSIS

- Athletes at high risk:
  - Those with low baseline levels of fitness
    - Too much, too fast, too soon
  - Those that have previously experienced only low-power-output, low-intensity workouts
    - These athletes have sufficient muscle mass and conditioning to go hard enough to hurt themselves but don’t have the protection that develops with regular exposure to intensity
  - Performing exercises to muscle failure during the eccentric phase (i.e. negatives, etc.)
  - Increasing the number of exercise sets and reducing time allotted to finish (i.e. death by..)
RHABDOMYOLYSIS

• Caution
  • Drink more water to prevent Rhabdo
    • Better to drink sports drinks that contain electrolytes like sodium and potassium
    • Starting to see patients coming into the ER with hyponatremia, in fact this is being seen more than patients with Rhabdo
  • Tips for preventing hyponatremia
    • Certain medical conditions increase risk, be aware of signs and symptoms of low sodium
    • Only drink as much fluid as you sweat out
ADHERENCE TO THE SPORT

• With time being a primary barrier to exercise it is easy to understand why CrossFit has become popular
  • Most workouts itself are less than 30 minutes
  • Workouts are already programmed for you
• Affect and Enjoyment
  • Multiple studies have found the positive correlation between exercise and affect
  • Increased self esteem
  • Better body image
• Workout Variety
  • Workouts are always changing, stimulating both the mind and body
• Sense of Community
  • Arguably the most powerful motivator
  • Sense of competition, camaraderie and encouragement
  • Shared sense of struggle
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