

Living Anatomy Exercise

■ **Be able to identify:**

- Humeral Head
- Scapular Spine
- AC Joint
- Sternoclavicular Joint
- ASIS
- Iliac Crest
- Greater Trochanter
- SI Joints
- Femoral Condyle
- Patella
- Medial and Lateral Menisci
- Medial and Lateral Malleoli
- Peroneal Tendons

Common Musculoskeletal Injuries in Yoga

Shanti Yoga School

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The background features a series of concentric, overlapping circles and lines in shades of gray, some solid and some dashed, creating a subtle, abstract pattern.

Disclosures

None



Goals and Objectives

- **Background of US Yoga Practitioners**
- **Epidemiology**
- **Common Injuries**
 - Shoulder
 - Elbow/Wrist
 - Neck and Back
 - Hip and Knee
 - Foot and Ankle
- **General Injury Prevention Recommendations**

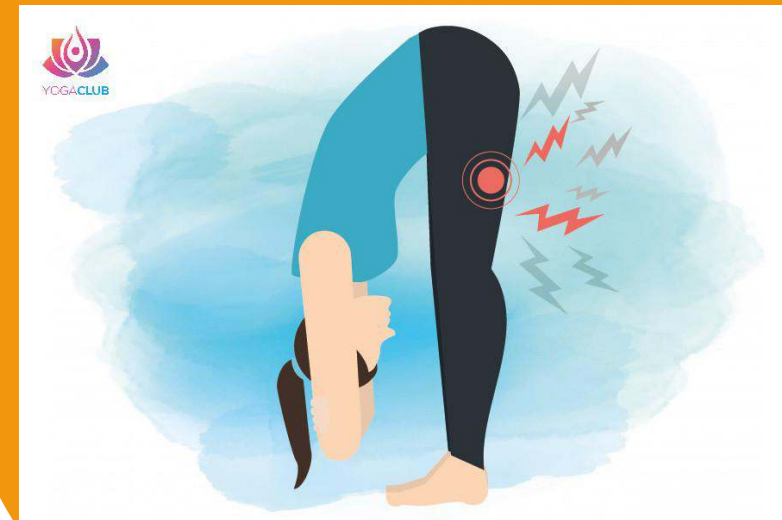
Background of US Yoga Practitioners

- **General yoga focus on 3 main components in Western world:**
 - Hatha (Postures)
 - Pranayama (Breathing)
 - Meditation
- **Estimated 6.9% of American population reports practicing yoga**
 - Typical US yoga practitioner attends 18.6 classes per year
- **Mean age:31-58 yo**
- **Majority are female**



- Incidence (rate of new diagnosed cases) of “adverse events” related to yoga of 22.7%
- Lifetime prevalence of “adverse event” (actual amount of cases at any given time) of 35.4%
- Of these events:
 - 1.9% were reported as a “serious adverse event requiring immediate discontinuation of yoga”
 - 0.6% were “adverse events requiring lifetime discontinuation of yoga”
 - 0% reported lifetime impairment from a yoga-related event

Epidemiolog y



Epidemiology (continued)



- Are there certain types of yoga implicated more commonly?
 - Bikram, Hatha, and Pranayama cited most commonly
 - Hot Yoga with higher prevalence (52.2%) – generally dehydration events
 - Ashtanga Yoga with longer duration injuries (thought to be related to complex sequences during flow)
- Most commonly cited poses leading to injuries:
 - Lotus, headstand, shoulder stand, handstand, forward bends, backward bends

Epidemiology (continued)



- Risk of yoga-related injury estimated to 1.45 per 1000 hours of yoga practiced (remember avg is 18.6 classes/year)
- Compared to other activities, there is a lower injury rate than high-intensity, higher impact activities such as soccer
- Risk of yoga-related injury is considered same risk of “usual care and exercise”
- Experience appears to play a role
- Practitioners cited **hypercompetitiveness** and **ego** as most common reason for injury.
 - Other reasons cited include excessive effort, poor technique, inadequate instruction, and poor instruction

Common Injuries

In order of decreasing frequency: Neck, Shoulder, Low Back, Knee, Wrist, Back (any region), Hamstring, Hip, Leg, and Groin

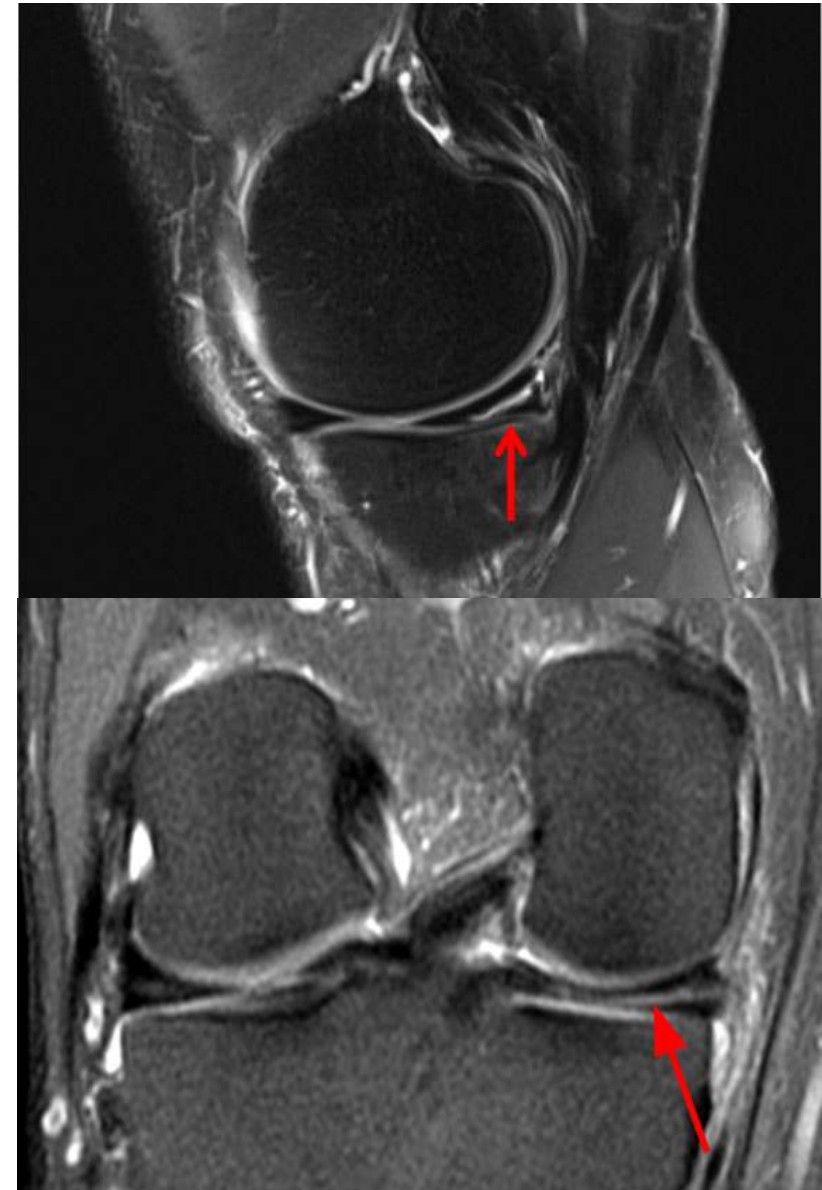
Imaging studies (MRI, CT, ultrasound, X-ray) showed:

- Tendinous lesions (sprains, tendon tears)

 - Most common supraspinatus and Achilles

- Fibrocartilaginous Tears

 - Medial Meniscus, Labrum (Hip and Shoulder), Lumbar Disc, and Peroneus Brevis Tendons



Upper Extremity

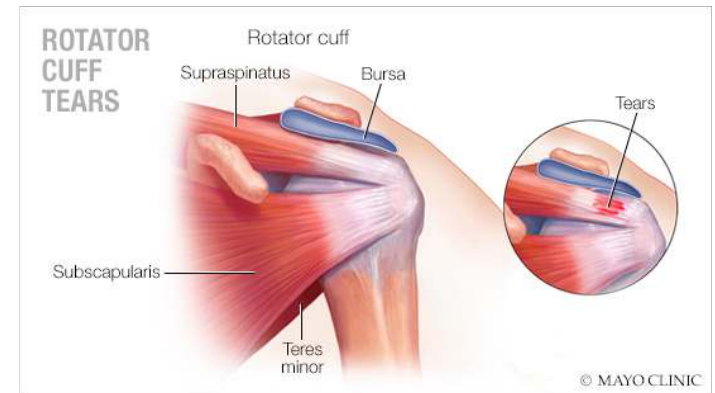
Shoulder Injuries

Rotator cuff (especially supraspinatus) at risk in any position that puts weight on the hands

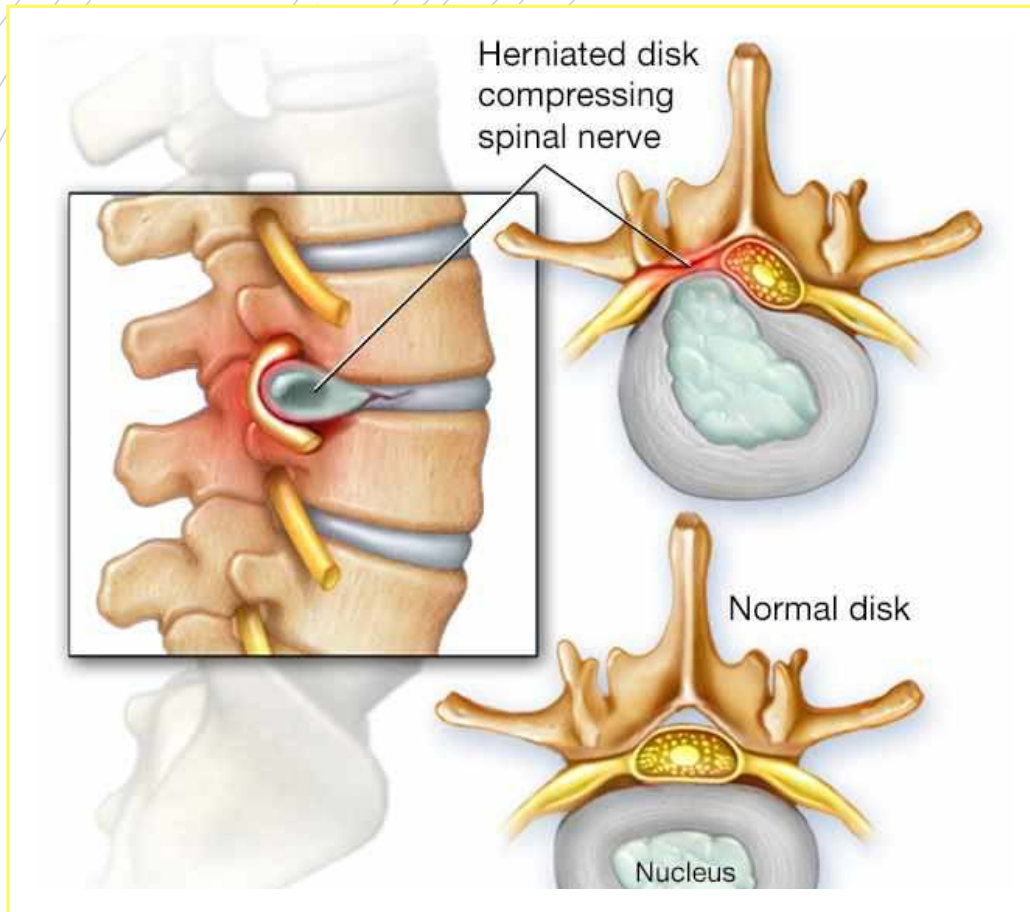
Ex: Chaturanga, downward dog, side plank, wheel, all binds, Handstand, Crow, Plank

Elbow/Wrist Injuries

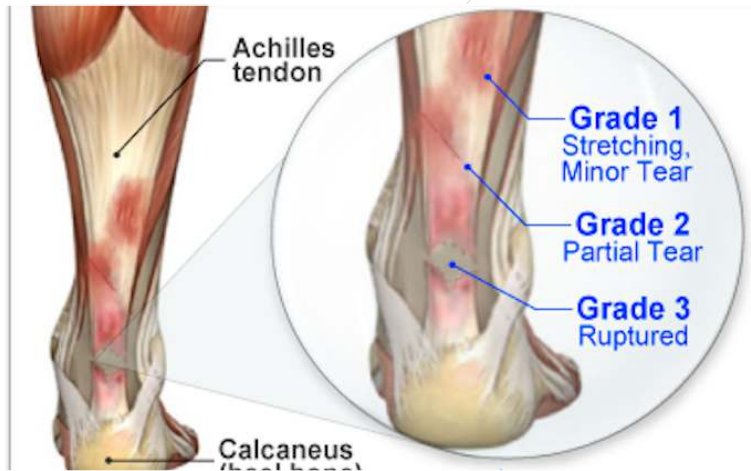
Similar poses leading to shoulder injuries can lead to elbow injuries



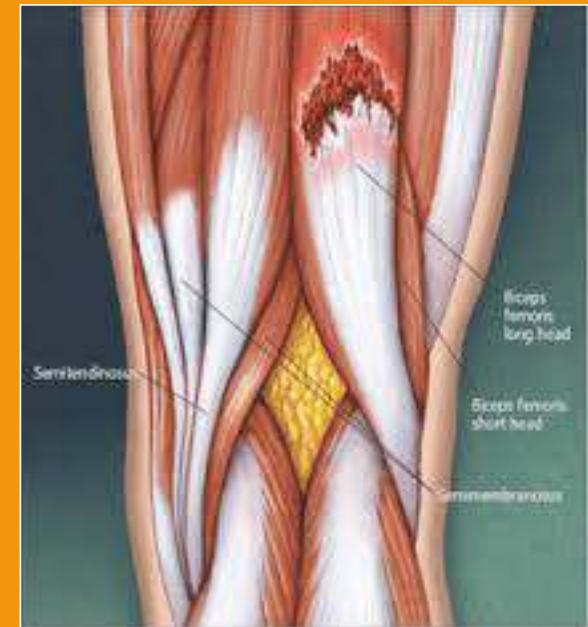
Neck and Back



- Cervical spine vulnerable to injury during inverted poses due to weight bearing in highly mobile part of the spine
 - Ex. Headstand, Shoulder stand
- Lumbar Spine can be injured during:
 - Backbends and twists due to overextension or forceful muscle contractions
 - Forward bends due to increased stress on the low back in the presence of tight hamstrings. Can also lead to disc herniation and vertebral fractures
- Be particularly mindful in older practitioners with possible degenerative disease (arthritis)!



Lower Extremity



■ Hip and Knee

- Hamstring strains most common
- Poses affecting hips can also affect knees due to stress transfer
- Ex: Wide-legged poses, Warrior poses, Lotus, Tree, Pigeon, Chair

■ Foot and Ankle

- Squatting poses can lead to excessive stretch of the Achilles tendon

Injury Prevention Recommendations



- **Avoid postures that cause pain**
 - PAIN is different than EDGE
- **Offer modifications and use of props**
- **If persistent pain or dysfunction despite rest, student should seek medical evaluation.**
- **Reflect on class sizes**
 - Size limit?
 - Assistant teachers?
 - Do you know your students?
- **Reiterate importance of listening to body and avoiding competition**