



Fit to Run

Alexis Williams PTA
Brian Hay DPT, OCS



Performance
Physical Therapy

What will you learn today?



Is there anything holding you back from your best running?



How to perform a dynamic warm up



Understanding the role of running mechanics



How to assess your own mobility and stability



Top exercises to improve and maintain YOUR mobility, stability and strength



When to seek assistance for injury



Resulting in....

Maximized running efficiency

Reduced risk of injury

Running Injuries

Up to 70% of recreational and competitive runners suffer an overuse injury in a 12-month period.

- Patella Femoral Pain Syndrome (PFPS) 40%
- Anterior Tibialis Tendinitis (Shin Spints) 12%
- Iliotibial Band Syndrome (ITBS) 12%
- Achilles Tendinitis 11%
- Plantar Fasciitis 10%
- Hamstring Strain 7%
- Stress Fracture 6%



Research
has given
us the
answers!

Too much training	Too little training	Being a heel striker	Being a toe runner
Too much shoe cushioning	Too little shoe cushioning	Being too old	Being too young
Running on a treadmill	Running on the road	Being female	Being male
Being overweight	Being underweight	Not stretching enough	Stretching too much
Overpronating	Underpronating	Drink to little water	Drinking too much water

*Searching for Injury
Causation...*

- Too much too soon
- Failure to recognize symptoms
- Changes in routine
- Changes in shoe wear
- Changes in diet
- Changes in surface
- Sometimes its just one straw too many



Best Practices for Runners

Have a plan (running, strength, mobility, recovery and nutrition)

Get the right gear (shoes, mobility tools, weights/ bands, apps, etc.)

Perform a dynamic warm up

Practice good form running

Incorporate a strength, stability and power routine based on your limitations

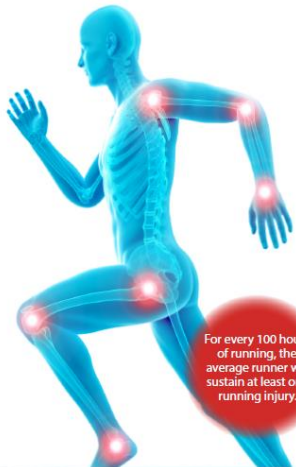
Incorporate a mobility routine based on your limitations

Recovery



Performance Physical Therapy

RUNNING ANALYSIS



For every 100 hours of running, the average runner will sustain at least one running injury.

Everything You Need
to Know



Good Running Form

Dynamic/Active
Warm Up

Toe Walk

High
Knees

Butt Kicks

Heel Walk

Bound

Squats

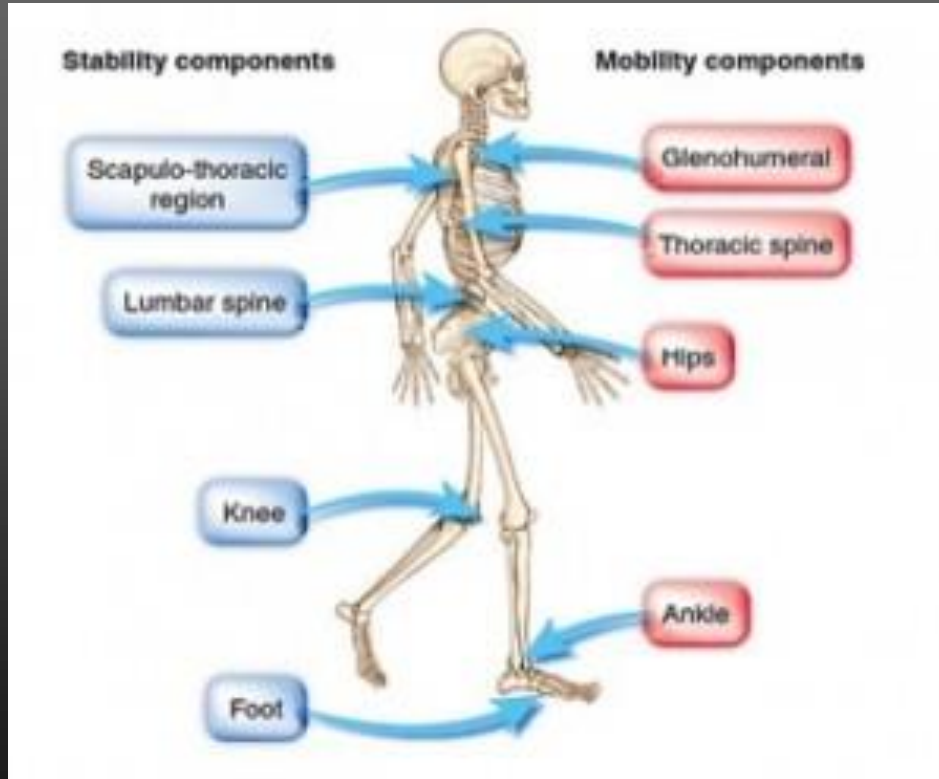
Rhythm
Skip

Hip Circles
in/out

Quick
Skips

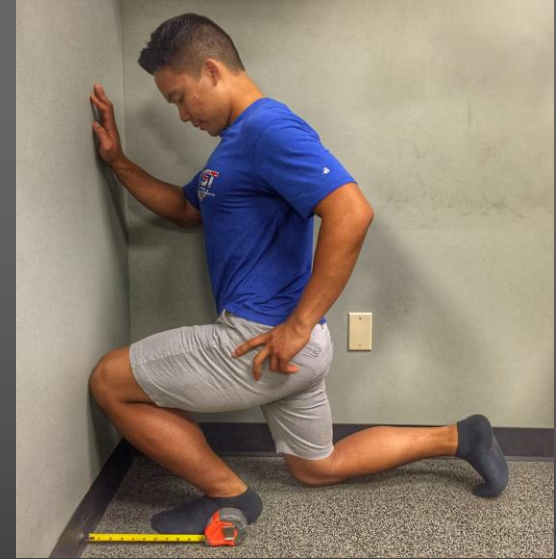
Microwave
Warm Up

How to Assess your own Mobility and Stability Joint By Joint Approach



Ankle Mobility Testing

Standing Vs Kneeling Ankle Dorsiflexion Test



Pass	Fail	Corrections
Knee touches wall (a fists length away or 2 inches)	<ul style="list-style-type: none">- Knee does not touch wall- Pain in front/back of the ankle	Half-Kneeling Calf Stretch Gastroc and soleus stretches Foam Roller - Lower Body

Hip Mobility Testing

Active Straight Leg Raise Test



Pass	Fail	Corrections
<ul style="list-style-type: none">- Moving leg rises above 80 degrees with knee straight- Opposite leg stays flat on the ground	<ul style="list-style-type: none">- Back or leg pain- Unable to rise above 80 degrees- Unable to keep back flat on ground- Unable to keep leg flat on ground	<ul style="list-style-type: none">Passive Leg LoweringReverse Toe TouchesFoam Roller - Lower Body

Hip Mobility Testing

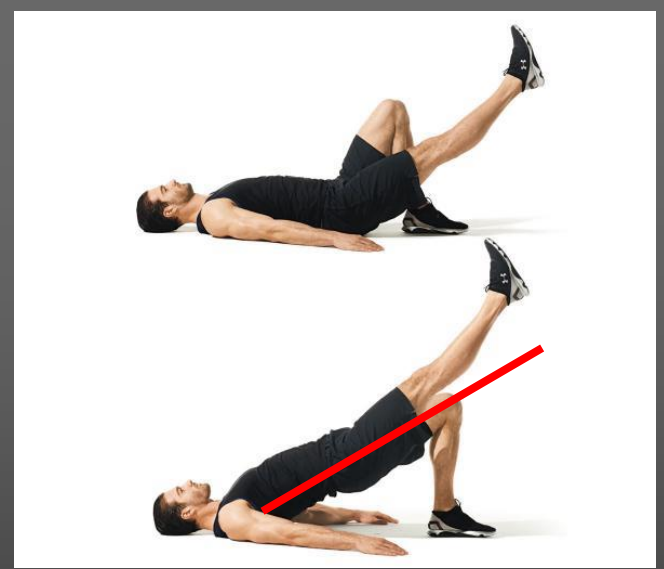
Wall Hip Extension Test



Pass	Fail	Corrections
<ul style="list-style-type: none">- Attaining position in picture above without lower back arching, trunk rotating, or feeling pain in knee/ back/ hip	<ul style="list-style-type: none">- Unable to attain position- Severe pain in knee/hip/ankle or lower back	<ul style="list-style-type: none">- Foam Roller - Lower Body- Brettzel- Hip Flexor Stretch with Side Bend

Posterior Stability Testing

Single Leg Bridge Test



Pass	Fail	Corrections
<ul style="list-style-type: none">- You can lift body so that there is a straight line from knee to shoulder- Pelvis does not drop or rotate- Easily hold for 20 seconds	<ul style="list-style-type: none">- Cannot lift to parallel- Pelvis drops- Cramping in hamstring or lower back- Cannot hold for 20 sec- Pain in hip/ lower back	<ul style="list-style-type: none">- Bridge with Pattern Assistance- Bridge (Palms Down)- Bridge (Palms Up - Neutral Pelvis)- Bridge Matrix - 1- Bridge Matrix - 2- Bridge Matrix - 3- Bridge With Arms Up

Anterior/Lateral Stability Testing

Modified Bunkie testing

Single leg Plank Tests (Front and side planks)



Pass	Fail	Corrections
<ul style="list-style-type: none">- Spine stays neutral throughout- Able to hold at least between 20-40 sec without compensation	<ul style="list-style-type: none">- Holds breath- Too much movement in pelvis and spine- Pain- Unable to hold 20-40 sec/ side	<ul style="list-style-type: none">- Planks

Functional Movement/ Strength and Power Tests

Lunge Test



Pass	Fail	Corrections
<ul style="list-style-type: none">- Able to forward lunge and return without loss of balance- Knee does not pass in front of toes- Knee does not drop inward- Trunk stays erect throughout	<ul style="list-style-type: none">- Loss of balance- Knee drops inward- Hip/ knee/ ankle do not stay stacked in a straight line- Pelvis drops- Pain	<ul style="list-style-type: none">- See previous stability exercises- Lunge Holds- Lunge with Twist- Lunges- Resisted Lunges - Low Anchor- Single leg deadlift/ squats

This is the last slide!



Performance
Physical Therapy

www.performanceptri.com

401.726.7100