Diabetes Foot Care Guidelines for Primary Healthcare Professionals

SEMDSA
Society for Endocrinology, Metabolism and Diabetes of South Africa

International Diabetes Federation

Strategies to Prevent Foot Ulcers and Amputation

1. Education of patient, family and healthcare providers.
2. Appropriate footwear.
3. Regular inspection and examination to identify the foot at risk.
4. Appropriate and timely referral.

Patient Education: Do's & Don'ts for the Foot at Risk

DO's: -

- ✓Inspect your feet daily, including areas between the toes
- ✓Ask someone else to inspect your feet if your vision is poor
- ✓Wash your feet daily
- ✓Dry your feet carefully, especially between the toes
- ✓Test the water temperature with your hand, not your foot
- ✓Inspect and feel the inside of your shoes daily
- ✓Moisten dry/cracked feet daily by applying oils/creams
- ✓Change your socks/stockings daily
- ✓Clip your nails straight across (fig. 1)
- ✓Insist that your doctor/nurse examine your bare feet
- ✓Notify your doctor/nurse at once if you have a blister/cut/scratch/sore

Figure 1

DON'Ts : -

- X Do not let your feet soak in standing water or foot spa's
- X Do not walk barefoot
- X Do not wear shoes without socks
- X Do not use chemicals or plasters to remove corns and calluses
- X Do not cut corns and calluses yourself
- X Do not apply moisturising oils/creams between your toes
- X Do not treat your own feet (e.g. clipping nails) if your vision is poor
- X Do not use hot water bottles and heaters near your feet

Annual Foot Screening
Identification of the Foot at Risk

WHO TO SCREEN?
Type 1 diabetes > 5 years duration
All type 2 diabetes from diagnosis

HOW TO SCREEN?
Complete the compulsory annual questionnaire below

Annual Foot Assessment Questionnaire

Are any of the following present in either the left or right foot?

Category A		
Bone/Joint Abnormality		
Deformity (e.g. claw toes, hammer toes, hallux valgus)	Yes	No
Bony prominences, areas of abnormal pressure	Yes	No
Loss of joint mobility (e.g. hallux rigidus)	Yes	No
Skin		
Callus, corns, cracks, interdigital maceration	Yes	No
Inappropriate footwear	Yes	No
Category B		
Protective sensation		
Monofilament sensation abnormal at any spot on ≈2 attempts	Yes	No
Ulcer	Yes	No
Past history of		
Ulcer	Yes	No
Amputation	Yes	No
Vascular		
Claudication or rest pain	Yes	No
Absent dorsalis pedis pulse and absent posterior tibial pulse	Yes	No

ACTION REQUIRED

If any one answer is 'yes' the foot is at risk for ulceration/amputation.
The foot must then be assessed at EVERY visit.
Intervene and refer appropriately.

Intervention

All Categories (A&B)
Patient foot education
Quit smoking
Optimise glycaemic control
Optimise blood pressure control
Optimise lipid profile

Referral

Category A
Refer to centre with access to podiatrist

Category B
Refer to secondary care facility with access to specialist care

Appropriate Footwear

Inappropriate footwear is a major preventable cause of ulceration.
Patients with normal protective sensation can select off-the-shelf footwear.
Patients with neuropathy/ischemia/deformities need extra care with footwear.

1. The shoe should not be too tight or too loose.
2. Internal shoe length should be 1-2 cm longer than the foot.
3. Internal shoe width should be equal to the width of the foot (fig. 2).
4. Toe height should allow enough room for the toes.
5. Fitting must be evaluated with the patient standing.
6. Refer to an orthotist (for special footwear) if:
   - fitting is too tight due to deformities.
   - there are signs of abnormal loading (hyperaemia, callus, ulceration).

Figure 2

Figure 3

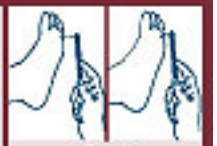

Figure 4

Examination of the Foot for Protective Sensation Using the 10g (Semmes-Weinstein) Monofilament

1. Apply the filament on the patient's hand so he/she knows what to expect.
2. The patient must not be able to see if and where filament is applied.
3. Three sites must be tested on each foot (fig. 3)
4. Apply monofilament perpendicular to the skin surface with sufficient force to cause the filament to buckle against the skin for no more than 2 seconds (fig. 4). *Do not allow the filament to slide across the skin and do not probe repetitively* at the test site.
5. Ask the patient IF (yes/no) and WHERE (left/right) they feel the pressure.
6. Perform this twice at the same site, but also perform at least one "sham" application, in which *no filament* is applied (total three questions/site).

Protective sensation is absent with two out of three incorrect answers at any one site, and the patient is then considered to be at risk for ulceration.

Additional information may be obtained by assessing vibration sense (128Hz tuning fork), ankle reflexes, pain sensation (pinprick) and light - touch (cotton wool).

Adapted from the International Consensus Guidelines of the International Working Group on the Diabetic Foot

[For more information visit http://www.semdsa.org.za/guidelines.htm]