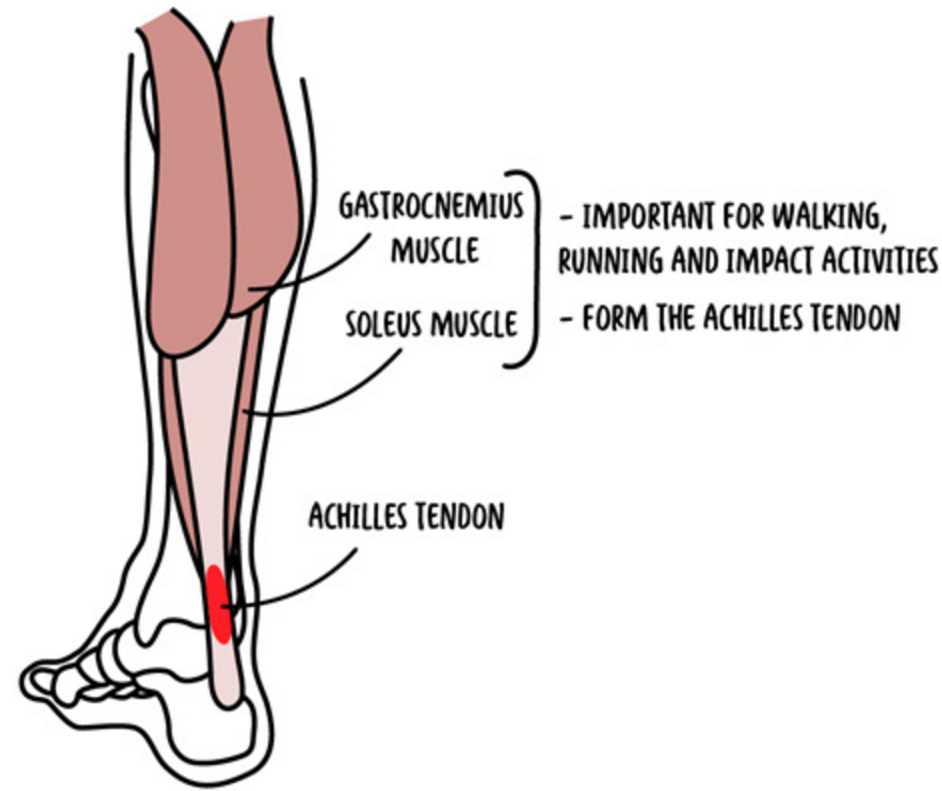


ACHILLES TENDON

- LARGEST TENDON IN THE BODY
- NEEDS TO WITHSTAND UP TO EIGHT TIMES BODY WEIGHT IN FORCE WHEN UNDERTAKING SPORTING ACTIVITIES
- INJURIES ARE COMMON

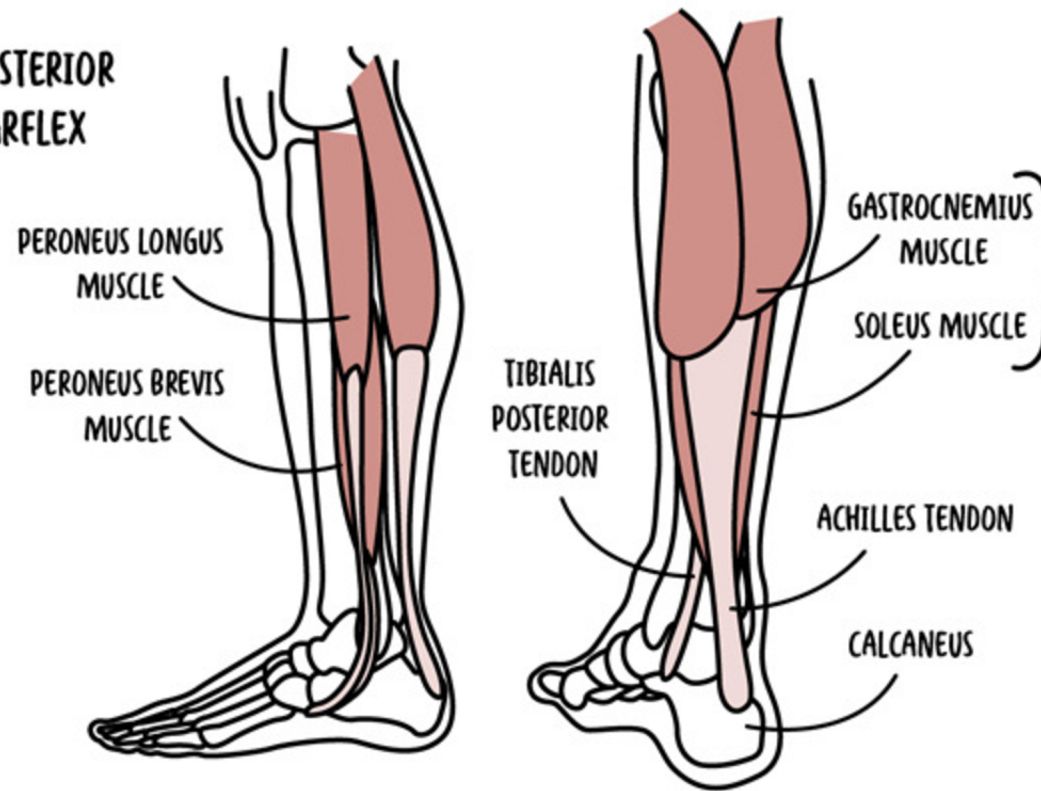


ACHILLES TENDINOPATHY OR TENDONITIS

- OVERUSE INJURY FROM EXCESSIVE STRESS ON THE TENDON
- OCCUR EITHER IN INTENSE SPORTING ACTIVITIES OR IN THE ELDERLY FOLLOWING CHRONIC TENDON PAIN

ACHILLES TENDON ANATOMY

- CONTRACTION OF THESE MUSCLES + TIBIALIS POSTERIOR AND PERONEUS LONGUS AND BREVIS -> PLANTARFLEX



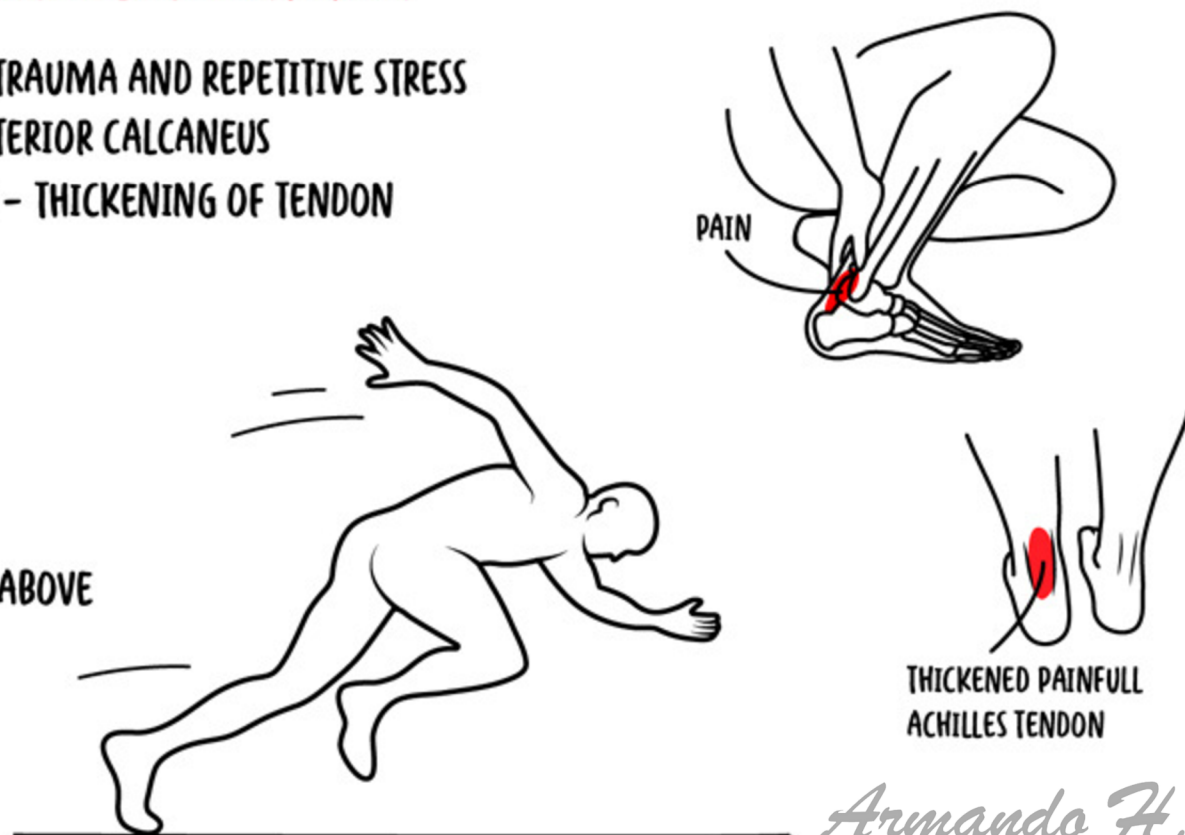
- PERITENDINOUS SHEATH ALLOWS THE TENDON TO SLIDE RELATIVE TO SURROUNDING TISSUE

ACHILLES TENDINOPATHY - CLINICAL PRESENTATION

- OCCURS IN ATHLETES FROM MICROTRAUMA AND REPETITIVE STRESS
- PAIN OR STIFFNESS ABOVE THE POSTERIOR CALCANEUS
- CHRONIC ACHILLES TENDINOPATHY - THICKENING OF TENDON

PAIN

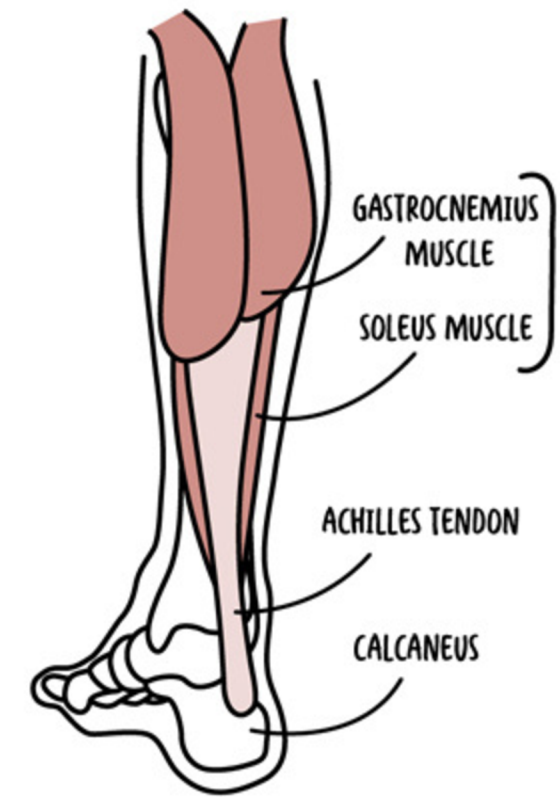
- BURNING
- WORSE WITH ACTIVITY
- RELIEVED AFTER A PERIOD OF REST
- LOCALIZED TENDERNESS 2 TO 6 CM ABOVE THE POSTERIOR CALCANEUS



Armando H. Faigl

ACHILLES TENDON ANATOMY

- RESIST LARGE TENSILE FORCES
- LARGEST TENDON IN THE BODY
- STEMS FROM A DISTAL JOINING OF THE GASTROCNEMIUS AND SOLEUS MUSCLES
- INSERTS AT THE BOTTOM OF THE CALCANEUS

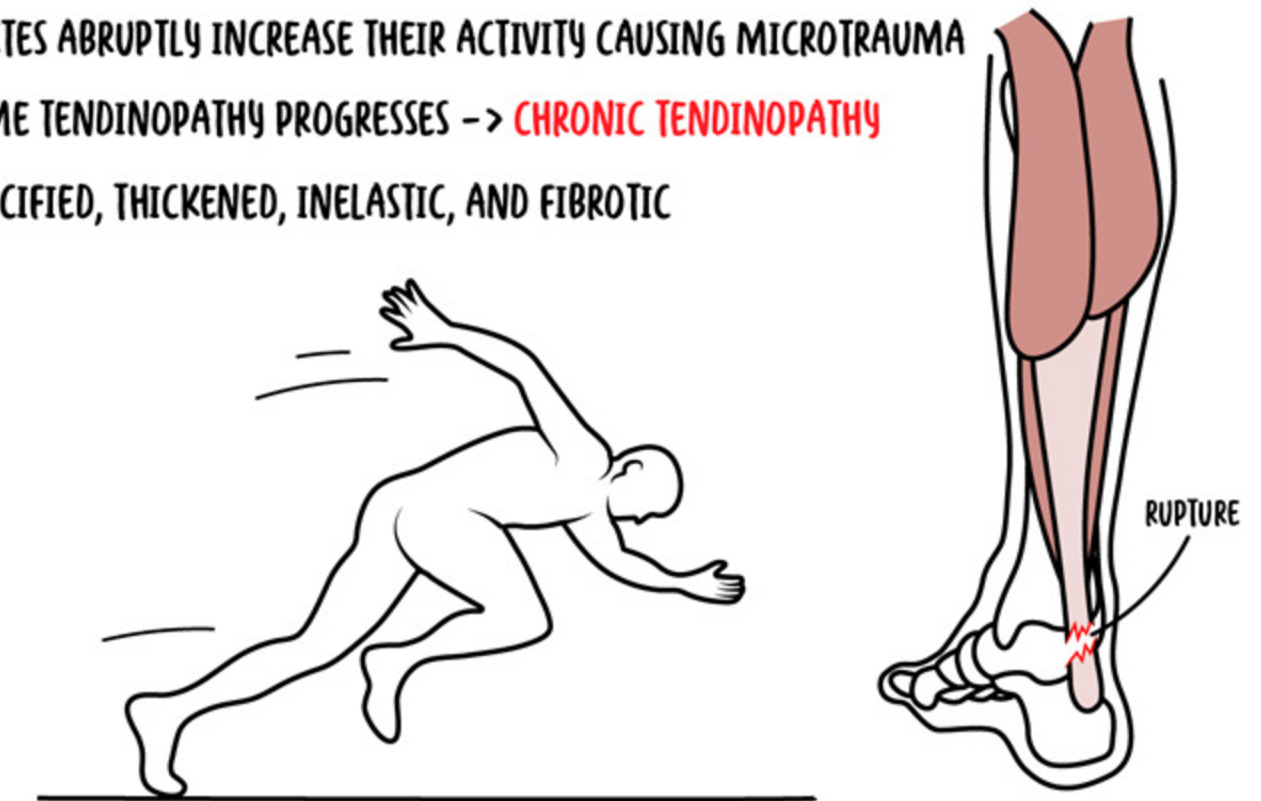


MECHANISM OF ACHILLES TENDINOPATHY

- ACUTE PAIN DEVELOPS WHEN ATHLETES ABRUPTLY INCREASE THEIR ACTIVITY CAUSING MICROTRAUMA
- WITHOUT ADEQUATE HEALING TIME TENDINOPATHY PROGRESSES -> CHRONIC TENDINOPATHY
- DAMAGED TENDONS BECOME CALCIFIED, THICKENED, INELASTIC, AND FIBROTIC

OTHER RISK FACTORS

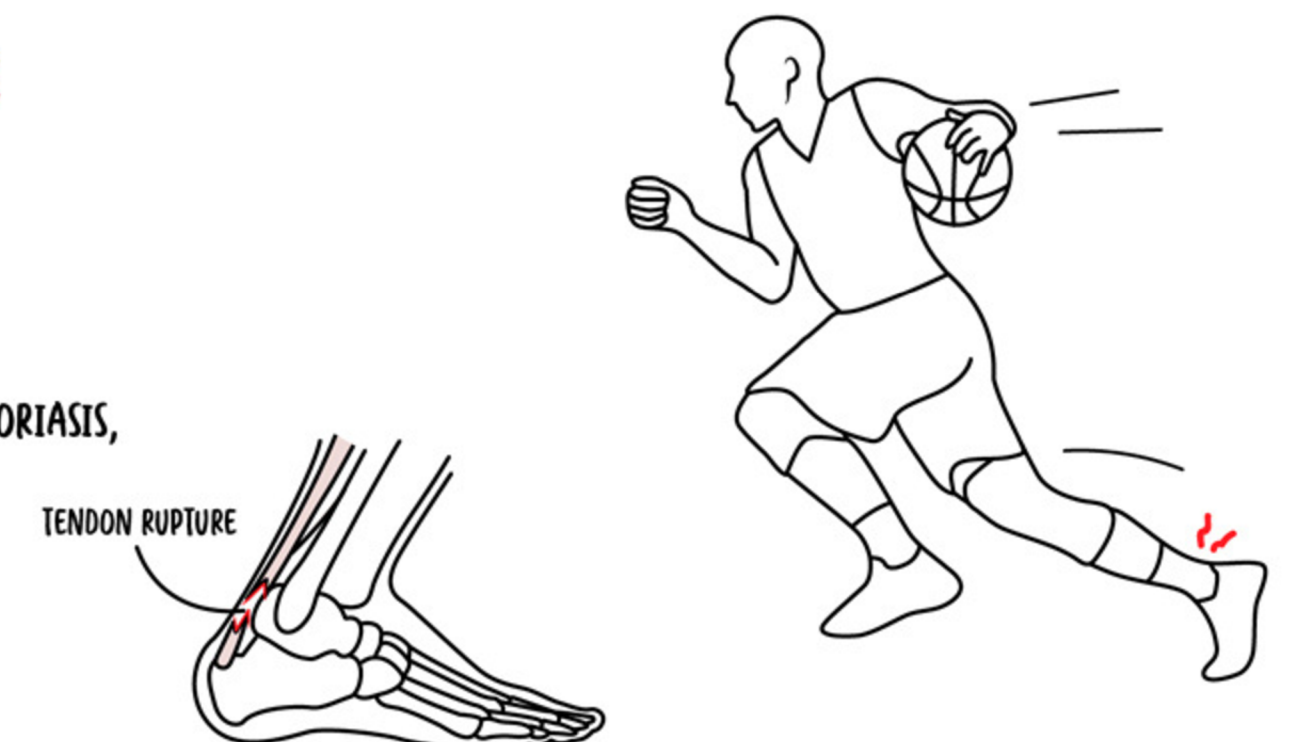
- COLD WEATHER
- FOOT MISALIGNMENT
- POOR RUNNING MECHANICS
- INAPPROPRIATE FOOTWEAR
- WEAKNESS IN PLANTARFLEXION
- LEG-LENGTH DISCREPANCY



ACHILLES TENDON RUPTURE

INCREASED RISK WITH

- ACHILLES TENDINOPATHY
- FLUROQUINOLONES
- GLUCOCORTICOID
- AUTOIMMUNE DISORDERS: PSORIASIS, ANKYLOSING SPONDYLOSIS

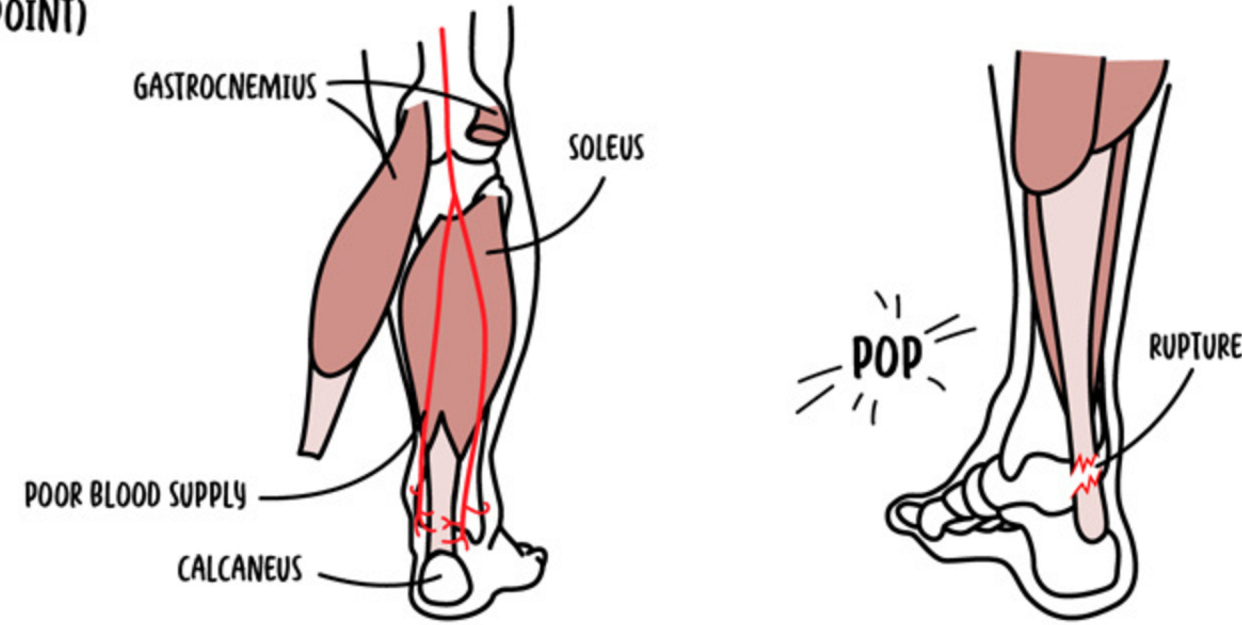


ACUTE TENDON RUPTURE

- OCCURS WHEN SUDDEN FORCES ARE EXERTED UPON THE ACHILLES TENDON DURING STRENUOUS PHYSICAL ACTIVITIES
- TYPICALLY WHEN A PATIENT IS PUSHING OFF WITH THEIR FEET (EG, STOP-AND-GO SPORTS SUCH AS TENNIS, BASKETBALL, OR SOFTBALL)

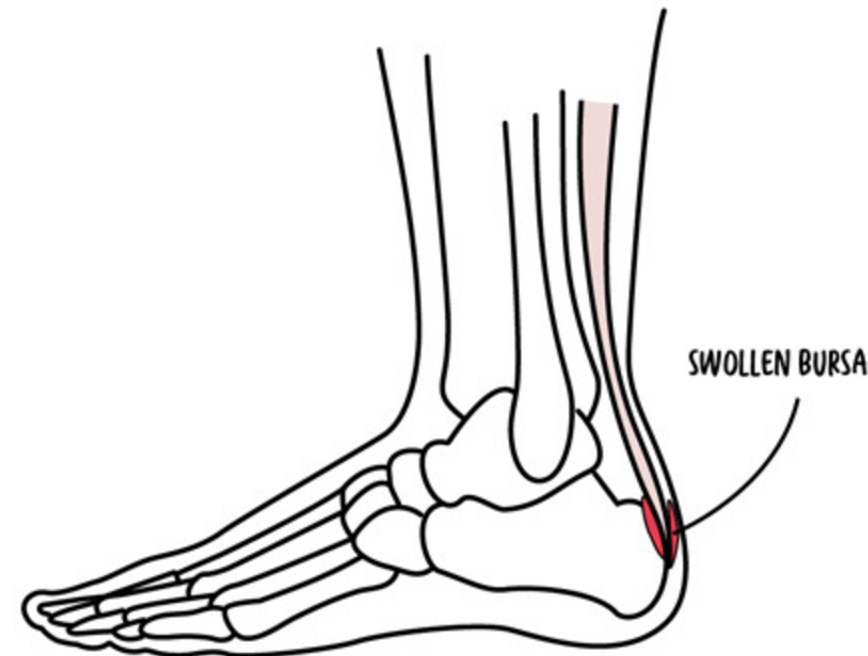
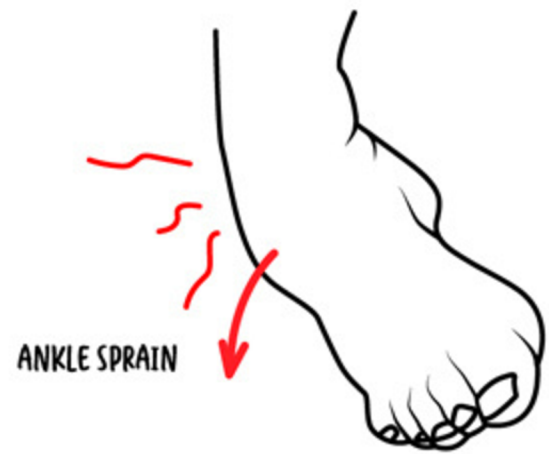
ACHILLES TENDON RUPTURE

- FEEL AS IF THEY WERE STRUCK VIOLENTLY IN THE BACK OF THE ANKLE
- SOME HEAR A "POP" AND EXPERIENCE SEVERE, ACUTE PAIN (ABSENCE OF PAIN DOES NOT RULE OUT RUPTURE)
- OCCUR WHERE THE BLOOD SUPPLY OF THE GASTROCNEMIUS-SOLEUS MUSCLE COMPLEX IS POOREST (2 TO 6 CM ABOVE THE INSERTION POINT)



DIFFERENTIAL DIAGNOSIS

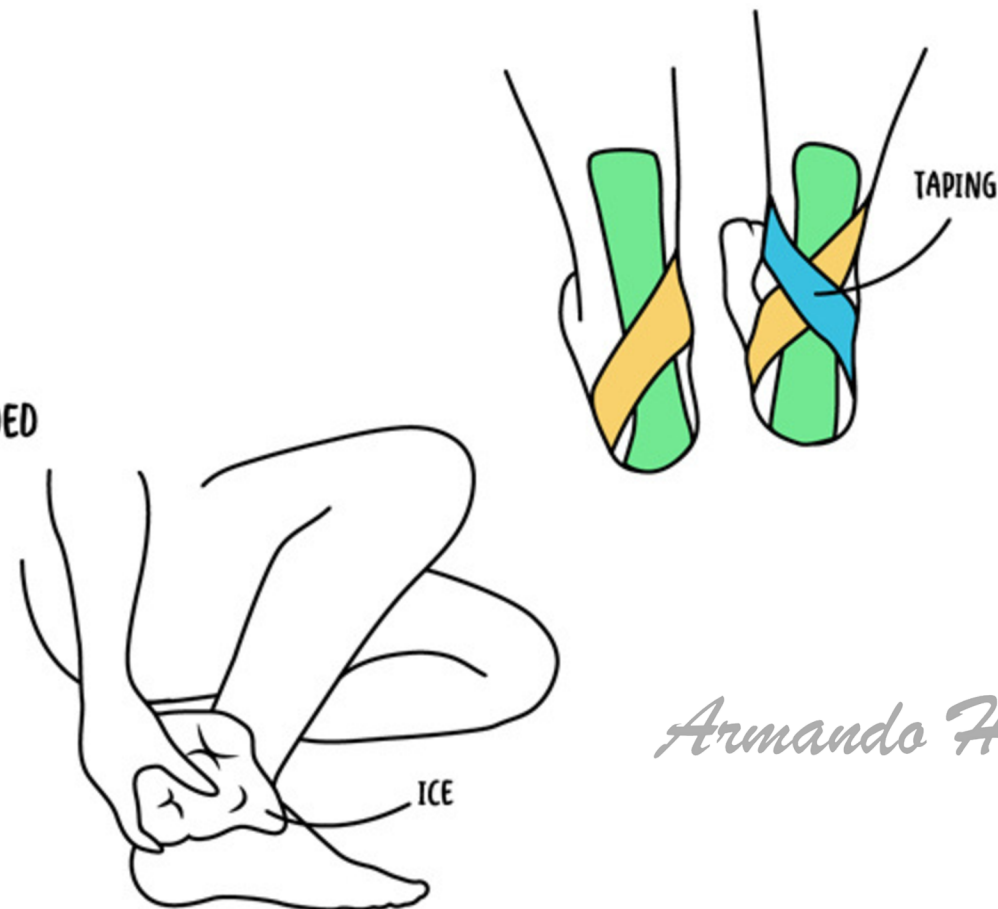
- ANKLE SPRAIN (OCCUR WITH LANDING) - ACUTE ACHILLES PROBLEM OCCURS WHEN TAKING OFF
- CALCANEAL BURSITIS
- CALCANEAL APOPHYSITIS



TREATMENT

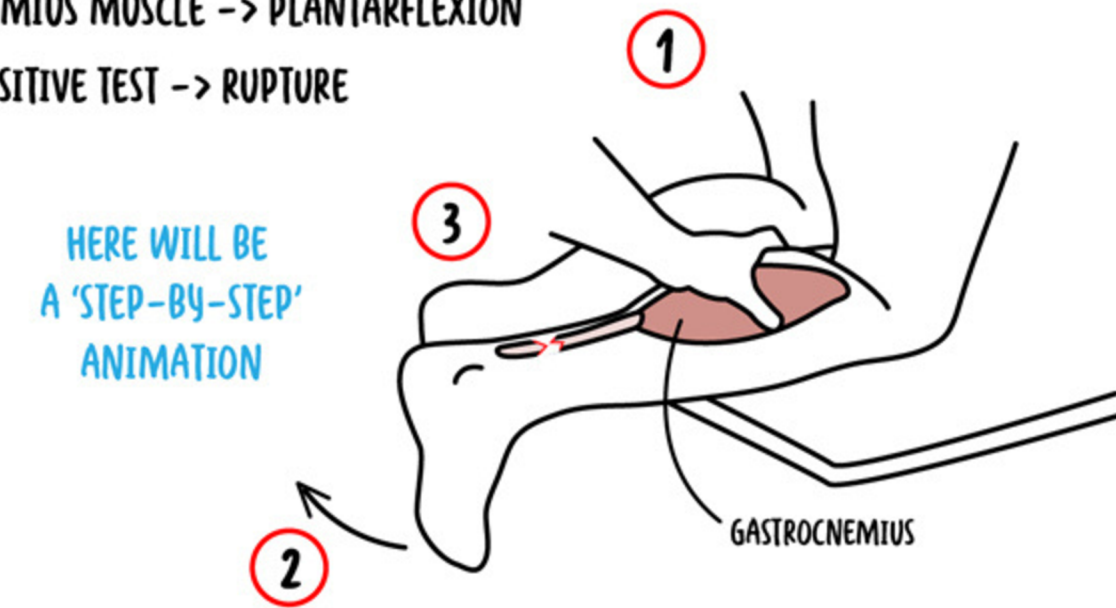
ACUTE TENDINOPATHY

- AVOID AGGRAVATING ACTIVITIES
- APPLY ICE WHEN SYMPTOMATIC
- NSAIDS
- SUPPORT THE ACHILLES WITH A HEEL LIFT AND WITH ELASTIC BANDAGE OR TAPING AS NEEDED
- RETURN TO EXERCISE / REHAB



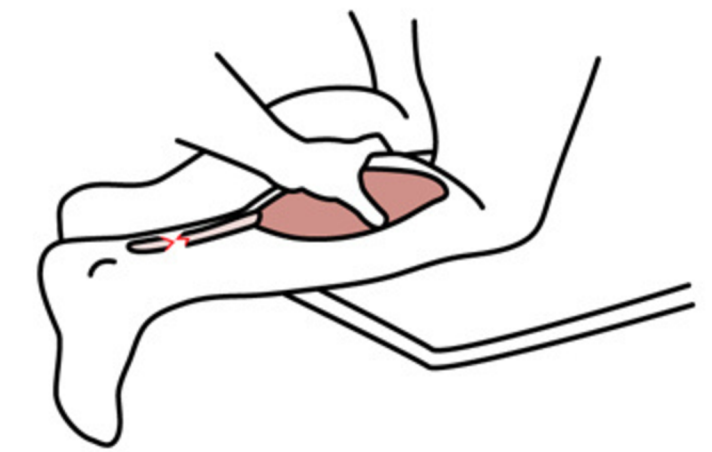
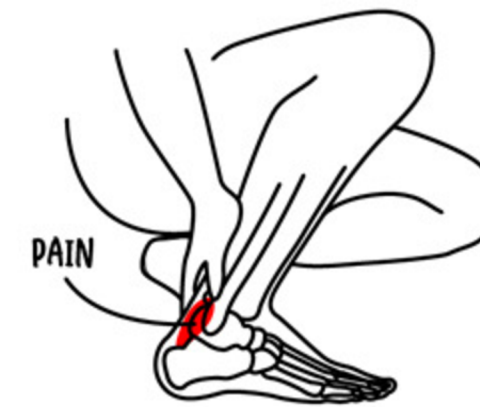
ACHILLES RUPTURE - CLINICAL EXAMINATION

- LOSS OF TENDON DEFINITION, BRUISING AND SWELLING
 - THE **CALF SQUEEZE** OR **THOMPSON TEST** - DETECTING COMPLETE TENDON RUPTURE
1. THE PATIENT LIES PRONE OR KNEELS ON A CHAIR
 2. THE CLINICIAN SQUEEZES THE GASTROCNEMIUS MUSCLE -> PLANTARFLEXION
 3. THE ABSENCE OF PLANTARFLEXION -> POSITIVE TEST -> RUPTURE



INVESTIGATIONS

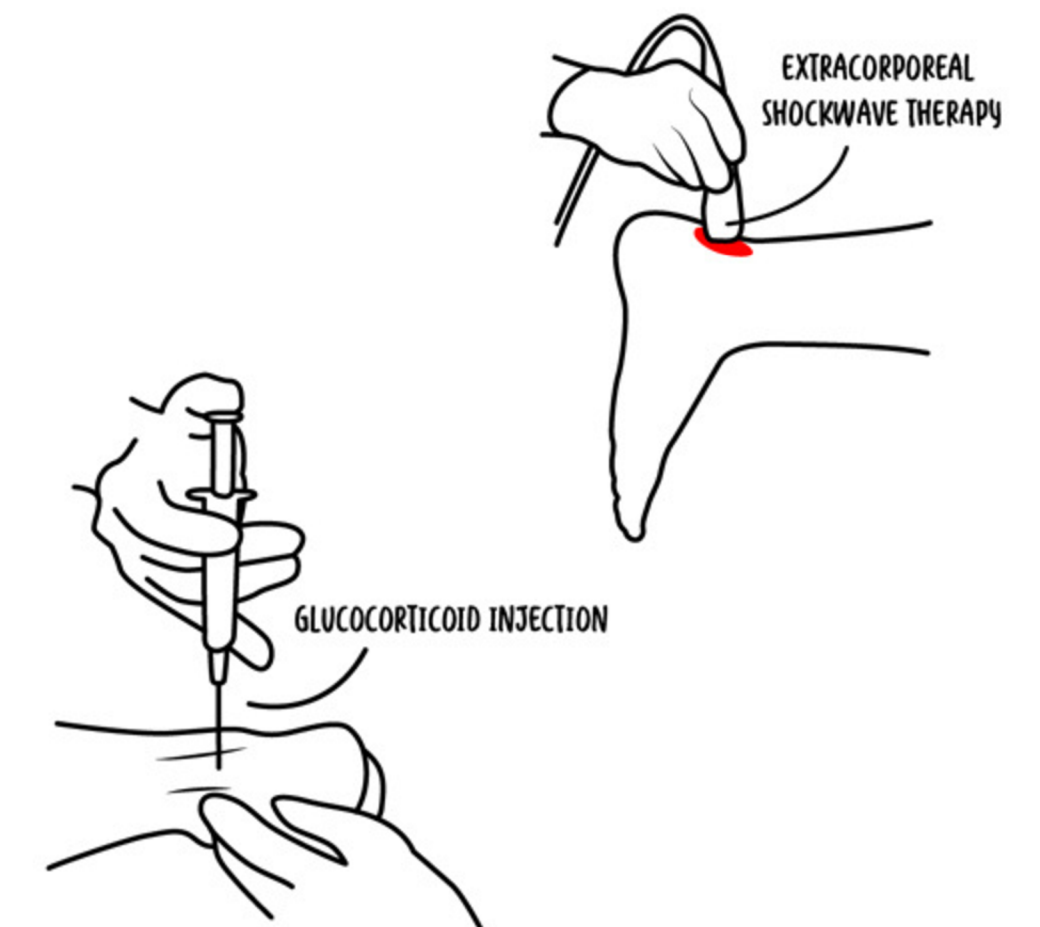
- HISTORY AND EXAMINATION
- IMAGING IS NOT NECESSARY EXCEPT TO
 - RULE OUT OTHER CONDITIONS, SUCH AS FRACTURE
 - CONFIRM ACHILLES TENDON RUPTURE



TREATMENT

CHRONIC TENDINOPATHY

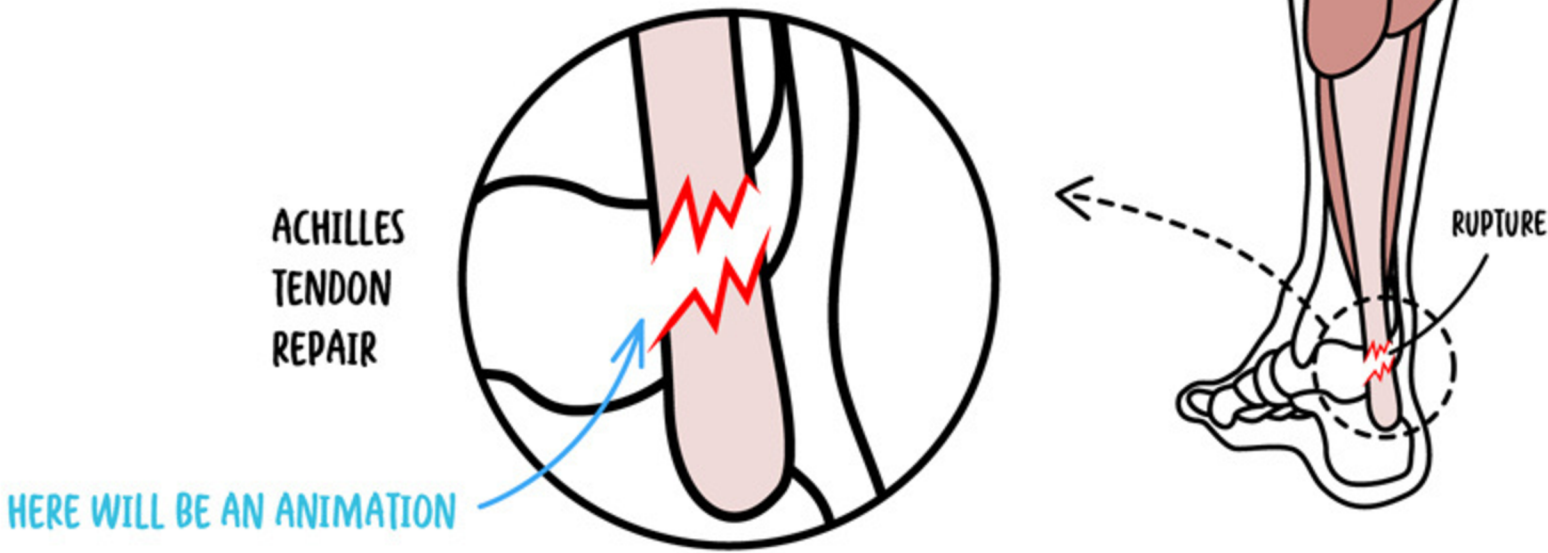
- INJECTION THERAPIES
- GLUCOCORTICOID INJECTION
- PLATELET-RICH PLASMA INJECTION
- AUTOLOGOUS BLOOD INJECTION
- EXTRACORPOREAL SHOCKWAVE THERAPY
- DRY NEEDLING
- TAPING AND HEEL SUPPORT



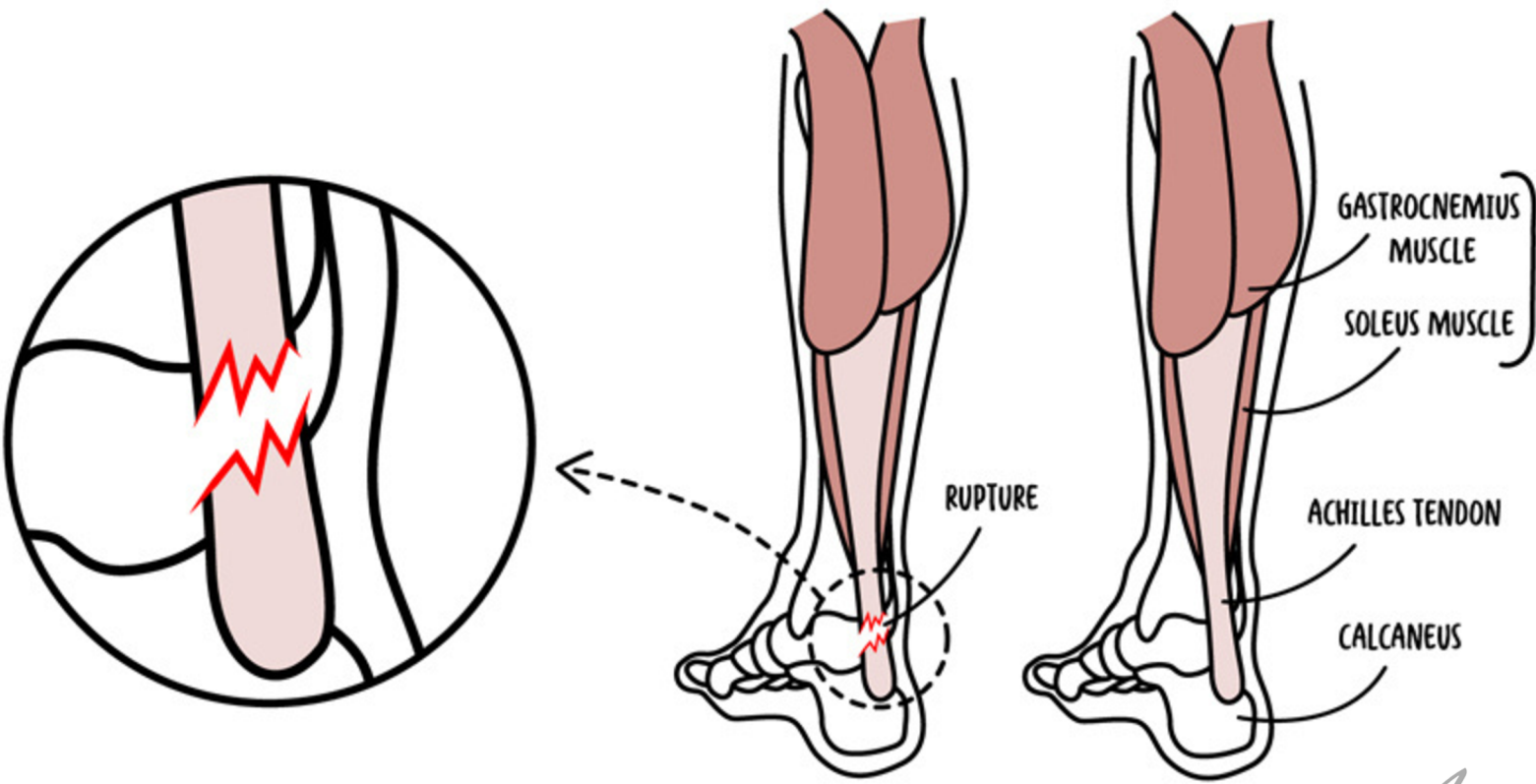
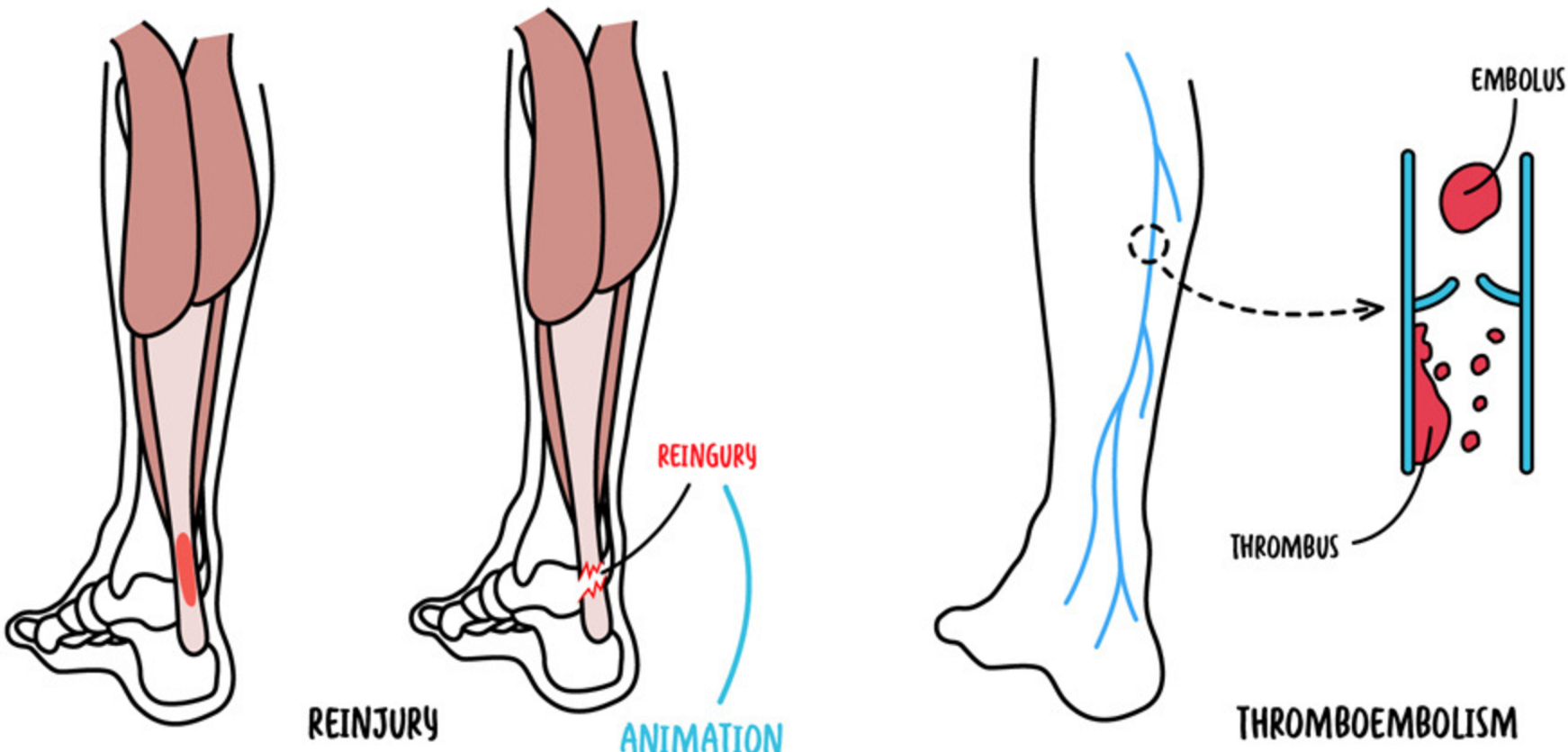
Armando H. Faigl

TREATMENT

- TENDON TEAR/RUPTURE – SURGICAL VS NON SURGICAL CONTROVERSIAL
- SURGICAL FOR ATHLETES
 - NON SURGICAL APPROACH FOR INACTIVE PATIENTS – REST – INJECTION



COMPLICATIONS



Armando H. Faigl