Common Foot Problems in Primary Care

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Hawaii Permanente Medical Group
Objectives

• Visualize the mechanism of over-pronation and it’s influence in causing some of the most common problems of the foot.

• Initiate treatment that directly addresses the problem of over-pronation before prescribing symptom specific measures.

• Realize there two types of over-pronated feet and that the *anteriock cavus* foot type may not respond to arch supports and orthotics the way true *flat feet* do.
Over-pronation

Common cause...

Sinus tarsi syndrome
Achilles tendonitis
Posterior tibial tendonitis

Plantar fasciitis
Tarsal tunnel syndrome
Morton’s neuroma
Metatarsalgia
Bunions
Hammertoes
Knee pain

*Common treatment

Over-pronation

Understand...

Pronation:
Rotation of (the foot) towards the midline (of the body).

Over-pronation:
*Over*-rotation of (the foot) towards the midline (of the body).

*Common cause...Common treatment*

- Plantar fasciitis
- Achilles tendonitis
- Posterior tibial tendonitis
- Morton’s neuroma
- Sinus tarsi syndrome
- Tarsal tunnel syndrome
- Bunions
- Hammertoes
- Knee pain
Over-pronation

Flat feet...

All flat feet are over-pronated

Over-rotation of (the foot) towards the midline (of the body).
Over-pronation

The *other* pronated foot...

A foot whose resting forefoot position lies appreciably lower than the resting heel position.

...the *Anterior Cavus* foot

Over-pronation
Over-pronation

Flattening of the medial arch...

...Pronated foot.
Over-pronation

2 types of over-pronated foot:

Anterior cavus foot

Flat foot
Over-pronation

Gait cycle

2 phases: stance and swing

Over-pronation

Plantar fasciitis
Achilles tendonitis
Posterior tibial tendonitis
Morton’s neuroma
Metatarsalgia
Shin splints
Sinus tarsi syndrome
Tarsal tunnel syndrome
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Knee pain

Over-pronation

**Plantar fasciitis**
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- Posterior tibial tendonitis
- Morton’s neuroma
- Metatarsalgia
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Posterior tibial tendonitis
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Over-pronation

Treatment

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Treatment

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**Primary:**
Control pronation

**Secondary:**
Symptomatic

**Tertiary:**
Advanced

**Footwear**
(NO flats/barefeet, USE 1” + heels)

**Arch support**
(OTC vs. custom orthotics)

**NSAID’s**

**Modify activity**

**Splinting/bracing**

**Injection therapy**
(PF/neuroma/STS/TTS)

**Physical therapy**
(shin/knee pain and -itis’s)

**Last resort options**
(x.bunions/hammertoes/knee pain)

**Surgery**
Over-pronation

Treatment

**Primary:**
Control pronation

**Secondary:**
Symptomatic

**Tertiary:**
Advanced

**Footwear**
(NO flats/barefeet, USE 1” + heels)

**Arch support**
(OTC vs. custom orthotics)

**NSAID’s**
Modify activity

**Night splinting**

**Injection therapy**

**Physical therapy**

**Last resort options**

Cast immobilization

Surgery

---

Over-pronation

Treatment

- Plantar fasciitis
- Achilles tendonitis
- Posterior tibial tendonitis
- Morton’s neuroma
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- Sinus tarsi syndrome
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Primary:
- Control pronation

Secondary:
- Symptomatic
  - NSAID’s
  - Modify activity
  - Splinting/bracing

Tertiary:
- Advanced
  - Injection therapy
    - (Do NOT inject the achilles)
  - Physical therapy

Last resort options
- Cast immobilization
- Surgery


Footwear
- (NO flats/barefeet, USE 1” + heels)

Arch support
- (OTC vs. custom orthotics)
Over-pronation

Treatment

Primary:
Control pronation

Secondary:
Symptomatic

Tertiary:
Advanced

Footwear
(NO flats/barefeet, USE 1” + heels)

Arch support
(OTC vs. custom orthotics)

NSAID’s
Modify activity
Ankle bracing

Injection therapy
(Do NOT inject the PT tendon)
Physical therapy

Last resort options
Cast immobilization
Surgery

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# Over-pronation

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Over-pronation

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Primary:
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(OTC vs. custom orthotics)

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Modify activity
Splinting/bracing

Injection therapy
Physical therapy

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Nail Problems
Onychomycoses

Presents as...

Painless thickening

Discoloration

Brittleness

Autolysis
Onychomycoses

Etiology/Risk factors

T. rubrum/
T. mentagrophytes

Elderly/immuno-compromised

Genetic predisposition

Moisture/heat/trauma
Onychomycoses

Treatments...

Observation

Anti-fungals

Nail removal

Debridement/filing

Onychomycoses

Treatment is rarely indicated
...if based **solely** on symptomatic presentation
Onychocryptoses

Presents as...

Painful

Inflamed

Draining

Granulomatous
Onychocryptoses

Etiology/Risk factors...

Trauma

Iatrogenic

Genetic

Footwear
Onychocryptoses

Treatments...

Partial-Simple Avulsion

Partial/Total Avulsion

Antibiotics
Onychocryptoses

Prevention/Tips...

Trimming

Abx? Avulse? Matricectomy?

How much nail?
Onychocryptoses
To summarize...

Onychomycoses...

Onychocryptoses...

Treatment is rarely indicated.
Lumps and Bumps

Ganglion/Synovial cysts
Mucoid/Mucinous cysts
Epidermal Inclusion cysts
Dermatofibromas
Tophi
Plantar fibromas
Lipomas
Ganglion/Synovial cysts

Definition:

A fluid filled mass typically coming off of a joint capsule or tendon sheath.
Ganglion/Synovial cysts

Presentation:

Subcutaneous

Fluctuating size

Often painless
Ganglion/Synovial cysts

Treatment:

Observation

Aspiration/injection

Excision

Banks, AS, et al. 2001; McGlamry’s Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
Mucoid cysts

Definition:

Ganglion cysts of the distal interphalangeal joints of the toe.
Mucoid cysts

Presentation:

Transdermal

DIP Joint of toes

Older patients/ arthritic joints
Mucoid cysts

Treatment:

Observation

Excision

Banks, AS, et al. 2001; McGlamry’s Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
Epidermal inclusion cyst

Definition:

Subcutaneous proliferation of epidermal cells often the result of implanted epidermal tissue in the dermal layer secondary to trauma.
Epidermal inclusion cyst

Presentation:

Subcutaneous mass

Plantar (typical: foot)

Sinus tract/ invagination

Caseous exudate
Epidermal inclusion cyst

Treatment:

Observation

Excision
Dermatofibromas

Definition:

Common, benign skin growths that often persist for life.

Also known as fibrous histiocytomas.
Dermatofibromas

Presentation:

Long history

Females

Occasional ‘bite’ history

Painless/Pruritits
Dermatofibromas

Treatment:

Observe

Excisional biopsy

(LN2)

Banks, AS, et al. 2001; McGlamry's Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
Tophi/Tophaceous Gout

Definition:

Nodular masses/aggregates of uric acid crystals.
Tophi/Tophaceous Gout

Presentation:

Deforming/destructive masses typically around joints.

Can be acutely inflamed and draining or hard and painless.
Tophi/Tophaceous Gout

Treatment:

Observation

Manage the disease

Surgical debridement

Banks, AS, et al. 2001; McGlamry’s Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
Plantar fibromas

Definition:

A proliferative mass of mature fibroblasts and collagen.
Plantar fibromas

Presentation:

Arch mass

+/- pain

Stable size

Bilateral
Plantar fibromas

Treatment:

Observation

Arch supports/
Orthotics

Injection

Excision

Banks, AS, et al. 2001; McGlamry’s Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
Lipomas

Definition:

A benign tumor composed of adipose tissue.

The most common form of soft tissue tumor.
Lipomas

Presentation:

Soft, generally painless subcutaneous masses.

More prevalent in patients over 40.
Lipomas

Treatment:

Observation

Excision

Banks, AS, et al. 2001; McGlamry’s Comprehensive Textbook of Foot and Ankle Surgery, 3rd Edition Lippincott Williams & Wilkins
To summarize...

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<td>Lipoma</td>
<td>observe/excise</td>
</tr>
</tbody>
</table>