

Total Care for the Athlete at Heart June 23, 2013

Safely Achieving Your Athletic Goals

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About me

- Orthopaedic Surgeon
 - George Washington University
- Additional Training in Sports Medicine
 - Cornell University / Hospital Special Surgery
- Team Physician for Chicago Bears
- Primarily Treat
 - Hip
 - Knee
 - Shoulder



Outline

- Before Training
- Training
 - Months Ahead
 - Weeks Ahead
- The Event
- Recovery from the Event

Before Training

- Pre-participation Health Screening
- Detect medical or musculoskeletal conditions that may predispose athlete to injury
- Detect conditions that may be life-threatening or disabling
- Purpose is not to exclude athletes, but to promote safe participation
 - Only 0.3-1.3% of athletes are denied clearance
 - Only 3.2-13.5% require further evaluation

Sudden Death in Athletes

- Prevalence of athletic field deaths
 - 1:100,000 to 1:300,000 high school athletes
 - Higher in males
- Older athletes
 - 1:15,000 joggers and 1:50,000 marathoners
- Preparticipation screening is the Primary Preventive Tool

Things to Evaluate:

1. Asthma or exercise induced asthma
 - Prevalence of undiagnosed 3-14%
2. Structural Heart problems
3. Heat Illness
4. Prior Musculoskeletal Injury

Training: Months

- Gradually ramp up intensity
- Periodization: Planned exercise variation → avoids over training
- Listen to your body-pain during an activity is your body sending you an alert message!

Training: Months

- Soreness the next day can be expected
- Allow for a recovery period
- Warm-up and stretch
- Apply ice to achy areas
- Use anti-inflammatory medicine if its safe for you
 - Ex: Ibuprofen

Training: Stretching

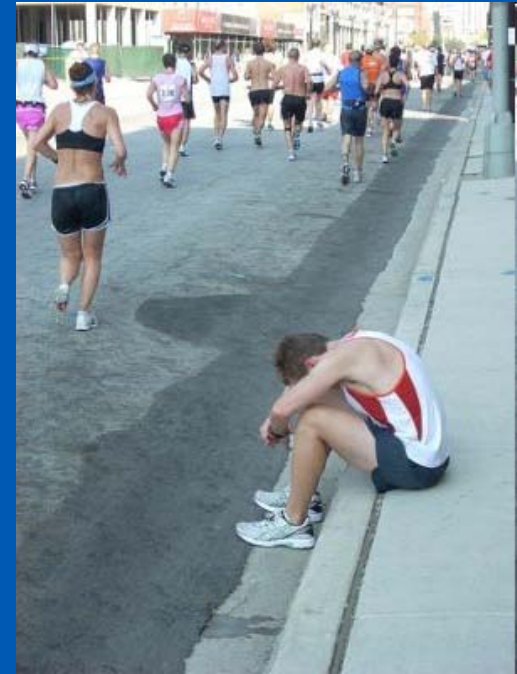
- Pre-activity stretching
 - Decreases the incidence of muscle and tendon injury
- Calf, hamstring, quadricep, adductor (groin), Upper Extremity

Training: Weeks

- Follow a training program specific to your event/sport
- Carb loading
 - Decr training, incr carb week prior to event
- Plan for day of event needs
 - Fluid replacement
 - Medication
 - » Epi pen, inhaler
 - Check possible weather conditions (heat)

The Event: Possible Problems

- Dehydration
- Heat Illness/Hyperthermia
- Musculoskeletal Injuries



Dehydration

- Preventable injury
- Thirst mechanism dampens during prolonged exercise-know your needs
- Drink when thirsty on race day
- *Do Not Overdrink!*

Hydrate

- Most athletes requires a *minimum* of 20-40oz of fluid per hour of exercise
- Acknowledge urination pattern and concentration during training

Prevent Dehydration

- Track sweat loss during training
- Measure pre- and post-run weights
- Fluid Replacement: Consider 24oz of fluid for every lb lost



Heat Illness

- Risk of heat illness increases in endurance athletes
- Spectrum of illness
 - Heat Cramps
 - Heat Exhaustion
 - Heatstroke
- >80 degrees F high risk for heat illness
- Lose 1-2L/hr sweat in hot conditions
- Q20-30min water breaks
- 5% total body loss water → incr HR 30beats/min, core temp 1 deg. C

Prevent Heat Illness

- Pace yourself
- Maintain hydration
- Acknowledge warning symptoms of heat exhaustion and seek medical attention:
 - Cramps
 - Fatigue
 - Tunnel Vision
 - Pale, Sweaty Skin---Cool, Clammy
 - Dizziness or Lightheadedness
 - Urge to Defecate or Diarrhea

Heat Stroke

- Can Be Fatal
- Symptoms
 - Confusion, drowsiness
 - Staggering
 - Nausea
 - Vomiting, diarrhea
- Vitally important to cool the body within one hour of an elevated core body temperature

Musculoskeletal Injuries

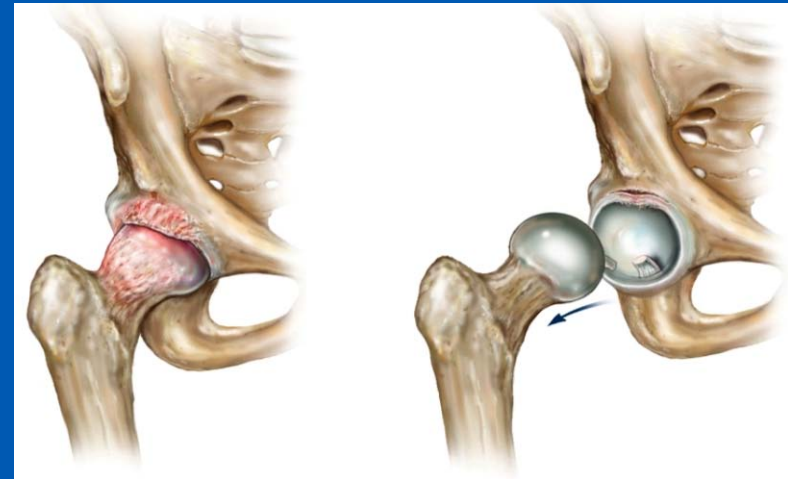
- Hip Pain
- Knee Pain
- Shoulder Pain
- Achilles Tendinopathy
- Plantar Fasciitis
- Stress Fractures

Musculoskeletal Injuries

- Related to an increased training volume
- Do not ignore early warning signs
- Pain during an activity is a signal to stop and re-evaluate
- If persists: Get evaluated by a physician

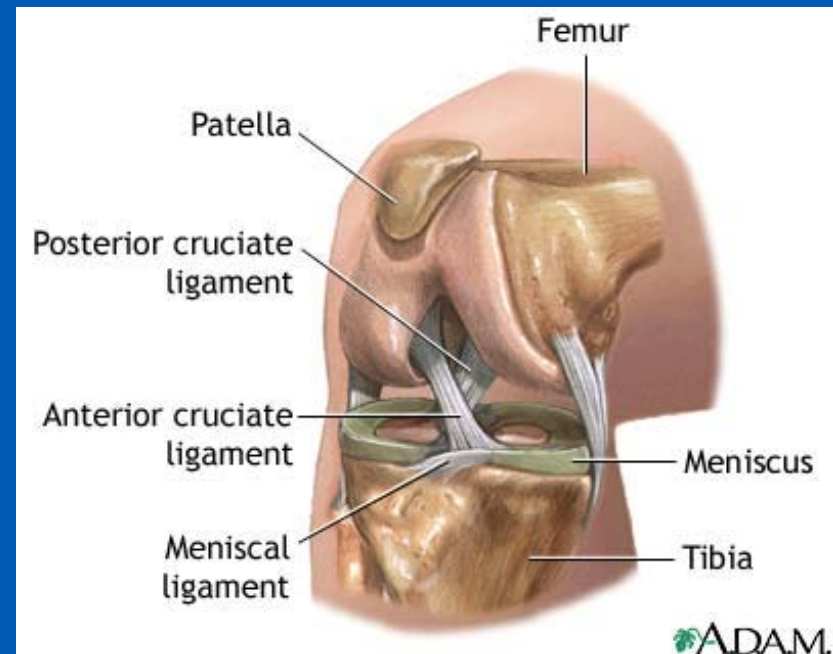
Hip Pain

- Groin/ Gluteal / Thigh pain
- Muscle pull
- Tendonitis
- Cartilage Injury (Labral tear)



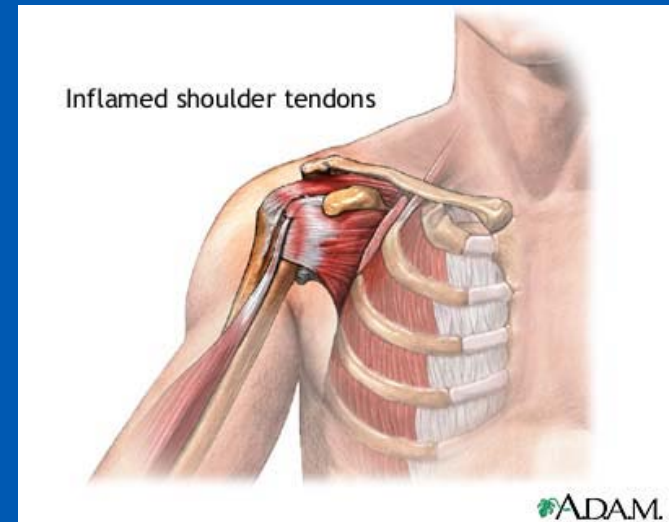
Knee Pain

- Tendonitis
- Cartilage Injury (meniscal tear)
- With traumatic event
 - Ligament injury (ACL)



Shoulder Pain

- Tendonitis
- Tendon / Rotator cuff tear
- With traumatic event
 - Cartilage tear (labrum) / Ligament Injury



Achilles Tendinopathy

- Gradual increased pain
- Tightness in the calf



Plantar Fasciitis

- Pain in the plantar heel or arch
- Worse with the first few steps in the morning
- May subside with activity only to get worse later in the day



Stress Fractures

- Focal, progressive pain over a bony structure
- Pain increases with running or walking
- Common Sites:
 - Hip (Femoral Neck)
 - Foot (Metatarsal)
 - Shin (Tibia)

The Event: other possible issues

- Hyponatremia (Low Sodium Level)
- Hypothermia
- Lacerations
- Blisters
- Allergic Reactions
- Asthma Exacerbations
- Abnormal Glucose/Diabetic Complications
- Cardiovascular Issues

Recovery from the Event

- Fluid Replacement: Consider 24oz of fluid for every pound lost
- Ice sore anatomy
- Use anti-inflammatory medicine if needed and its safe for you
- Self-evaluate any painful areas

If Symptoms Persist

- Seek An Evaluation:
 - Flexibility
 - Core strength
 - Running mechanics
 - Running shoes

