Kin 2236b - Athletic Injuries - Review

STTT

-will be more on the final
-have to determine what is inert and what is contracile

Inert Tissue:
-Pain of stretch
Contractile Tissue:
-pain on contraction and stretch

AROM:
-contraction of agonist, stretch of antagonist/specific inert
PROM:
-stretch of antagonist/specific inert
-FORGET AGONIST!
Resited
-contraction of the agonist
-if no pain then it can be ruled out

Screw Home Mechanism

-rotation occurs during the last few degrees of extension because the medial femoral condyle is larger than lateral
    -if foot is planted, femur rotates medially
    -if foot is fixed, tibia rotates laterally

-this locks the joint to increase stability
-the Popliteus then must contract to unlock the knee

Gait Cycle

-pronation is like the 3 bears, too much, not enough, and just right
-important because it helps us adjust to terain
-pronation occurs as foot is loaded to allow for shock absorbtion, ground terrain changes and equilibrium
-3 movements
-Tibia rotates internally with the Talus and Calcaneus

-Supination
    -in supination, the mid-tarsal joints are locked
    -foot more stable for toe off
    -allows you to use great amount of force ot propel body
    -achieved with aid of the cuboid pulley

Excessive Pronation
    -over pronation at the subtalar joint causes internal rotation of the tibia and delayed re-supionation

Alignment and Medial Collapse

    -Lower Chain Alignment
        Valgus
            -compression on outside
            -gapping on the medial side
        Vargus
            -compression on medial side
            -gapping on lateral side

Medial Collapse Syndrome

-hip adduction, femoral internal knee rotation, and knee valgus

-change femur under patella

-decreased joint contact area

-increased joint stress

-knee pain can often be due to a joint above or a joint below

Rotator Cuff Strains and Tears

Older Athlete >35-49 Years Old

-shoulder pain during activity above shoulder

-usually slower onset

-inability to sleep on shoulder

-usually weak rotator cuff

-+ve impingement signs

Shoulder Impingement

-weakness of rotator cuff muscles reduces the effectiveness of centralization of the humeral head

-with impingement, the humerus is pulled too far up and pinches the Supraspinatus or sub-acromial bursa

-this causes pain during ROM between 70-120 degress

-this cause be caused by many things such as moving the wrong way or the wrong muscles turning on at the wrong times

-Positive Hawkins-Kennedy, Neer and possibly Speed's