FOOT AND ANKLE ORTHOPEDICS

Upstate HealthLINKS

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UPSTATE
ORTHOPEDICS
HOME OF
OrthoNOW! An After Hours Walk-In Program
Man’s foot is all his own. It is unlike any other foot. It is the most distinctly human part of his whole anatomic make up. It is a human specialization, and whether he be proud of it or not, it is his hallmark, and so long as Man has been Man, and so long as he remains Man, it is by his feet that he will be known from all other members of the animal
TOP 10 MOST COMMON FOOT/ANKLE CONDITIONS

1. PLANTAR FASCIITIS/HEEL PAIN
2. MORTON’S NEUROMA
3. ANKLE SPRAIN
4. METATARSALGIA
5. BUNION
6. HAMMERTOE
7. CORNS/CALLUSES
8. FOOT/ANKLE FRACTURES
9. ACHILLES TENDONITIS
10. DIABETIC FOOT PROBLEMS
1. HEEL PAIN

OUCHY HERE !!
1. ‘HEEL’ PAIN

- **Medial**
  - NERVE ENTRAPMENT (tarsal tunnel)
- **Sides**
  - CALCANEAL STRESS FX (rare)
- **Top/Posterior**
  - PUMP BUMP
  - RETROCALCANEAL BURSITIS
  - CALC (SEVER’S) APOPHYSITIS (kids)
- **Lateral**
  - SUBTALAR ARTHROSIS (sinus tarsi)
- **Bottom**
  - PLANTAR FASCIITIS

***‘HEEL PAIN (PAD) SYNDROME’***
1. PLANTAR FASCIITIS

- MOST common problem
- Posteromedial heel pain
- Inflamed fascial origin: medial tuber
- *Especially*: F, obese, tight GS, high arch
PLANTAR FASCIITIS

- **HX**: Worst in AM *(FIRST steps)* & after sitting
  - Warms up with activity (stretching)
  - Friends/family that have had it
PLANTAR FASCIITIS

- **XR**: usually negative

- **NOTE!** ‘Heel spurs’ mean **NOTHING** (50%)
PLANTAR FASCIITIS

- **RX**: 95% better **W/O surgery @**
- Slow response: **6-10 mos**
  - Plantar fascial stretch, calf stretch.
  - Cushioned shoewear (SAS)
  - Silicone heel cup, NSAIDS
  - Custom Orthotic
    - Injection
    - Shockwave treatment
    - Surgery last resort
EXTRACORPOREAL SHOCKWAVE THERAPY
HEEL Pad Syndrome

- **HX/PE**: *Central, plantar* pain/tenderness *w/o* pain along plantar fascia

- Heel pad atrophy!
  - Normal with aging process
  - Repeated injection

- Worse *with* activity/WB
**Treatment:**
- Well-cushioned shoes
- NSAIDS
- Wt loss, Activity Modification
- Heel pad
- Orthotics inserts
- Advise *against* injection
2. MORTON’S NEUROMA

- Overdiagnosed
- Repetitive irritation → many causes

- Female/Male = 5/1 (shoes)

- \( \frac{3}{4} \text{ IS} = \frac{2}{3} \text{ IS} \)

- \textit{RARE} > 1 site
  - \( \frac{1}{2} \text{ or } \frac{4}{5} \text{ IS} \)
MORTON’S NEUROMA

- **History**: pain at base of toes dorsal/plantar
  - ‘Walking on pebble/marble’
  - Numbness/burning in webspace
  - Relief by shoe removal/massage
MORTON’S’S NEUROMA

- **XR**: exclude stress fx, MTP synovitis
- **OTHER TESTS**: MRI **NOT** useful, over-used
- **RX**: *wide* toe box shoe, *lower* heel
  - Metatarsal pad
  - NSAIDS
  - Injection @ 6 weeks (50%)
  - EtOH injection *unproven*
4. METATARSALGIA
MTP synovitis

- Pain **under** MT head(s)
- Frequently **diffuse, bilateral**

- Multiple causes (1° mechanical):
  - High heels or arches
  - Claw toes
  - Overuse
  - Fat pad atrophy
  - Plantar keratosis (IPK)
  - Tight Achilles
METATARSALGIA

- **HX**: ‘feels like balled up sock in the shoe’
  - Worse with WB (walking, activity)
  - 1 joint, 2, 3 or more
  - May be due to long metatarsals
  - Often due to overuse – distance runner/walker
**METATARSALGIA**

- **RX:** *decrease pressure*
  - File down the callus
  - Well-cushioned, low heeled shoes
  - Orthotic
  - Metatarsal bar, rocker bottom shoe
METATARSALGIA

- **Treatment**: rarely required
  - Only when focal and recalcitrant after 6-8 mos
  - Surgery rare...generally not much else that can be done beyond judicious activity/shoewear

- EDUCATE pts to avoid their frustration
3. ANKLE SPRAIN

- **25,000 sprains** daily!

- **80%** involve *LATERAL* ligament complex

- **IF RX, 80-90% better** @ 3 mos

- **10-20% NOT:** something else is going on
ANKLE SPRAIN

- **HX**: Usually inversion

- Can hear/feel a ‘pop’
ANKLE SPRAIN

- **When to seek care**
  - inability to bear wt 4 steps
  - Significant swelling/bruising
  - Tenderness over inner/outer bump
ANKLE SPRAIN

- **OTHER TESTS**: MRI, CT, BScan ONLY @ Rx failure!
- You **RARELY** need an MRI, and **NEVER ACUTELY**!
GOAL is to minimize chronic Symptoms
Severity: Graded 1 thru 3

- **Stage 1** (immediate **PRICE** protocol):
  - Protection (brace/crutches; SLC 2 wks if Gr 3)
  - Rest (limited WB)
  - Ice (72 hrs.)
  - Compression (initial splint 2-3 wks, or ace wrap)
  - Elevation (Minimize edema, NSAIDS)
Stage 2 (after able to WB):
- PT program
  - G-S stretching, heel/toe walk, peroneal strengthening

Stage 3 (4-6 wks after injury):
- Begin agility, endurance, proprioceptive exercise
- Sports return: ‘The Hop Test’
  - Initial use of brace until fully rehabilitated
3b. THE SYNDESMOTIC SPRAIN
“High Ankle Sprain”

- Anterior TTP well above ankle
- Positive squeeze test
- Pain with ER

PROLONGED RECOVERY
Splint/Cast, Refer
NON-OPERATIVE RX
5. Bunions = Hallux Valgus
There are **BUNIONS**, and **BUNIONS**
If the Shoe Won't Fit, Operate on the Foot?

Sacrificing Toes for Style
A procedure to shorten toes is usually coupled with the removal of a portion of bone relaxed by wearing poorly fitting shoes.

High heeled narrow shoes force the toes to curl against the front of the shoe. The joints of the long and small toes may permanently bend and rub against the inside of the shoe, causing injury.

After removing the corn, a surgeon may shorten the toe in one of several ways:

- Frequently a portion of the bone is cut
- or bone is cut.

Women are having parts of their toes lopped off to fit into Manolo Blahniks.

If Shoe Won’t Fit, Fix the Foot?

Popular Surgery Raises Concern

By BARDIN HARRIS

Days after her daughter's engagement a year ago, Sheree Reese went to her doctor and said that she would do almost anything to wear stilettos again.

"I was not going to walk down the aisle in sneakers," said Dr. Reese, a 60-year-old professor of speech pathology at Kean University in Union, N.J. She had been forced to give up wearing her collection of high-end, high-heeled shoes because they caused earing pain.

So Dr. Reese, like a growing number of other women, put her foot under the knife. The objective was to remove a bunion, a swelling of the big-toe joint, but the results were disastrous. “The pain spread to my other toes and never went away," she said. "Suddenly, I couldn’t walk in anything. My foot, metaphorically, died.

With vanity always in fashion and shoes reaching iconic cultural status, women are having parts of their toes lopped off to fit into the latest Manolo Blahniks or Jimmy Choos. Cheerful how-to stories about these operations have appeared in women's magazines and on television news programs.

But the stories rarely note the perils of the procedures. For the sake of better "toe cleavage," as it is known to the fashion-conscious, women are risking permanent disability, according to many orthopedists and podiatrists.

"It's a scary trend," said Dr. Rock Positano, director of the non-profit foot and ankle service at the Hospital for Special Surgery in Manhattan. Dr. Positano said that his waiting room is increasingly filled with women hobbled by fitted cosmetic foot procedures, those done solely to improve the appearance of the foot or help patients fit into fashionable shoes.

More than half of the 175 members of the American Orthopedic Foot &
HALLUX VALGUS

- Hereditary
- SHOES (F/M = 9/1!)

- **HX**: pain/swelling @ site, worse w/ tight shoes
- **PE**: 1\textsuperscript{st} MTP swollen, impinge 2\textsuperscript{nd} ray crossover
‘BUNION’

- **Treatment**: *proper shoe fit*
  - *Wide* toe box
  - Heels < 1 inch
  - Soft upper, fit *end* of day
‘BUNION’

- Orthotics & Splints of high cost and ? benefit

- Other RX: NSAIDS, stretching, HAPAD
When to Refer a BUNION

ONLY 3 INDICATIONS TO FIX!!!!

Progressive deformity, pain, shoeability
NEVER SURGERY FOR: aesthetics, ‘prophylaxis’, implants, killer shoewear

Worse deformity = Worse outcome
  - Longer surgery, Longer recovery
Bunions - remember

- Expectations
2 kinds: **insertional OR midsubstance**

- **HX**: ‘pain in the back of heel’
  - Worse with stairs, after prolonged activity
  - **Night Pain**
  - May be both sides
  - Often history of overuse - running
ACHILLES TENDONITIS

- **Treatment**: can take 8-12 *months* to improve
  - RICE, NSAIDS
  - PT: **DAILY** stretching, modalities
    - **NIGHTLY** DF splint
  - Shoe lift (1cm) / heels!
  - Walking boot
  - *Injections with caution*
Haglund’s Syndrome

- Prominent superolateral calcaneus
- Pain, pressure from shoe
The bane of the runners’ existence
Metatarsal Stress Fracture

- Runner, athlete, dancer
- Training errors, worn out shoes
- Elevation 1\textsuperscript{st} met, stress transfer to lesser
- Dancers – 2\textsuperscript{nd} met due to pointe position
- Cavovarus – 5\textsuperscript{th} met
Metatarsal Stress Fracture

- Localize tenderness
- Xrays, bone scan/MRI
- Rest, boot, cast
- Cross-train, pool
- Surgery
  - Non-healing with closed Tx
  - 5th metatarsal
    - IM screw
    - Varus heel – Closing wedge calcaneal osteotomy
ANKLE Arthritis

- Normal
- Arthritic
Non Surgical Treatment

“There is no operation that has ever been invented that can not in theory make a patient worse off.”

Limiting force through the ankle
- Activity Modification
- Rocker bottom
- Comfort shoewear
- Ankle Lacer or boot

Medications
- NSAIDs
- Glucosamine Sulfate
Ankle Arthroscopy

GOOD FOR:
- Loose bodies / catching
- Impingement
- Isolated cartilage injuries
- Synovitis

BAD FOR:
- Significant osteoarthritis
Ankle fusion has ~ 90% first time fusion rate

79% difficulty on unlevel ground

75% difficulty with stairs

64% aching with prolonged activity

Muir, Foot Ankle Clin 2002
Ankle fusion long-term follow up

- 12 pt’s followed 8 years
- Gait analysis with shoes excellent
- Barefoot walking
  - Gait velocity slowed
  - Stride length shortened
- Loss of ankle motion compensated by
  - Motion of small joints
  - Altered motion of opposite ankle
  - Appropriate shoes
    - Mazur, JBJS 61-A, 964-75
Ankle Replacement
CONCLUSIONS

- ALL forms of foot/ankle care (surgical AND non-surgical) require everyone’s patience

Feet are small & we walk on them
= HIGH STRESS!

- Difficult patients to make better,
  BUT...Patients usually very grateful
    ‘the splinter analogy’
Remember

Healthy Feet = A Happy Life
THANK YOU!

UNIVERSITY OF SAVANNAH

UNITED STATES OLYMPIC TEAM