Back to Performance

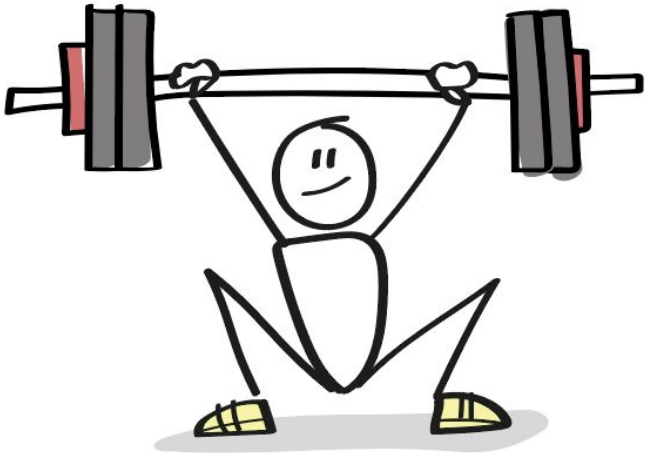
Dr. Joe Camoratto, Dr. CJ DePalma, Ben Dziwulski

Objectives

- Define mobility, pain and injury in a useful and understandable fashion
- Content Q/A
- Review common misconceptions in the training world
- Teach identification and modifications tactics for training through pain
- Teach our modification system
- General Q/A and case discussions

Mobility

- What is mobility?
- What relationship does it have with pain and injury?
- How can we integrate it into our understanding of performance?



Mobility

- Medical definition: The ability to move
- Our compromise definition: The ability to achieve a position (based on skill level and prior exposures)
- What is the position you are trying to reach?
    - If we are defining mobility as the ability to achieve a position, what is the defined position?
    - Who is judging whether or not you have reached this position?

Mobility

- How new is this movement?
- What role does tissue structure/length play in mobility?
- What harms/benefits can come from mobility work?
  - Taking away from training
  - Learning how to move through space
- So what should we do?
  - SAID

Pain

- What is it?
  - A subjective and personal experience
  - Driven by multiple variables including but not limited to: current context, past experience, beliefs, expectations and biology
  - Normal
  - Transient/temporary
- What it is not
  - Direct indicator of tissue status
  - Something to be feared
  - Permanent
  - Criteria for rest or medical attention
  - Simply defined

The Biomedical Model of Pain

- What is it?
  - "All illness has a **single underlying cause**, disease (pathology) is always the single cause, and removal or attenuation of the disease will result in a **return to health**."
  - "Classical science readily fostered the notion of the **body as a machine**, of disease as the consequence of breakdown of the machine, and of the doctor's task as **repair of the machine**."[3]
  - How long has it been around?
    - 1662 is the first time that it was described by Rene Descarte
  - Is it still useful?
    - When moving forward in science, it is always good to understand old ways of thinking

The Biomedical Model of Pain

- If there is a single driver for each and every patient presentation or symptom, then we just need to be the best “technicians” that we can be
- Primed to look for something that is “abnormal” or outside of what textbooks would describe as normal
- Correct these “abnormalities” because they must be causative of the presentation
- The term abnormal varies from clinician to clinician as well as from specialty to specialty
    - Posture, muscle strength, muscle tone, muscle length, range of motion, tenderness, form etc
- Why do we stray away from this model?
    - Reductionist

The Biopsychosocial (BPS) Model of Pain

What is it?

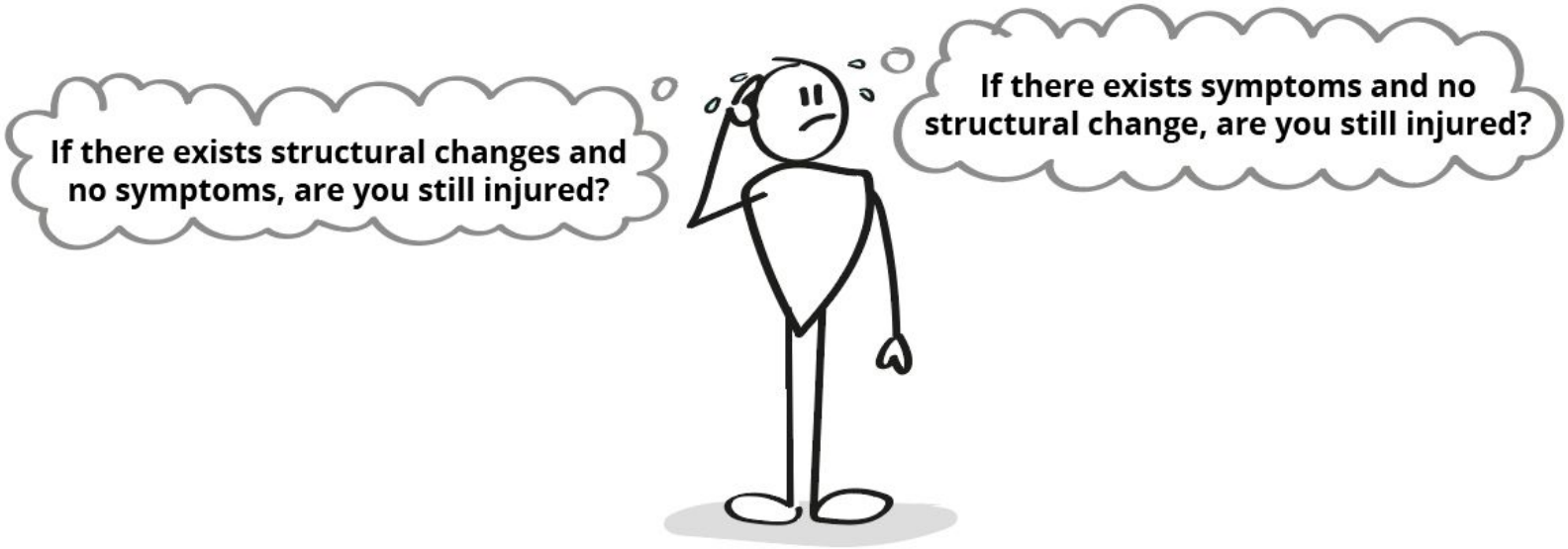
- In 1977 George Engle introduced a new way of thinking about pain stating: “The dominant model of disease today is biomedical, and it leaves no room within its framework for the social, psychological, and behavioral dimensions of illness.”
- “In contrast to the biomedical model, it recognises that psychological and social factors influence a patient’s perceptions and actions and therefore the experience of what it feels like to be ill.”

IASP Definition of Pain

- An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage

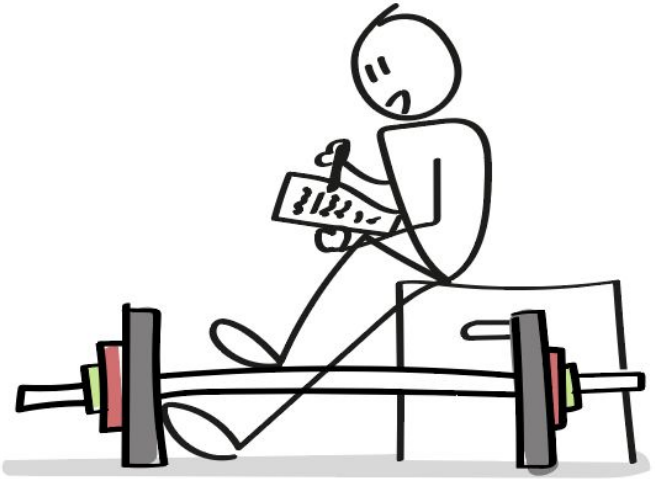
Injury

- Definition: “damage to the body caused by external force” - Dr. Wikipedia, PhD
- Why is this problematic?
  - Relationship between tissue structure and symptoms



Injury

- What is it?
  - Decrement in performance
  - Presentation of symptoms (pain or discomfort) or neurologic deficit (concussion symptoms)
  - Alteration of training schedule
    - Time off correlating with level of injury
- What it is not
  - Simply defined



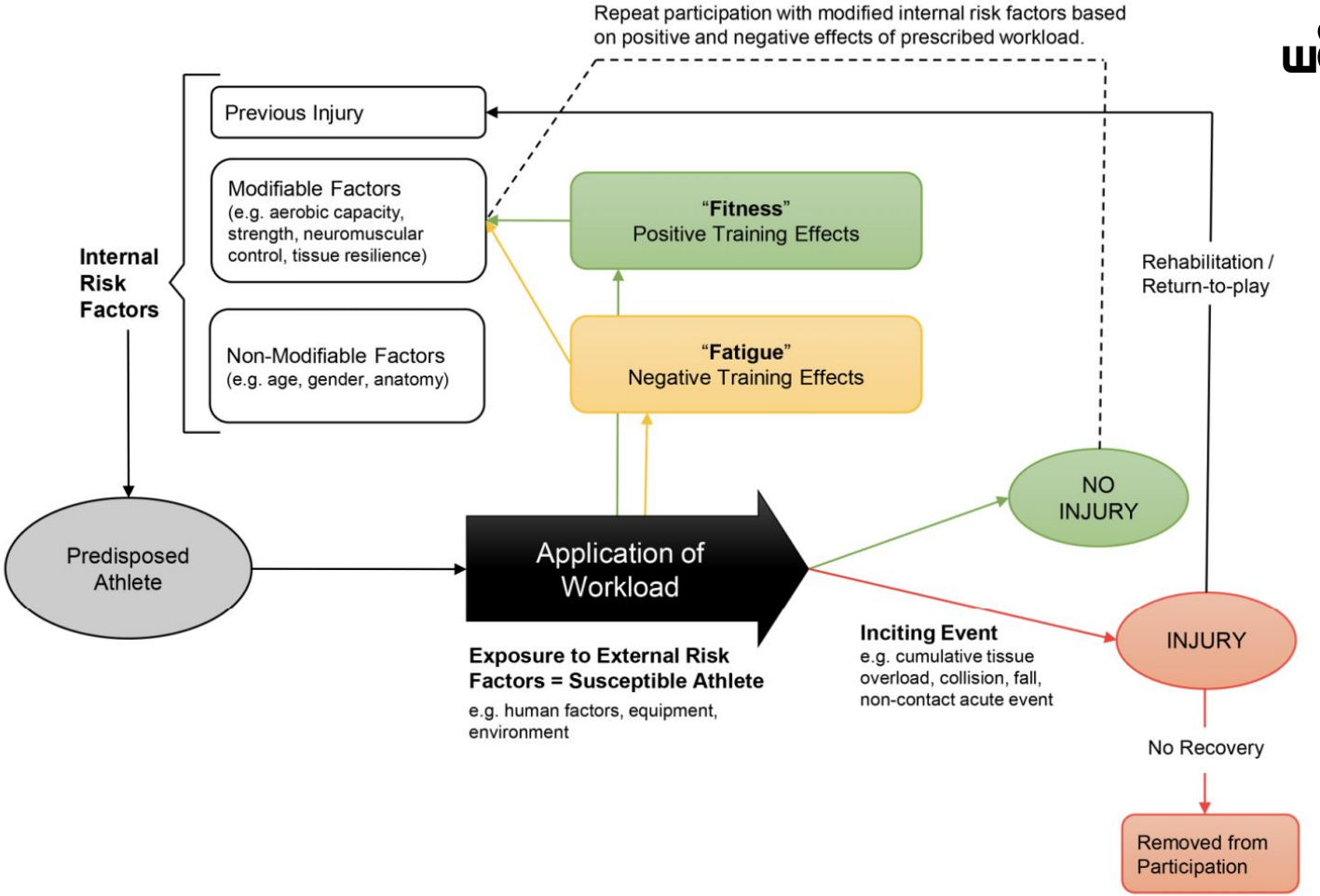
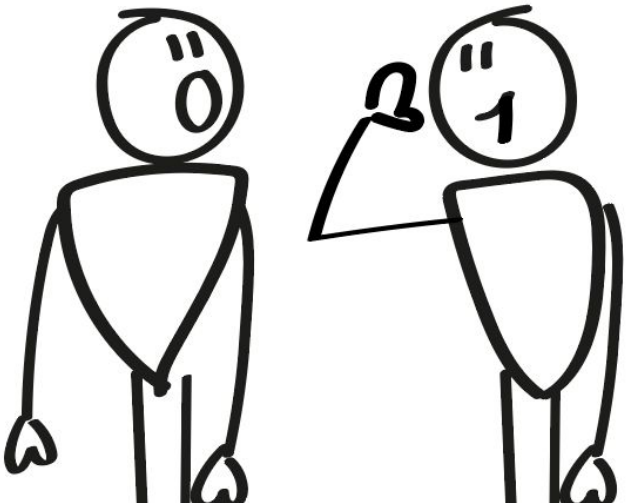


Figure 6 The workload—injury aetiology model.

Content Q/A



Misconceptions

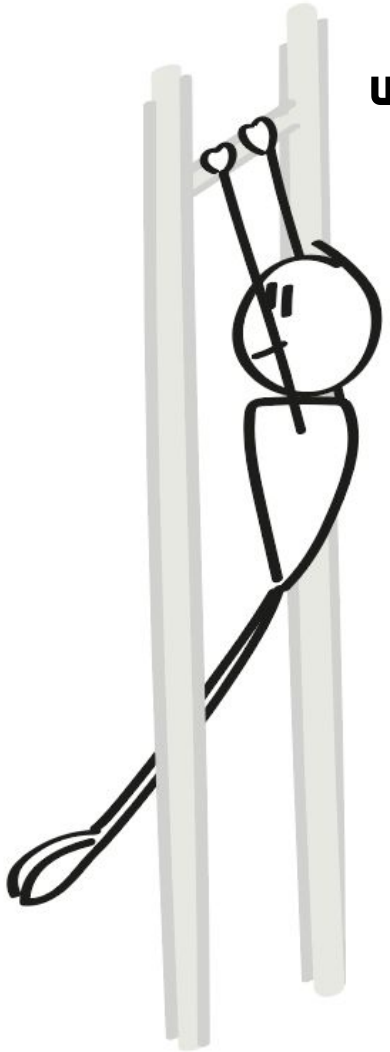
- Pain, injury and mobility are clean cut and simple topics to discuss
- You should never train with pain or injury, OR, training should be at extremely low intensity
- Rest after injury or pain is necessary
- You need to move this way before doing _____
- Your body is fragile
- Training/activity will “make it worse”
- Training or certain movements are inherently injurious
- Pain and injury can be prevented

So we have pain? Now What

- Modifiable factors
  1. Intensity/Load
  2. Volume
  3. Frequency
  4. Speed
  5. Range Of motion
  6. Movement selection
- Questions to ask your yourself to help define what needs to be modified
  - Is anything hanging off of me?
  - Are there any signs of trauma? (bleeding, bruising, joints not facing the regular direction etc)
    - Was there a blunt force trauma?
  - Can I continue with the same parameters? If not, can I continue with modifications?

Graded Exposure

- Staircase Method
  - No pain/symptoms in goal movement = the top of the stairs.
  - When we are symptomatic we work are self down the staircase testing regressions of the movement to find out starting point.
- Examples:
  - Conventional deadlift: 5 reps @ 315lbs
  - Push jerk: 3 reps @ 155lbs
  - Kipping pullups: 15 reps



How do we know where to start

- Subjective interview
  - What is the complaint
  - How long has it been happening
  - When do you feel it
  - What do you believe is happening
  - What do you believe will help
- Simple assessment
  - Is there anything hanging off of you?
  - Is there blood? (Internally or externally)
  - Are there red flags?
- Assess Person's Confidence/Hesitation
  - What do you feel comfortable doing
  - What do you feel you can tolerate
  - Show me
- Ego check
  - Modifications
  - Hitting the brakes temporarily is ok
  - Embrace the process
  - Seek professional help if needed

Summary

- **Mobility** is a nebulous term that we would prefer to refer to as the skill level of an athlete in the context of a certain movement
- **Pain** is a nuanced, individual and subjective topic that encompasses the past experience, the current society/culture, the beliefs and expectations and biologic status of the person
- **Injury** is difficult to define and depends on more factors that just the structural status of the person and plans should be individualized to that person and situation
- **Modifications** should follow a stepwise process and should aim to move as little away from the goal movement as possible

Q/A and Live Case Discussion