

Patient Evaluation

Physical Evaluation of the foot and identification of therapeutic shoe eligibility criteria



Universal Precautions

The practice of avoiding direct contact with patient.

Essentially, these precautions are good hygiene habits, such as hand washing and other barriers to help reduce the possibility of a workplace hazard.

All patients are possible carriers of bloodborne pathogens, such as hepatitis B and C and human immunodeficiency virus (HIV).

Personal Protective Equipment (PPE): gloves, masks, eye protection, gowns, etc.





The Occupational Safety and Hazard Association (OSHA) is the main federal agency charged with **enforcement of safety and health legislation.**

Their mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach and education; and encouraging continual improvement in workplace safety and health.





OSHA posters must be posted in a common place providing employees with information on their safety and health rights. This information is available at the OSHA website at <http://www.osha.gov/index.html> or by calling (800) 321-OSHA.

The OSHA training institute can also provide training to employees on proper procedures to prevent work-related injuries.



Why Conduct Assessments

- To adhere to the DMEPOS Quality Standards (Appendix C)
 - Assess the beneficiary's need for and use of the footwear
 - Determine the appropriate footwear specifications
 - Perform an in-person, diagnosis-specific functional clinical exam
 - Establish beneficiary goals and expected outcomes
 - Formulate a treatment plan consistent with the prescribing physician's order
 - Ensure the treatment plan is consistent with the prescribing physician's dispensing order
 - Communicate to the beneficiary and stakeholders the recommended treatment plan
 - Assess the orthoses/prostheses for structural safety
 - Follow manufacturer guidelines
- To meet the ABC Code of Professional Responsibility Guidelines



Conducting Assessments

To perform an in-person diagnosis-specific functional clinical examination as related to the beneficiary's use and need

To assess the products for structural safety and ensure that manufacturer guidelines are followed prior to face-to-face fitting/delivery (e.g., beneficiary weight limits, ensuring that closures work properly and do not demonstrate defects)



During Assessments

Always wear gloves for the protection of your patient and you!

Should be conducted in a discrete area such as an exam room.

Develop a rapport with the patient.



Biomechanical Assessments

Range of Motion

Pedograph/foot imprinter on patient

Gait analysis

Worn shoe evaluation

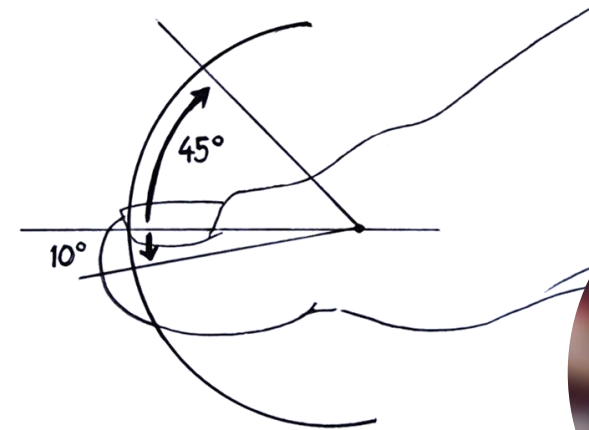
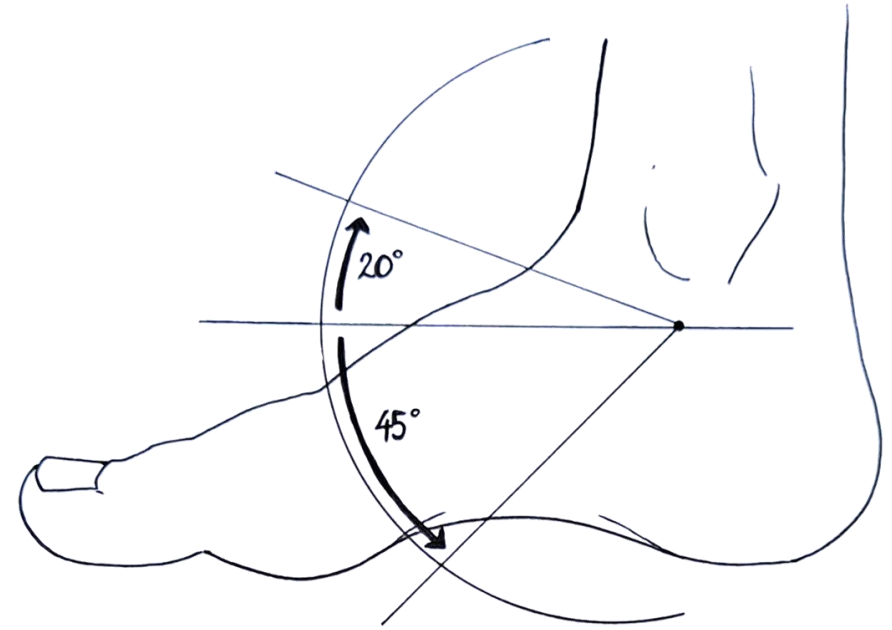


Range of Motion (ROM)

Decreased joint mobility has been shown to increase plantar pressure and foot ulcer risk, especially at the ball of the foot.

Ankle joint (DF 20°/PF 45°)

First metatarsophalangeal joint
(DF 45°-50°/PF 10°)





Pedograph

A Harris mat, or foot reaction imprinter, measures areas of pressure on the plantar portion of the foot.

Ink, a rubber roller, and a mat identifies areas of high pressure by darker



Gait Analysis

Note any unusual gait in the comments of patient's foot assessment form. Notice position of hips, shoulders and head during gait.

Unusual gait may include:

Foot Drop

Avoidance

Excessive Pronation/Supination

Limb Length Discrepancy

Lack of Proprioception and/or Balance

Also, indicate assistive devices such as a cane, walker or crutches.



Shoe Wear Pattern

In addition to the assessment of the patient, the clinician should also inspect the shoes and orthotics, if any, of the current shoes.



A “normal” wear pattern on the sole of the shoe begins at the lateral heel, transitions medially across the ball of the foot and finishes under the great toe.



Visual Assessment of the Foot

Foot Inspection
Digital Photographs

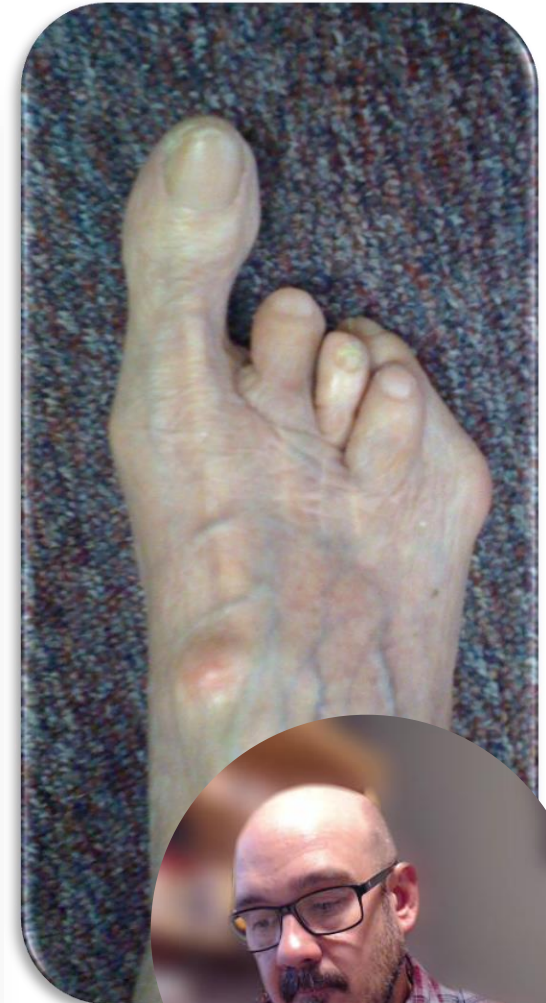


Foot Inspection

Inspecting the foot to check and note any abnormalities.

- Deformities
- Edema
- Redness
- Blisters, calluses or ulcers
- Fungal nails

Foot Assessment Form	
Patient Name: <u>Helen</u> DOB: <u>1/10/44</u> (Age: <u>75</u>) Date of Exam: <u>2/15/19</u>	
Current Footwear: <u>SAS</u> Length of time DM: <u>12 yrs.</u>	Foot deformities: <u>cross-over; bunions; redness</u>
Past DM footwear: <u>None</u> AIC: <u>7.2%</u>	Gait observations: <u>slight supination</u>
Current complaints: <u>Tingling</u>	Shoe wear patterns: <u>normal</u>
Contact Allergies: <u>None</u>	Patient occupation/activities: <u>retired; active lifestyle; walking 2mi/day</u>
Comments: <u>dorsum hurts at redness</u>	
Examination Checklist	
Biomechanical:	Foot Measurements using Brannock Device:
Ankle Motion: (Normal/Limited) <u>(Normal/Limited)</u>	NWB Right: Toe <u>9</u> Arch <u>9.5</u> Width <u>M</u>
1 st Toe Motion: Normal/Limited <u>(Normal/Limited)</u>	NWB Left: Toe <u>9</u> Arch <u>9.5</u> Width <u>M</u>
Pedograph Completed: ☐	WB Right: Toe <u>9.5</u> Arch <u>10</u> Width <u>M</u>
Dermatologic:	WB Left: Toe <u>9.5</u> Arch <u>10</u> Width <u>M</u>
Nails: Ingrown/Poorly Trimmed/Thick/Normal <u>(Normal)</u>	Treatment Plan/Goals:
Skin: Ulcers/Corns/Lesions (Indicated below)	☒ Provide properly fitting footwear
Vascular:	☒ Provide DM education/foot health awareness
Temp: dorsal R <u>91</u> * plantar R <u>81</u> *	☒ Reduce pain
dorsal L <u>81</u> * plantar L <u>81</u> *	☒ Promote healing
Hair: R-present/absent <u>(absent)</u> L-present/absent <u>(absent)</u>	☒ Increase comfort
Color: <u>N/A</u> Texture: fragile/thin/shiny/dry <u>(dry)</u>	Other: _____
Capillary refill: R <u>3</u> seconds L <u>3</u> seconds	Circled areas are for 10g monofilament test results.
Pulse: Dorsalis Pedis R - yes/no <u>(yes/no)</u> L - yes/no <u>(yes/no)</u>	"+" if patient can feel and
Posterior Tib R - yes/no <u>(yes/no)</u> L - yes/no <u>(yes/no)</u>	"-" if patient cannot feel.
Neurologic:	128Hz tuning fork conducted on top of great toe just behind the nail bed.
Vibratory Sensation: Pass ☒ Fail _____	Indicate/label skin conditions:
Monofilament Test: Pass ☒ Fail _____	/// - Dry Skin > - Bunion
(Documented below)	• - Wound R - Redness
	S - Swelling ^ - Hammertoe



Photographs

Capture image of patient's foot to document abnormalities.



Vascular Assessments

Pedal pulses

Digital hair growth

Capillary refill test

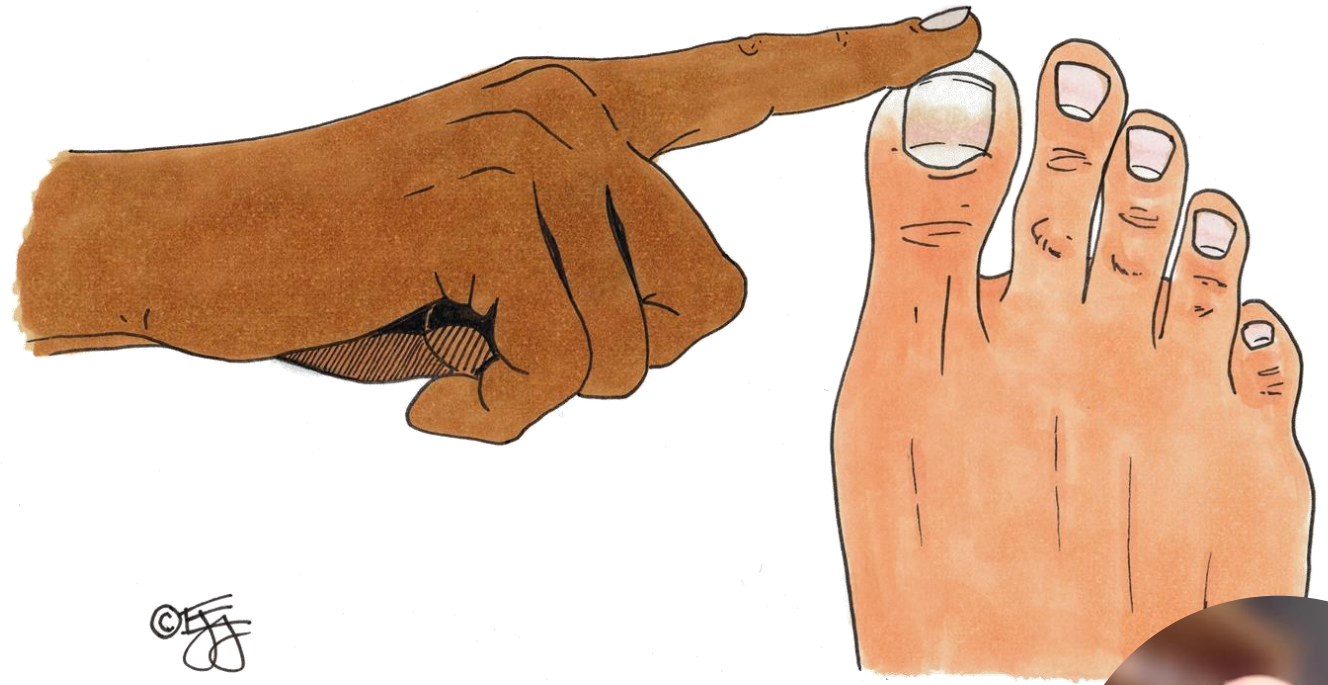
Temperature

Color and texture



Capillary Refill Test

Capillary refill is the rate at which blood refills empty capillaries. The test is taken by pressing on the distal tip of the toe and noting how long it takes the color to return once released. Normal return is 2-3 seconds.



Pedal Pulses

The **dorsalis pedis artery** can be found halfway down the dorsum of the foot on the bony area in the line between the first and second toes. The bones you can feel are the dorsal aspect of the navicular and the intermediate cuneiform bones. The pulse is palpated where the artery passes over this area.

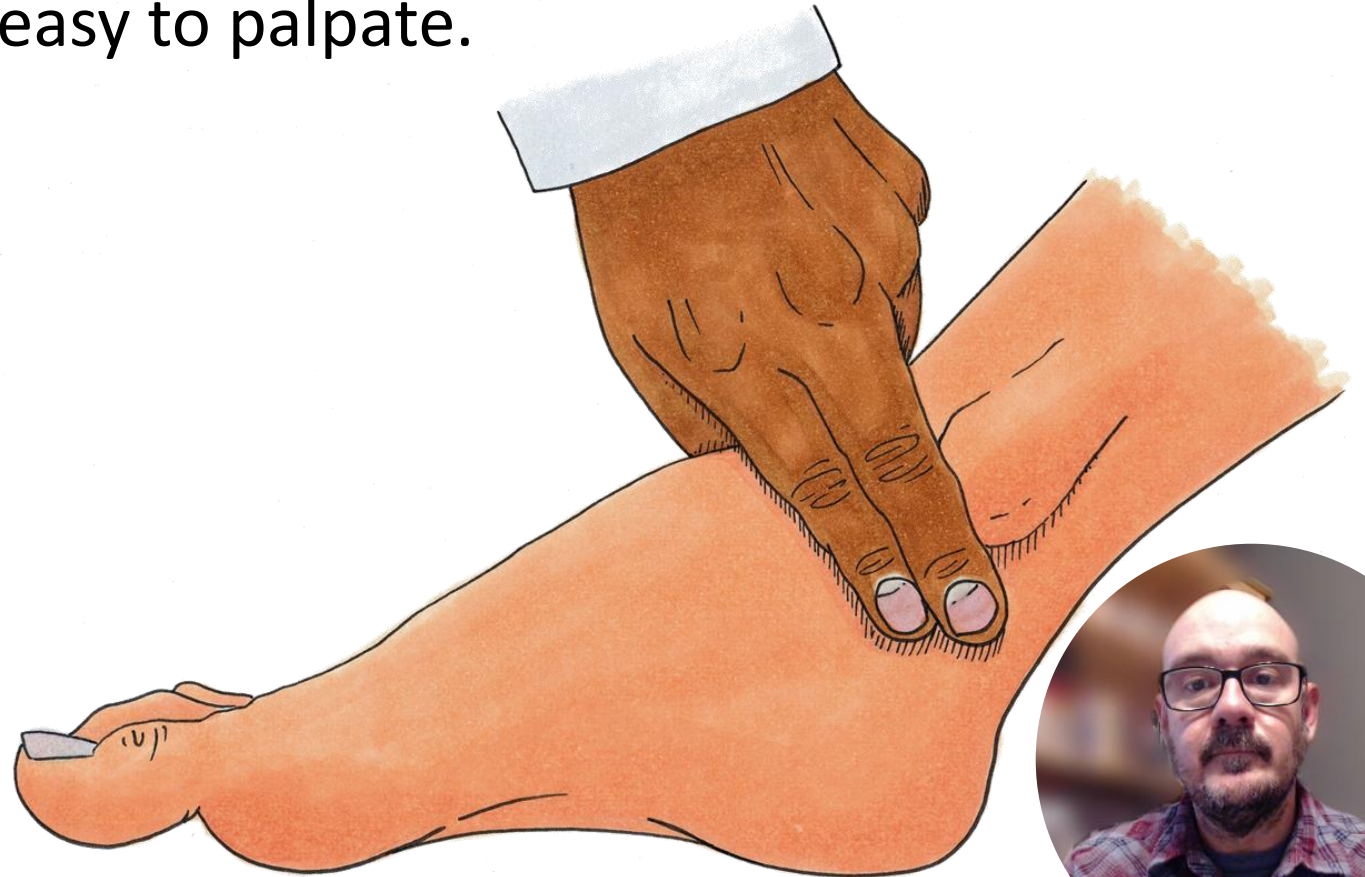
Presence or absence of pulse should be noted.



Pedal Pulses

Located 2-3 cm below the medial malleolus, the **posterior tibial artery** can be palpated. This artery lies slightly deeper than the dorsalis pedis and therefore may not be as easy to palpate.

Presence or absence of pulse should be noted.



Digital Hair Growth

Lack of digital hair growth may indicate loss or lack of circulation.



Take Temperature

Take the temperature on both the plantar and dorsum of the foot.

A pre-ulcerative temperature may be increased by 4°-5°, so note significant differences in the 2 feet. A neuropathic patient may have temperatures above 86° Fahrenheit.

Increased temperature also may indicate a fracture, infection, or Charcot.



Color and Texture

Observing the color and texture of the patients' feet may also indicate vascular concerns.



Neurologic Assessments

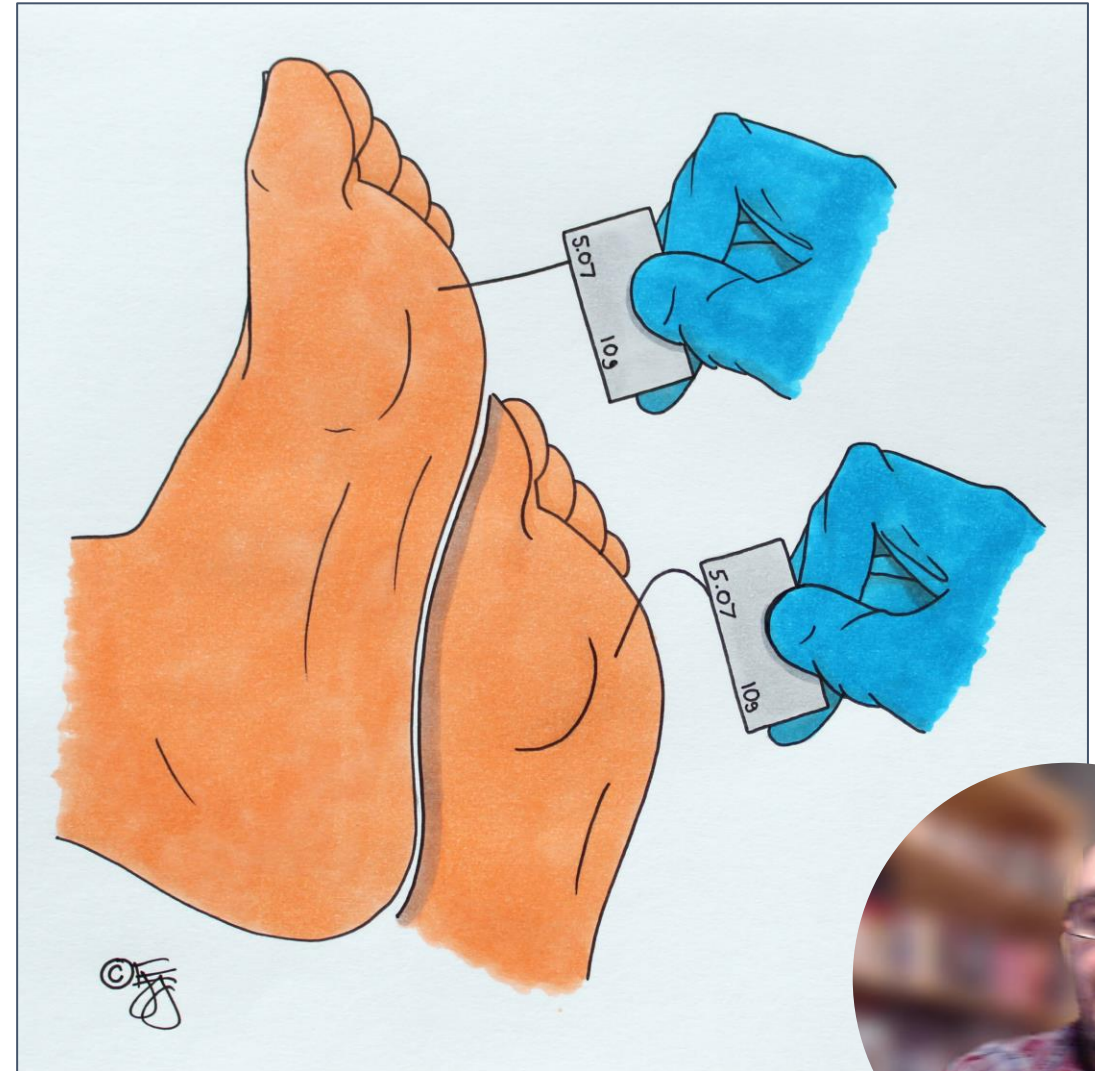
Vibratory Sensation
Monofilament



Semmes Weinstein Monofilament

The monofilament produces 10 grams of force when bowed into a “C” as pictured.

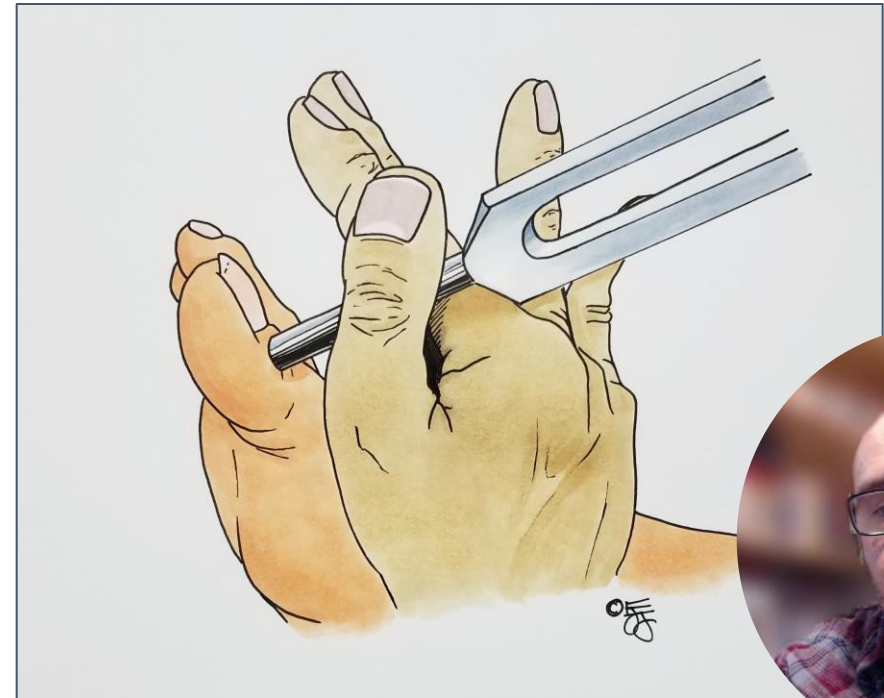
If the patient cannot detect this pressure, they are considered to have a loss of protective sensation (LOPS).



Tuning Fork

Using the 128-Hz tuning fork, gripping by the stem (not the prongs), strike the fixed weights against a firm surface and test at the dorsum of the great toe proximal to the nail bed.

Presence or absence of patient's ability to sense vibration should be noted.



Additional assessments

Anything that measures, captures, or otherwise assists with the assessment of a patient—quantitative results.

Use of goniometer for ROM

Height/weight/BMI

Digital skin moisture meter

Digital plantar pressure mapping

Wood's lamp (UV light)



Further Assessment of the Patient

- Recognize any challenges the patient may have
 - Note the shoes the patient is wearing
 - Any challenges for fastening (able to lace or strap)
 - Weight preventing proper donning
- Aid in selecting footwear
 - Knowledge of footwear
 - Identify foot type
 - Note prescription and any additional requirements



Follow-up

Per Medicare (DMEPOS Quality Standards):

- Have access to a facility for follow-up
- Provide follow-up treatment consistent with the type of orthoses or prostheses
- Review recommended maintenance with the beneficiary
- Solicit feedback from the beneficiary and stakeholders on the DMEPOS effectiveness
- Review and adjust the treatment plan as necessary
- Assist the beneficiary to obtain optimal level of fit and function



Follow-up

- A follow up appointment should be scheduled.
- Appointment should be within 2 weeks.
- Stress the importance of following up sooner if the need arises (rubbing, redness, irritation)
- Subsequent follow-up should be as needed or when the patients condition changes.



Follow-up

- When the patient returns, re-check the fit of the shoe
- Inspect feet and shoes
- Confirm the patient is following break-in procedures and care instructions
- Advise patient to follow up if the need arises or there are changes in their condition
- Per ABC, provide appropriate patient follow-up care, consistent with the diagnosis and services provided



Thank you!

