

TREATING THE INJURED RUNNER



Helpful pearls for immediate implementation

Why Do Injuries Occur?

- Can it be a foot / ankle issue?
- Can it be a knee issue?
- Can it be a hip/core issue?
- Can it be related to lack of strength?
- Can it be related to lack of ROM/flexibility?
- Can it be related to poor neuromuscular control?
- Can it be due to poor balance?

**YOU CAN NOT PREDICT THE CAUSE OF
THE INJURY BASED ON DIAGNOSIS!**

- Think about how the kinetic chain works with regards to loading.
- Prolonged loading leads to stress somewhere along the chain.
- Influence of footwear and how the body can compensate

Relationship between Form and Compensatory Bank

- Goal – increase bank
- Goal – limit reasons to draw from the bank

How we typically deal with these issues

- Strengthen (neuro re-ed) weak tissue (eccentrics?)-
- Stretch and mobilize tight tissues and restricted joints
- Tape and or brace to offload
- Footwear changes?
- Modalities for pain control

How does this treatment philosophy change when dealing with runners?

- It doesn't!!
- Same Principles apply
- Why are we “running specialists”?

**WHAT DOES DIFFER IS THE
UNDERSTANDING WE HAVE FOR THE
MECHANICS OF RUNNING AND HOW TO
INCORPORATE THIS UNDERSTANDING INTO
IDENTIFYING THE BIOMECHANICAL FLAW
LEADING TO OVERLOAD, EXERCISE
PRESCRIPTION AND ACTIVITY
MODIFICATION**

First Step to Treatment

- Identify the cause! (form, bank, or both)
- Why we succeeded in the past without addressing form.....or did we??

Initiate Treatment Strategies

- Usually don't attempt running until can walk without pain (however walking and running are different)
- Initiate running drills with and without assistance and assess quality of movement and pain
- Walk : Run Progression
- Running Rules
 - No pain $>3/10$
 - No increase in pain during or after
 - No alteration in form due to pain

**WAYS TO FACILITATE RUNNING A
BIT QUICKER.....**

Assistive Strategies

- Achilles tendonopathy
 - Heel lift, PECH Shoes, orthoses, taping to offload achilles or control pronation
- Post tibialis tendonopathy
 - Orthoses, PECH shoes, taping to support insertion and control pronation
- Plantar Fasciitis
 - Orthoses, PECH shoes, taping techniques to support arch
- PFPS
 - Taping and bracing to improve PF tracking

Achilles Unload



Arch Tape



Plantar Fascia Support



PF Tracking



Posterior Tibialis Unload/Support



Fat Pad unload



STRENGTH TRAINING FOR RUNNERS



1. Planks
2. Lower body Russian twist
3. Scorpion
4. Swiss Ball back extension
5. KB squat with OH press
6. OH lunge
7. Swiss ball jackknife
8. Swiss ball hip extension
9. Rotational shoulder press
10. Alt. dumbbell row

PROBLEMS

???

10 Essential Strength Exercises for Runners

Do these 10 exercises consistently, and you'll run faster and stronger.



MUST HAVE COMPONENTS

- Hip Strengthening
- Foot Strengthening
- Core/Posture/Pillar
- Neuromuscular Control
- Plyometric
- Single leg stance

Does running late
count as Exercise?

RUNNING EXERCISE CLASSIFICATION

	Hip Strength	Foot Strength	Core/Posture	Plyometric	Neuromuscular control	Single leg stance
Exercise						
Goblet squat	X					
Overhead squat	X		X		X	
Pistol squat	X	X			X	X
Front squat	X					
Back squat	X					
Bridging	X		X			
Single leg bridge	X		X			
Gastrocnemius calf raise		X				X
Soleus calfraise		X				X
Foot doming		X				
Heel tap	X	X			X	X
Side plank	X		X			
Side plank with hip abduction	X		X			
Prone plank	X		X			
Prone plank with hip extension	X		X			
Deadlift	X					
Single leg dead lift	X	X			X	X
Lateral resistor	X					
Fwd step up	X				X	
Lunge series	X				X	

Matrix taps multi direction	X	X			X	X
Jump rope double leg		X		X	X	
Jump rope single leg		X		X	X	X
Jump rope running		X		X	X	
Russian hamstring curls	X		X			
Rolling			X			
Quadruped with arm/legs			X			
Box jump				X	X	
Depth jump				X	X	
Good mornings	X					
ladder drills				X		
Pass the weight supine/sitting			X			
Neutral spine marching			X			
Neutral spine leg extension			X			

Strengthening Guidelines

- Think higher reps
- Strength train post run
- Importance of proper form
- Shoes off stresses more balance/foot strengthening

Exercise Examples















STRENGTHENING IN REVIEW

- A complete program will include
 - Balance component
 - Unilateral loading
 - Plyometric components
 - Target core, glutes, foot intrinsics
 - Transverse plane / rotational control
- Be creative!! There is no perfect 1 exercise for everyone

STRENGTHENING IN REVIEW

- How many reps are appropriate?
- What is the focus?
- Where is the patient in the rehab process
- Practice does NOT make perfect.....Perfect Practice make Perfect!!! Importance of motor pathways.