• Originally from Cannon Falls, MN
• Hamline University – St. Paul, MN
  • Biology Major; Psychology and Spanish Minor
• Des Moines University – Des Moines, IA
  • College of Podiatric Medicine
• Regions Hospital/HealthPartners – St. Paul, MN
  • Foot & Ankle Surgery Residency
• Allina Health: Cambridge Medical Center
  • APMA Board Certified
  • ACFAS Board Qualified
Your foot.....is complicated.

- 26 bones
- 33 joints
- 107 ligaments
- 19 muscles & tendons
Happy Feet = Healthy Feet

Don’t Let Foot Problems Sideline Your Fitness Goals

• Don’t skimp on footwear
  • Strong heel, padded insoles, flexible toe box

• Socks matter too!
  • Provide cushion, wick away moisture

• Arch support
  • Full length insert, firm arch support

• Ease in to any workout routine
  • Doing too much too fast = high risk for injury
Put shoes to the 1-2-3 test:

- **Step 1:** Press on both sides of the heel area to ensure the heel is stiff and won't collapse.
- **Step 2:** Bend the shoe to check for toe flexibility. The shoe shouldn't bend too much in the toe box area, but it shouldn't be too stiff either.
- **Step 3:** Try twisting the shoe; it shouldn't twist in the middle.

*Three out of four people over the age of 65 wear shoes that are too small.*
"Increasing awareness of the benefits of exercise and longer lifespans is leading to more older patients seeking care for musculoskeletal injuries. Older individuals are more prone to overuse injuries and are slower to heal. Despite that, most researchers and clinicians agree that the benefits of exercise far outweigh the risks. The volume of research on aging is increasingly showing that there are physical, cognitive and psychosocial benefits to remaining physically active as we age."
“It’s all down hill after 50”...

- Feet start to show signs of aging around age 50 and older
  - More regular aches and pains
  - Development of foot deformities
  - Circulation problems
  - Thin and dry skin
  - Swelling
  - Loss of plantar fat pad/cushion

Pain and uncomfortable feet aren’t a natural part of growing old or something to ‘put up with’. A lot can be done to improve comfort, relieve pain and maintain mobility.
• The incidence of overuse injuries is highest in the aging population (60+ yrs)

• 75% of Americans will experience foot problems at one time or another in their lives.
Foot & Ankle Conditions Related to Overuse

- Ingrown toenail
- Capsulitis/Pre-dislocation Syndrome
- Stress fracture
- Arthritis
- Plantar fasciitis
- Tendonitis
"I already diagnosed myself on the Internet. I'm only here for a second opinion."
Foot & Ankle Conditions

Ingrown Toenail

- Most common site is the big toe
- Symptoms
  - Pain
  - Redness
  - Swelling
  - Drainage
Foot & Ankle Conditions

**Ingrown Toenail**

**Causes**

- *Cutting your nails too short*
- *Rounding the edges*
- Heredity
- Nail deformity

- Tight fitting shoes or socks
- Repetitive trauma (e.g. running, dancing)
- Acute trauma (e.g. stubbing)
Foot & Ankle Conditions

Ingrown Toenail

• Treatment
  • Home Remedies:
    • Remedy tight shoes/socks
    • Warm foot soaks
    • Anti-inflammatories
    • Cotton under the nail
  • Medical Management:
    • Antibiotics
    • Nail avulsion*

• If conservative treatment fails, clinic procedure to remove the side of the affected nail is recommended.
Foot & Ankle Conditions

Capsulitis

• Inflammation of the ligaments that surround the joint at the base of the second toe

• Symptoms
  • Pain in the ball of the foot
  • Swelling at the base of the toe
    “Marble or sock bunched up”
  • Difficulty going barefoot
  • Elevating or drifting of the toe
• Caused by excessive pressure to the ball of the foot
  • Long second toe
  • Bunion deformity
  • Pronated foot type
  • Tight calf muscles
• Treatment
  • Ice
  • Rest
  • Stiff soled or rocker bottom shoes
  • Taping/strapping the toe
  • Activity modifications
  • Stretching (calf muscles)
  • Padding and orthotics
  • Surgery
Foot & Ankle Conditions

Stress Fracture

- Crack or hairline fracture in a bone
- Typically caused by overuse (ie. stress) to the foot
  - Change in activity, shoe wear
- Risk Factors:
  - New workout routine
  - Prolonged activity (standing, walking)
  - Osteoporosis
  - Low Vitamin D
- Symptoms: without definite “injury”
  - Pain
  - Swelling
  - bruising
Foot & Ankle Conditions

Stress Fracture

If symptoms, see your local foot & ankle surgeon (podiatrist)!

• Diagnosed based on symptoms and x-rays
  • X-rays commonly “normal” initially
  • Healing fracture will appear 2-3 weeks later
  • MRI is more sensitive
Foot & Ankle Conditions

Stress Fracture

• Treatment
  • Immobilization in boot or cast (~6 weeks)
    • Vitamin D supplementation
  • Failure to treat can result in complete fracture, delayed healing, continued pain, etc.
Osteoarthritis

• Known as the “wear and tear” arthritis that occurs with age
  • Breakdown and loss of cartilage in joints →
    Bone on bone rubbing →
    Inflammation and pain

• Most common joints in the foot:
  • First metatarsophalangeal joint
  • Tarsometatarsal joints (arch)
  • Ankle

• Symptoms:
  • Joint pain, stiffness, swelling
  • Difficulty walking or bending the joint
• Arthritic joints commonly develop bone spurs (a bony protrusion)
  • Cause decreased joint motion
  • Rub on shoes
  • Form painful calluses
Treatment

- Anti-inflammatory medication (e.g. ibuprofen, advil, steroids)
- Orthotics & supportive shoes
- Bracing (i.e. ankle)
- Physical therapy
- Steroid injection
- Surgery
  - Joint fusion
  - Bone spur removal
  - Joint replacement
    - ankle, big toe
Symptoms
- Sharp heel and/or arch pain
- Often bilateral
- Worse in the morning or with activity following prolonged rest
• What is the plantar fascia?
  • Flat ligament on the bottom of the foot that connects the heel bone to the toes

• What does it do?
  • Stabilizes and supports the arch of the foot

• Why does it hurt?
  • It becomes weakened, irritated, and inflamed from excessive weightbearing pressure
## Foot & Ankle Conditions

### Plantar Fasciitis

<table>
<thead>
<tr>
<th>Step</th>
<th>Treatment Options</th>
</tr>
</thead>
</table>
| 1    | • Stretching, ice, no barefoot walking, weight loss  
      • OTC inserts (eg. Superfeet, spenco)  
      • Anti-inflammatory (eg. Tylenol, ibuprofen) |
| 2    | • Physical therapy  
      • Custom orthotics, bracing, night splint  
      • Immobilization  
      • Cortisone injection |
| 3    | • Surgery |

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**Plantar Fasciitis Exercises**

- Towel stretch
- Standing calf stretch
What is tendonitis?
- Inflammation of a tendon
- Most commonly caused by overuse
- Insertion or during tendon curve

Tendons most involved in the foot & ankle
- Achilles tendon
- Peroneal tendons
- Posterior tibial tendon

Symptoms
- Pain, swelling, weakness
• Partial or total collapse of the arch

• Due to dysfunction of the posterior tibial tendon

• Symptoms
  • Foot or ankle pain (typically along the inside)
  • “Rolled-in” ankle
  • General fatigue in the foot or leg
  • Knee, hip, and back pain
  • Arthritis
Foot & Ankle Conditions

Posterior Tibial Tendonitis

- Treatment
  - Orthotics
  - Stretching
  - Physical therapy
  - Shoe modifications
  - Activity modifications
  - Weight loss
  - Surgery
• “When our feet hurt, we hurt all over” – Socrates

• Over age 65, feet need an annual or biannual (at risk groups) physical just like the rest of your body.

• Basic foot care and prompt attention from a podiatrist if you find a problem will help keep you active and independent!
Questions?