PRESERVATION-AMPUTATION CARE AND TREATMENT (PACT) PROGRAM

FOOT SCREENING COMPETENCY
Objectives

• Review basics of Foot Screening Exam for PACT didactic competency.

• Identify the components of proper foot care education.

• Understand when a veteran needs a referral for Podiatry follow-up.
FOOT SCREENING SAVES LIVES AND IMPROVES QUALITY OF LIFE!

• In FY 2003 the VA performed 5,081 amputations

• It is believed that approximately 50-75% of these amputations can be prevented!

• Foot ulcers and their complications contribute to significant morbidity, mortality and costs
WHO CAN PERFORM A FOOT SCREEN AFTER TRAINING?

- Diabetes Educator’s
- RN’s
- Dietitians
- LPN’s
- Medical assistants
- Nurse Practitioners
- Physicians Assistants
- MD’s,
- Podiatrists
Brief Foot History

- Ask about previous amputation
- Ask about S/S claudication or vascular insufficiency (pain walking 50 ft. that abates w/rest)
- Ask about neuropathy (numbness & tingling of feet)
- Ask about pain in feet
- Ask about smoking and encourage cessation!
Click on the Foot Reminder in CPRS to Start Your Foot Screen

- The reminder is designed to guide your assessment and teaching
- Have a 5.07 Semms Weinstein monofilament on hand
- Visual abnormalities, lack of circulation or lack of feeling (neuropathy) all increase the risk of ulcers and amputation
The VA mandates that all patients with diabetes mellitus, peripheral vascular disease or end stage renal disease should have a Complete Foot Exam completed annually. This includes a visual exam of the skin, pedal pulses and a sensory exam. Patients with any abnormality noted during the foot exam should be referred to a specialist.

*THIS REMINDER APPLIES TO PATIENTS WITH RENAL, VASCULAR, OR DIABETES DIAGNOSIS*

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**--VISUAL INSPECTION:** (includes inspection for skin breaks, deformity, erythema, trauma, pallor on elevation, dependent rubor, nail deformities, extensive callus and pitting edema).

- Normal
- Abnormal

**--PEDAL PULSES:** (includes palpation of dorsalis and posterior tibial pulses and signs/symptoms of vascular compromise like pain, pallor, parathesia or paralysis)

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**CLINICAL REMINDER ACTIVITY**

Foot Exam (PACT):

- A complete foot exam was completed at this encounter.

Examinations: **DIABETIC FOOT EXAM, COMPLETE**
Visual Foot Screenings
Common Foot Deformities

- Nail pathology
- Infections
- Hyperkeratosis
  - Heloma (corns)
  - Tyloma (calluses)
- Trauma

- Bone and joint deformities
  - Hallux valgus (Bunion)
  - Metatarsal deformities
  - Digital deformities
  - Tailors Bunion
  - Charcot foot
Be Sure to View Foot From Many Angles

- If you just look down at feet from above you might miss an ulcer on the heels
- Separate the toes as well
- Consider a visual deformity any condition that would prevent a person from wearing routine shoes comfortably
View Feet From Six Perspectives

- Anterior
- Lateral
- Dorsal
- Posterior
- Medial
- Plantar
Identification of Foot Deformities
Foot Infections

Tinea Pedis or “Athletes Foot”  Cellulitis-Infection
Toenail Problems

Onychomycosis-(Fungus)

Onychocryptosis
Heloma Durum (Hard Corn)
Calluses
Heloma Molle
(Soft Corn)
Bunion and Hammer Toe
Bunion and HammerToe
Trauma

- Subungual hematoma (Collection of blood under nail)
- Blisters
Charcot Foot/ulcer
(Rocker Bottom)
Bone and Joint Deformities and Pathology

- Bone and joint deformities
  - Hallux valgus (bunion)
  - Metatarsal deformities
  - Digital deformities
  - Tailors bunion
  - Charcot foot
- Pathology
  - Hyperkeratosis - Heloma/Tyloma
Question # 1

• What is considered a visual abnormality in the foot screening of a patient with diabetes?
  • 1. Tinea pedis (athletes foot)
  • 2. Dry, cracked skin
  • 3. Corns
  • 4. All of the above
That’s correct. A visual deformity is anything that would make wearing a normal shoe feel uncomfortable.
Question # 1 False Answer

• False—that’s not correct. A visual deformity is anything that would make wearing a normal shoe feel uncomfortable.
Question # 2

• When inspecting feet you should view them from at least 6 angles to avoid missing a lesion.
• True.
• False.
Question #2 – True Answer

• True—that’s correct. When inspecting feet you should view them from at least 6 angles to avoid missing a lesion.
Question #2 – False Answer

- False - That’s not correct. When inspecting feet you should view them from at least 6 angles to avoid missing a lesion.
View Feet From Six Perspectives

Anterior

Lateral

Dorsal

Posterior

Medial

Plantar
Palpation of Pulses
Pulses

• Pedal
  Follow 2\textsuperscript{nd} large toe up \( \frac{1}{2} \) way
  Not all people normally have dorsalis pedal pulse
  Look for signs of good perfusion-toe hair, no shiny skin
  Use a Doppler if necessary

• Posterior Tibial
  More difficult to palpate
  Medial Foot
  Just below Malleolous or “Ankle Bone”
  Look for signs of good perfusion-toe hair, no shiny skin
  Use a Doppler if necessary
Dorsalis Pedis
Posterior Tibial
Reminder Resolution: Foot Exam (PACT)

---PEDAL PULSES: (includes palpation of dorsalis and posterior tibial pulses and signs/symptoms of vascular compromise like pain, pallor parathesia or paralysis)

Comment: 

- Normal/Present (even if diminished)
- Abnormal/Absent

---SENSORY EXAM: (includes light touch, pin-prick, vibratory or monofilament test of sensation)

Comment: 

- Normal/Intact to monofilament
- Abnormal/Decreased or absent sensation to monofilament

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USING THE SCALE BELOW, PLEASE IDENTIFY THE RISK LEVEL FOR THIS PATIENT
=================================================================================================

---LEVEL "0" - (NORMAL RISK)
Normal sensation and circulation
No deformity
No ulceration or H/O amputation

-------------------------------------------------------------------------------

---LEVEL "1" - (MILD RISK)
Sensory deficit to pin-prick
No significant deformity

-------------------------------------------------------------------------------

---LEVEL "2" - (MODERATE RISK)
Sensory deficit to pin-prick
Significant deformity

-------------------------------------------------------------------------------

---LEVEL "3" - (SEVERE RISK)
Sensory deficit to pin-prick
Significant deformity
Severe ulceration

-------------------------------------------------------------------------------

---LEVEL "4" - (DANGEROUS)
Sensory deficit to pin-prick
Significant deformity
Severe ulceration
Amputation

-------------------------------------------------------------------------------

CLINICAL REMINDER ACTIVITY

Foot Exam (PACT):
A complete foot exam was completed at this encounter.

Examinations: DIABETIC FOOT EXAM, COMPLETE

* Indicates a Required Field
Reporting of Pulses

• Non palpable
• Barely palpable
• Palpable
• Bounding
Question # 3

- To palpate the dorsalis pedis pulse follow the 2\textsuperscript{nd} great toe about 1/2 way up the foot with your index finger.

- True
- False
Question # 3

• True-that’s correct. To palpate the dorsalis pedis pulse follow the 2\textsuperscript{nd} great toe about \( \frac{1}{2} \) way up the foot with your index finger.

• False-that’s NOT correct. To palpate the dorsalis pedis pulse follow the 2\textsuperscript{nd} great toe about \( \frac{1}{2} \) way up the foot with your index finger.
Check Sensation
Semms Weinstein Monofilament
How to Use the Semms Weinstein Monofilament

• Just gently touch the foot until the 5.07 or 10 gram monofilament bends
• Make sure you have a good “bend” then remove
• Have veterans shut their eyes and say “now” when you touch the skin
• Monofilaments are re-usable for approximately 100 times (never more than 7 times in one day)
Where To Perform Monofilament Testing
Ordering Monofilaments & Field Manual for Foot Health

- PACT website:
  
  http://vaww.appc1.va.gov/primary/page.cfm?pg=74
VHA Podiatry Service provides monofilaments to the entire system for free. The VHA PACT Directive mandates a foot inspection, palpation of pedal pulses and a sensory foot exam. The 5.07 Semmes Weinstein Monofilament has been shown to have value in screening for protective sensation in the foot in an effort to prevent foot wounds and ulceration.

**Monofilament Order Form**

We know that it is easier to prevent a foot wound than it is to treat one. For that reason prevention of these conditions before they occur is essential. We also know that prevention is a lifetime effort which must be maintained if it is to be effective. The "Field Manual for Foot Health is a patient education tool which can be used as a "take home" adjunct to patient education efforts.

"Field Manual for Foot Health" Ordering information
Question # 4

• When using the Semms Weinstein monofilament it is important to apply a large amount of pressure to “flatten” the monofilament on the skin surface.

• True.
• False.
Correct Answer # 4

• False—that’s correct.

• Just gently touch the foot until the monofilament “bends” not “flattens”.
Incorrect Answer # 4

• True—that’s not correct.

• Just gently touch the foot until the monofilament “bends” not “flattens”.
Question # 5

- When using the Semms Weinstein monofilament start with the most distal end of the nerve or the big toes and then test under the metatarsal heads.

- True.
- False.
Correct Answer-question # 5

• True—that’s correct.

When using the Semms Weinstein monofilament start with the most distal end of the nerve or the big toes and then test under the metatarsal heads.
Incorrect Answer-question # 5

• False—that’s not correct.

When using the Semms Weinstein monofilament start with the most distal end of the nerve or the big toes and then test under the metatarsal heads.
Determine A Risk Based On Assessment

- Remember poor circulation,
- poor sensation or
- visual abnormalities or history of amputation all put a veteran at risk for amputation!
<table>
<thead>
<tr>
<th>Risk Score</th>
<th>Neuropathy</th>
<th>PVD</th>
<th>Specified Deformity</th>
<th>Ulcer OR Osteomyelitis OR Amputation</th>
<th>Intermittent Claudication, Rest pain, Gangrene, Peripheral Bypass Surgery or Angiography</th>
<th>ESR D</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Normal Risk</td>
<td>Diagnosis of qualifying at risk condition, i.e. diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Low Risk</td>
<td>(one of three)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Moderate Risk</td>
<td>(two of three)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Highest Risk</td>
<td>Prior ulcer, osteomyelitis or amputation or severe PVD OR all three risk factors (N, PVD, D)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

A history of smoking, although not shown to be an independent risk factor for lower extremity amputation, clearly raises the risk level for other morbid vascular complications such as **peripheral vascular disease**, stroke and MI and as such aggressive smoking cessation counseling is recommended.
Intervention

- Foot Risk Score 0
  - Glycemic control
  - Patient education
  - Smoking cessation (must be willing)
  - Refer to podiatry or other foot care specialist for regular care if appropriate
  - Annual screening
Intervention

• Foot Risk Score 1
  – Glycemic control
  – Patient education
  – Smoking cessation (must be willing)
  – Refer to podiatry or other foot care specialist for care within one month or as appropriate
  – Annual screening
Intervention

- Foot Risk Score 2 and 3
  - Glycemic control
  - Patient education
  - Smoking cessation (must be willing)
  - Refer to prosthetics for depth shoes and inserts
  - Refer to podiatry or other foot care specialist for care within one month if no history of ulceration
  - Refer immediately for ulceration and/or infection
  - Annual screening if FRS 2
Components of Foot Self-care Education

Instruct the veteran to:

- Check your feet daily.
- Clean your feet daily & dry between toes!!!
- Bathe your feet in room temperature water-not hot!
- Use clean (preferably white) socks that are not too tight.
- Avoid walking barefoot.
- Always let your health care providers know right away if you have a cut or foot problem.
- Breaks in the skin of your feet can lead to gangrene and amputation!!!
- Try to stay off your foot if you have a cut-let the foot doctor decide how much walking you should do.
Inspect & Educate For Proper Foot Wear

- Holes or pressure points
- Rough spots, worn heels
- Objects in shoes (nails, etc)
- Tracing of shoe (no pointed toes & adequate fit)
Avoid Dry Skin

• Studies have shown that just adding lotion to skin prevent cracks that can lead to infection and amputation

• Avoid Vaseline as this is too occlusive and can trap bacteria in cracks and increase infection

• Recommend lotion
Question # 6

- A veteran wants to use Vaseline at home for dry, cracked skin because he doesn’t have lotion. Is this ok?

- Yes
- No
Correct Answer Question # 6

- No-That’s correct.
- Avoid Vaseline as this is too occlusive and can trap bacteria in cracks and increase infection
- Recommend lotion
Incorrect Answer-Question # 6

• Yes—that’s not correct.

• Avoid Vaseline as this is too occlusive and can trap bacteria in cracks and increase infection

• Recommend lotion
Prevention and Referral
When To Refer

• Refer to Podiatry or foot care specialist for any visual abnormality
• Refer to Podiatry or foot care specialist for any loss of sensation
• Refer to Podiatry for or foot care specialist an inability to palpate pulses
• Emergent Referrals are necessary for all identified ulcers or infectious processes
• Refer to the following PACT Algorithm:
  • http://www.oqp.med.va.gov/cpg/DM/DM3_cpg/content/ModF/modF_fr.htm
Question # 7

Under which conditions below should you refer a veteran for further foot evaluation?

1. Ulcer
2. Unable to palpate pulses
3. Unable to feel monofilament
4. All of the above
Correct Answer-Question # 7

• 4-All of the above.

• You should refer a veteran for further evaluation if you find an ulcer, you are unable to palpate pulses or they are unable to feel the monofilament testing.
Incorrect Answer Question # 7

• 1, 2 or 3-That’s NOT correct.

• You should refer a veteran for further evaluation if you find an ulcer, you are unable to palpate pulses or they are unable to feel the monofilament testing.
Hands On Foot Screening Training

• After an 80% or better completion of this didactic training you are ready for hands on foot screening
• It is recommended that you be observed in at least 3 successful foot screens by another person with foot screening competency
• See the form that follows for examples of documentation of successful hands on screening
DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER DIABETES FOOT EXAM COMPETENCY

Competency Statement: **Demonstrates the knowledge and skills to examine the foot of a veteran with diabetes.**

**Performance Criteria:** Demonstrates (3) successful completion of clinical performance criteria.

**Clinical Performance:**

1. Obtain a health history:
   a. Personal and family medical/surgical
   b. Presence of any diabetes complication
   c. Current or past foot ulcers
   d. Functional and sensory changes
   e. Pain assessment, including calf
   f. Changes
   g. Health habits, smoker?

2. Removes shoes and socks and inspects both for the following:
   a. Holes or pressure points
   b. Rough spots, worn heel
   c. Objects in shoes (nails, etc.)
   d. Tracing of shoe (no pointed toes & adequate fit)

3. Educates veteran on foot care using either foot manual or the foot care instruction booklet.

4. Visual inspection of legs, feet, and toes includes (noting):
   - Calluses, lesions, redness, sparker drainage, edema, dryness, hair growth
   - Toenail length, thickness, presence of fungus, other deformities or amputation, bunions, trauma

5. **Assess for pulses:** Right and left dorsalis pedis and posterior tibial, using Doppler if needed.

6. **Monofilament exam of both feet.**
   a. Touch along side of any ulcer, callous or scar.
   b. Touch the foot to make the filament bend (only once, no dragging of filament)
   c. Repeat if no sensation
   d. 5 points

7. Report any abnormal finding to podiatry and/or primary care provider

8. Complete foot reminder as needed
<table>
<thead>
<tr>
<th></th>
<th>Right</th>
<th>Left</th>
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</thead>
<tbody>
<tr>
<td><strong>FEET</strong></td>
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<tr>
<td><strong>Monofilament Sensory Test</strong></td>
<td>v&lt;2.5(1)</td>
<td>v&lt;2.5(1)</td>
<td>v&lt;2.5(1)</td>
<td>v&lt;2.5(1)</td>
<td>v&lt;2.5(1)</td>
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<td>v&lt;2.5(1)</td>
<td>v&lt;2.5(1)</td>
</tr>
<tr>
<td><strong>Pelvic Pulse</strong></td>
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<tr>
<td>Ulnar Nerve</td>
<td>Palpable</td>
<td>Palpable</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Non-Palpable</td>
<td>Non-Palpable</td>
</tr>
<tr>
<td>Proximal Pulses</td>
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<td>Palpable</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Rarely Pain</td>
<td>Non-Palpable</td>
<td>Non-Palpable</td>
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<tr>
<td><strong>Inspection for Foot Pathology</strong></td>
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</tr>
<tr>
<td>Current ulcers and infections</td>
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<td>None</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Bony deformity, i.e., hammertoe, claw toe</td>
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<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Hypertrophic callus or ulcer</td>
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<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Other plantar deformities</td>
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</tbody>
</table>
Quiz

1. Many amputations in diabetes can be prevented by teaching patients to examine and care for their feet and catching problems early.
   True (correct)
   False

2. To palpate the Posterior Tibial pulse you should palpate the MEDIAL side of the foot below the ankle bone?
   True (correct-the Posterior Tibial pulse is below the ankle bone on the medial side)
   False

3. When inspecting the feet you have a clear view if you look from two angles (above & below)?
   True
   False (correct-It is best to observe from 6 angles to avoid missing a problem)

4. It is best to avoid tight fitting shoes that may pinch feet.
   True (correct)
   False

5. The correct Monofilament to use for determining protective sensation in foot screening is a 1.0 Semms Weinstein?
   True
   False (correct-the correct monofilament to use is 5.07 or 10 gram)

6. When using the monofilament start at the knees and work down to the toes to test sensation.
   True
   False (correct-start at the most distal nerve or toe and work toward the knee)
Quiz

7. Any of the following put a patient with diabetes at risk for amputation; history of amputation or visual deformity, absent or diminished pulses or lack of sensation tested by monofilament.
   - True-(correct)
   - False

8. Nails should be cut on sharp angles to prevent dirt from accumulating in the corners of the toenail.
   - True
   - False (correct) It is best to keep nails cut straight across or filed to avoid sharp edges (not excessively) or ingrown toenails.

9. Patients with dry & cracked feet should apply lotion to their feet but avoid getting it between their toes.
   - True (correct)
   - False

10. A screening foot exam should be performed at least annually for patients with diabetes because they are at higher risk for amputations.
    - True (correct)
    - False
The End