

Protecting our Seniors' **Quality of Life!**



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Today's Program

- **Foot Deformities and Solutions**
- **Subungual Hematomas**
- **Shoe Choices**
- **Compression Therapy**
- **Thick Toenails**
- **Senior Skin Care**
- **Ingrown Toenails**
- **Interdigital Lesions and Solutions**

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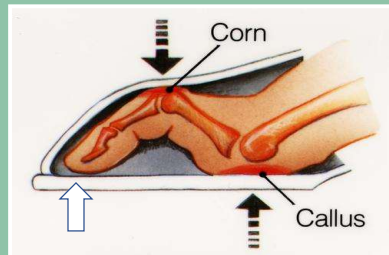
Common Foot Deformities in Seniors

Fun Fact:

Bunions are often unilateral. That is the longer leg so more mechanical pressure affects the foot with each step!!



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Hammertoes



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Distal tip hyperkeratotic lesion



1. Regular debridement (scalpel or Sander). NOT Dr. Scholls Callus Remover!!!
2. Wear protective padding – if the patient can apply it!

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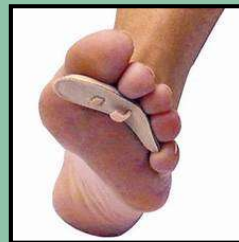
Distal Tip Lesion Protection Style Mostly Patient Preference



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Distal Tip Lesion Protection

Buttress or Crest Pads



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Shoe Shaped Toes!!!

Common in Seniors – Not a problem unless shoes are too small



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Bunions – DJD Malformations



**Cause more harm
than good!!**

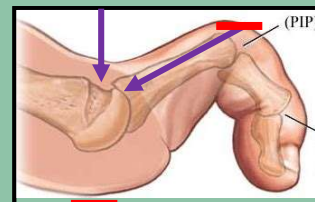
Too wide/bulky
Push toes too far



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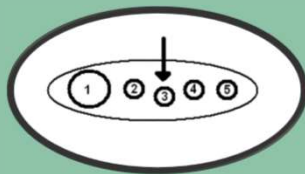
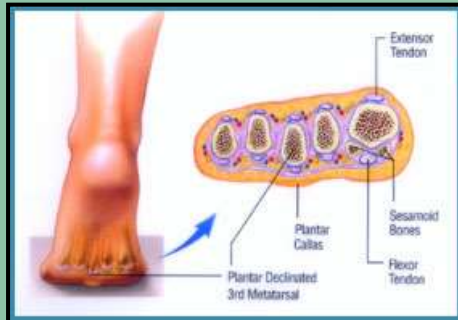
Plantar Forefoot Lesions - Metatarsalgia

Can lead to Callouses or wounds



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Plantar Forefoot Lesions - Metatarsalgia Calluses/Wounds



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Plantar Forefoot Protection



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Subungual Hematoma

Acute or "Old" ??

This one is very dark color.
Looks like old dried blood.



Rule of Thumb:
If new injury (brighter red)
and >50% of nail bed, refer
for drainage or nail avulsion.

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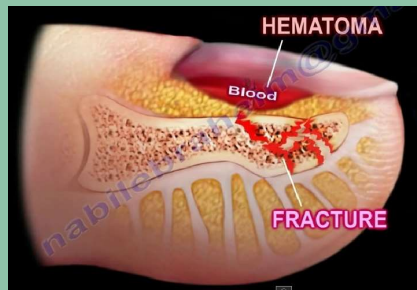


Not acute – Not a problem

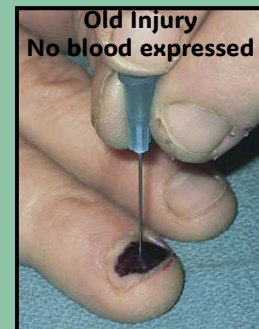


Injury was 6 – 8 months ago

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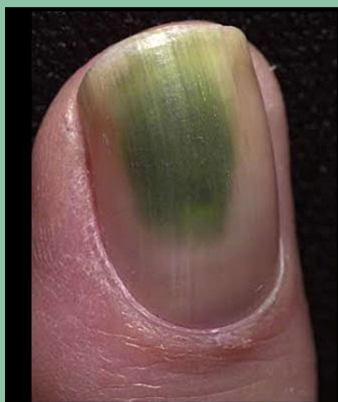


Subungual Hematoma



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Subungual Hematoma



Ddx

- Blood – Trauma
- Aspergillus
(more blackish green)
- Melanoma?!

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The Problem with Google searches!!!!

NOT!!!!



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Subungual Hematoma????

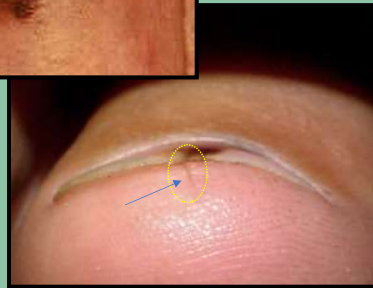
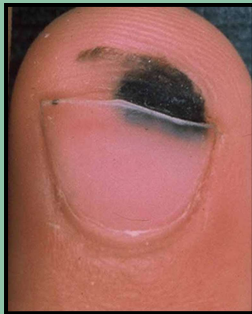


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Subungual Melanoma

Clue: Brown discoloration extends onto adjacent skin.

Hutchinson's Sign



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Take photos of questionable skin lesions!!!!



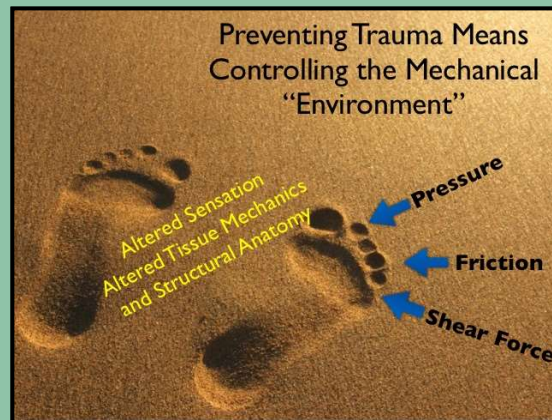
1. Area was slightly raised.
2. Almost translucent.
3. Variegated color density.
4. Weird!



Cancer??? - refer to Pod/Derm for biopsy
It was Positive!!!!

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Best Shoe Choices for Fall Prevention



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Shoes for High Risk Feet



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What to look for in a shoe



- Wide and deep at the toe
- Thick rubber sole
- No high heels
- Firm heel counter
- Lace-up or velcro
- Smooth lining

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Which is the right shoe sole material? Fall Prevention!!!

Goldilocks!
Not too slick –
not too “grippy”



Just
Right!

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Lower Extremity Edema Control

Long term = Compressions socks/hose

Short term = Compression wraps, Unna Boots



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TED Hose ≠ Compression Sock



TED is an acronym that stands for thromboembolic deterrent

Adequate compression generally lasts two weeks and is not gradient. It is 18mmHg top to bottom



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Compression Therapy

15-20 mmHg (Moderate)
or
20-30 mmHg (Firm)

Any style will work.

Usually 15-20mmHg or 20-30mmHg.

30-40mmHg is often better –
but patients usually can't put them on
and take the socks off.

Knee High



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Effectiveness of Long-Term Compression Socks



Compression socks
scrunched down

Beneficial effect of
long-term compression
therapy!!

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- Compression Wraps x 1 month
- Antifungal cream x 1 week
- Steroid cream x 2 weeks
- Moisturizer forever!
- f/up w compression socks

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Compression = Healthier Skin!!!



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Compression??



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"Ace Wraps" are NEVER used for medically appropriate compression wraps.

<http://www.worldwidewounds.org/1997/september/Thomas-Bandaging/bandage-paper.html>

Bandage construction

Although bandage tension, and hence sub-bandage pressure, is initially determined by the user during application, the ability of a bandage to maintain this tension, under normal conditions of use, is subsequently determined by its elastomeric properties.

The elastic properties of simple woven cotton bandages tend to be extremely poor. [8] Raj *et al.*, [9] found that cotton bandages had to be re-applied every 6-8 hours if they were to achieve and maintain therapeutically active levels of pressure, and Tennant *et al.* showed that over a four-hour period the pressure recorded beneath a crepe-type bandage fell by some 63%. This compared with a 10% drop beneath a bandage containing significant quantities of elastomer. [10] In recent years, however, completely new products have been developed containing synthetic yarns made of polyamide and polyurethane, many of which are knitted rather than woven. These offer considerable advantages over their predecessors, being more conformable (and thus easier to apply) as well as more elastic due to the use of new elastomeric yarns.

<http://emedicine.medscape.com/article/1085412-treatment>

The compression gradient is extremely important because nongradient stockings or high-stretch elastic bandages (eg, ACE wraps) may cause a tourniquet effect, with worsening of the venous insufficiency.

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Multilayer Layer Bandage System

- **Layer 1 - Orthopedic Wool**
 - Padding for protection and to modify diameter of leg if <18cm
- **Layer 2 - Cotton Crepe**
 - Does not contribute to compression. Used to smooth padding layer for better conformation
- **Layer 3 - Elastic Conformable Bandage**
 - Delivers approx 17mmHg on 18-25cm leg when applied at 50% extension and 50% overlap in a figure 8 technique
- **Layer 4 - Cohesive Elastic Bandage (Coban)**
 - Delivers 23mmHg additional compression for a total of 40mmHg. Apply in Simple spiral technique with 50% extension and 50% overlap



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Thick, Dystrophic Toenails Onychomycosis??



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Not every thick toenail is fungal!!!



Trauma with secondary
fungal invasion



Primary fungal infection

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Validation for the Mechanical Cause of Thick Toenails



Fun Fact:

Many people have 5 thick toenails on one foot and none (or just 1) on the other foot.

Reason- The foot with all 5 thick toenails is the larger foot.

The toenails have “been banging around” in shoes for 30+ years!

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Psoriatic Nails



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Psoriatic Nails

A. Nail matrix psoriasis



Pitting, leukonychia



Leukonychia



Red macules in lunula



Crumbling



Trachyonychia

B. Nail bed psoriasis



Splinter hemorrhages and onycholysis



Hyperkeratosis and splinter hemorrhages



Salmon patch or oil spot dyschromia



Onycholysis and salmon patch dyschromia

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Presentations of Primary Toenail Fungal Involvement



Proximal Subungual



White Superficial



Distal Subungual

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Damaged Skin



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Soaps to Avoid



Lye Soaps

Deodorant Soaps

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Soaps for "Mature" Skin

Humectants, pH Balanced, Shea Butter
Doesn't "strip" the skin or change the microbiome



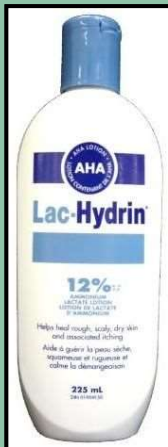
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Moisturize Daily!!



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Heel Fissures



12% Lactic Acid



20% or 40% Urea



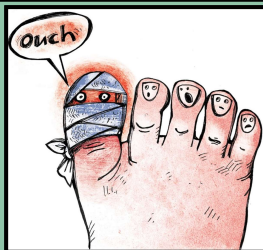
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Hyperkeratosis



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Ingrown Nails



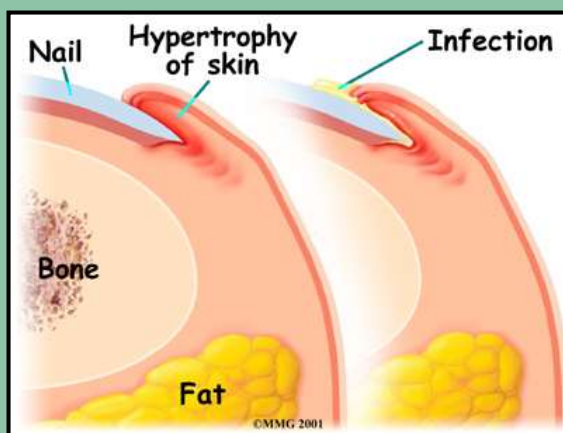
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Warning signs of pressure or laceration



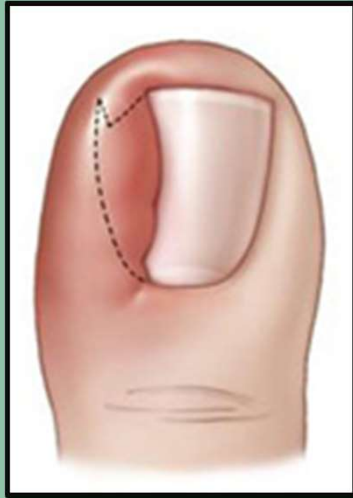
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One Cause of Ingrown Nails: Wide Nails which cut into the sides



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Another Cause of Ingrown Nails: **Improper Cutting**



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Ingrown Nail Border **What to do???**



Oral Antibiotics usually NOT
NECESSARY!!!!

As long as the nail continues to cut into the flesh, bacteria will continue to pour in.

You must remove the ingrown portion ASAP.

Then just topical care will be sufficient.

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Ingrown Nail Border

What to do???



Soaking in Epsom Salts is one of the worst things you can do.

It has absolutely no therapeutic value.

It leads to increased infection risk due to bacteria in the soaking basin.

And patients often use hot water which can cause burns in neuropathic patients.

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**It takes months for a nail to grow longer.
How long will this stick stay there!!!!**



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Partial Toenail Matrixectomy



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Innerspace/Interdigital Lesions

Importance:

1. Can lead to serious infections
2. Can lead to ulcerations/wounds



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“Kissing Corns”

Phalangeal prominences (condyles) of two adjacent toes rubbing together



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Toe Separators



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Innerspace Maceration



**Excess moisture usually due to sweating from
Autonomic Neuropathy**

Is there fungus in this area. Yes.

Did the fungus cause the maceration? No!




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Innerspace Maceration

Excess moisture is caused by sweating from
Autonomic dysfunction.


Prevention? No!



Clotrimazole Cream USP, 1%
Cures Most Athlete's Foot
Relieves Itching, Burning, Cracking & Scaling

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Interdigital Maceration



Lamb's Wool

InterDry Ag
Coloplast®

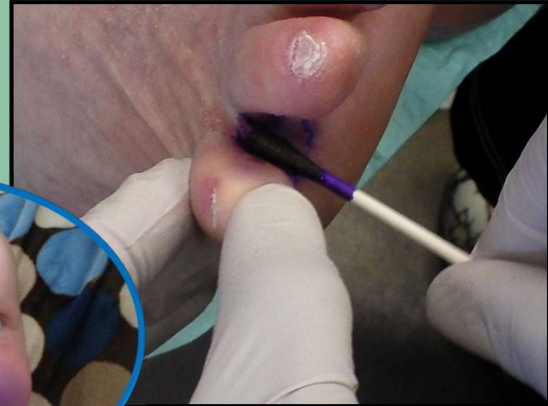
Moisture Transfer
Evaporation

InterDry Ag
Fabric with Antimicrobial
Silver Complex

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Gentian Violet

2 treatments – 6 to 8 weeks apart
Damages the sweat glands and the
excess sweating stops.



Oral Thrush

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