Shin Splints and Hamstring Issues
A Coaches’ Perspective

Shin Splints

- Anterior Shin Splints
- Posterior Shin Splints
- Compartmental Syndromes
- Stress Fractures

- Issues
  - Muscle-Bone Detachment
  - Inflammation of the Periosteum
  - Stress Reactions
  - Stress Fractures
Shin Splint Management

- Diverse Approach to Management
- There is No Single Answer!
- Understanding Preparation and Rehab Differ

Approaches to Shin Splint Management

- Managing Surfaces
- Lower Leg Strength
- Lower Leg and Foot Mobility
- Biomechanical Correction
- Skill Correction
- Training Design
- Inflammation and Pain Management

Lower Leg Strength

- Developing Impact Resistance
- Mild In Place Jumps and Skips
- 15-30 Second Workouts
- 15-30 Second Rest Intervals
- 8-12 Total Sets
- Shoes vs. Barefoot
- Changing Surfaces – Sand, Grass, Court, Track
LLC Exercises

Lower Leg Strengthening Exercises

Lower Leg and Foot Mobility

- The Foot in Function
  - Force Applicator
  - Shock Absorber
- Approaches
  - Prescriptive Exercises
  - Physical Manipulation

Lower Leg and Foot Mobility

- Prescriptive Exercises
  - Barefoot Work
  - Balancing Exercises
  - Walking Alterations
Prescriptive Exercises

Lower Leg Strengthening Exercises

• Others
  o Barefoot Hurdle Mobility
  o Toe/Towel and Rotation Walks
  o Side-Foot/Heel/Toe Walks
Physical Manipulation

- Massage and Manipulation
  - Away From the Injury Site
  - At the Injury Site
- Cautions

Biomechanical Correction

- Controlling Pronation and Impact
- Chronic Foot Issues
- Arch Support Possibilities
- Orthotic Possibilities

Skill Correction

- Common Causes
  - Poor or Unbalanced Strength Levels
  - Poor Running Mechanics
    - Excessive Backside
    - Late Grounding / Plantar Flexion
  - Toe-First Jump Penultimate Steps and Takeoffs
  - Improper Stopping
Training Design

• Frontloading Plyometric Training
• Undulating Training Loads – A Must
• The Value of Rest

Applying Adaptation Timeframes in Training Design

Inflammation Management

• NSAIDs
  o Pros
  o Cons
• Holistic Solutions
  o Arnica
  o Crystalline Ginger
• Cautions
Shin Splint Prevention

- Strengthening vs. Impact
- Maintaining Mobility and Flexibility
- Hards and Easys in Training
- Skill Teaching and Correction

You Have Shin Splints – Now What?

- Avoid Preventative Routines
- Restoring Mobility
- Inflammation and Pain Management
- Addressing Biomechanical Issues
- Rest is the Key

Handling Hamstrings

A Guide for the Coach
You Have a Hamstring Injury – Now What?

- Diagnose and Assess the Injury
- Diagnose and Assess the Injury Cause
- Immediate Treatment
- Continue Training
- Functional Rehabilitation

What's Available

- Injury Causes
- Hamstrings – Decelerators
- High - Medium – Low?
- The Grabbing Hamstring
- Adductor Magnus - The Hamstring Imposter

Causes - Gait Biomechanics

- Anterior Pelvic Tilt
  - Mechanics
    - Lumbar Tightness
    - Hip Flexor Tightness
  - Achieving Proper Posture in Acceleration
  - Predisposition Myths
  - It’s a Skill, Not a Condition
  - Overtraining Issues
    - Oversquatting
    - Rounded Backs - Contrasting Training
Causes - Gait Biomechanics

- The Foot and Ankle
  - The Talus
  - The Navicular Bone
  - The Head of the Fibula
- Diminished Dorsiflexion
  - The Flip Test
  - Mechanics of the Injury
- Solutions
  - Ankle Mobility
  - Possible Adjustment

Causes - Gait Biomechanics

- Weakness - Never!
- Altered Neurology and Biomechanical Disadvantages
- Strength Misconceptions

Continued Training

- Stay in the Plan, but Pain Free
- Exercise Alterations
- When Healed....
  - Reteaching
  - Improved Acceleration Patterns
  - Risk Mitigation – Distance Choices in Run Training
  - Avoiding Excessive Running and Bilateral Work
Functional Rehabilitation Guidelines

• Pain Free
• No Stretching at the Injury Site
• Stretching Surrounding Areas
• Functional Movement Based Rehabilitation

Understanding Eccentric Rehabilitation

• Concentric and Eccentric Work
  o Training
  o Competition
Functional Rehabilitation Guidelines

• Progressions
  o Concentric to Eccentric
  o Slow to Fast

• Exercise Sequence
  1. Walking
  2. Easy Jogging
  3. Jogging
  4. Running
  5. Straight Leg Bounds
  6. Sprinting

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