## FOOT EXAMINATION

### ASSESSMENT | SIGNIFICANT FINDINGS
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Patient history | Previous foot ulceration  
               | Previous amputation  
               | Diabetes > 10 years  
               | HbA1c > 58mmol/mol  
               | Impaired vision / retinopathy  
               | Neuropathic symptoms  
               | Claudication  
Dermatological examination | Dry skin  
                          | Absence of hair  
                          | Ingrown nail edges, long or sharp nails  
                          | Interspace maceration / infection  
                          | Ulceration  
Neuropathy screening | Lack of monofilament perception at one or more sites  
                      | Abnormal perception of vibration using 128Hz tuning fork  
Vascular examination | Absent dorsalis pedis or posterior tibial pulses  
                    | Ankle-brachial index (ABI) < 0.90  
Biomechanical assessment | Diminished joint mobility  
                        | Decreased vision, gait imbalance  
                        | Ill-fitting footwear  
                        | Patient’s inability to see or reach his/her feet  
                        | Corns, calluses, bunions  
                        | Prominent metatarsal heads  
                        | Hammer toes, claw toes

### USING A MONOFILAMENT
- Apply the filament to a sensitive area of skin (e.g. the forearm) so that the patient is aware of the sensation they are supposed to feel.
- Test 5 sites*:
  - Plantar surface of the hallux and 3rd toe
  - 1st, 3rd and 5th metatarsal heads
  *If callus is present at any of the sites then test at the nearest non-calloused area.
- Ask the patient to close their eyes and say ‘yes’ every time that they feel you touch the skin on the foot
- Place the monofilament at 90° to the skin surface
- Slowly push the monofilament until it has bent ~1cm (don’t jab)
- Hold the monofilament in this position for 1-2 seconds, then slowly release the pressure until the monofilament is straight
- Remove contact from the skin
- Repeat for all testing sites
- If the patient does not respond, repeat the test at the site twice. If there is still no response, record as a negative response
- Replace monofilament at least yearly

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All patients with Diabetes should be on a register and minimum data should include annual measures for microvascular disease. Please see Cardiovascular Risk for additional requirements.

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V1.2 Date of preparation: May 2015. For review: May 2016
**TYPE 2 DIABETES – FOOT MANAGEMENT ALGORITHM**

**FOOT SCREENING AND MANAGEMENT**

**Annual Foot Review**
Assumed patient part of ongoing care and one to one education as per NICE

- Foot examination with shoes and socks/stockings removed
  - Test foot sensation
  - Palpate foot pulses
  - Inspect for any deformity
  - Inspect for significant callus
  - Inspect footwear
  - Check for signs of infection
  - Ask about any pain
  - Ask about previous ulceration

**Diabetic foot risk assessment**

**Definition**

- **Low**
  - Normal sensation, palpable pulses

- **Moderate**
  - One risk factor present e.g. neuropathy or absent foot pulses or other foot changes

- **High**
  - Previous ulcer or amputation or more than one risk factor e.g. neuropathy or absent pulses plus deformity or skin changes

**Action**

- **Low**
  - Standard footcare advice and leaflets

- **Moderate**
  - Surveillance 3-6 monthly by clinician with footcare competencies training
  - Enhanced foot care education
  - Inspect feet 3-6 monthly
  - Advise on appropriate footwear
  - Review need for vascular assessment
  - Low threshold for further referral

- **High**
  - Increased surveillance 1-3 monthly by specialist podiatrist or member of the foot protection team
  - At each regular Diabetes visit review education / footwear / vascular status

**Risk Status**
Documented and patient provided with written and verbal education and emergency contact numbers

- **Low risk**
- **Moderate risk**
- **High risk**
- **Ulcer**

**Foot Ulceration Charcot Foot**

- Presence of active ulceration/break in the skin, spreading infection, gangrene or unexplained hot, red, swollen foot with or without pain

- Rapid referral to multidisciplinary foot care team

- Admission to secondary care if patient systemically unwell

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**Download PILs:**
- Low risk
- Moderate risk
- High risk
- Ulcer

**V1.2 Date of preparation: May 2015. For review: May 2016**

32
TYPE 2 DIABETES – MANAGING NEUROPATHIC PAIN

BACKGROUND POINTS
Neuropathic pain in people with Diabetes is common and often goes undiagnosed or may not be associated with their Diabetes. It can be extremely debilitating and can have physical and psychosocial implications. All clinicians involved in the care of people with Diabetes are responsible for the diagnosis, treatment and monitoring of neuropathic symptoms. Some patients will require referral to specialist Diabetes care or pain service at for advice and treatment plan.

Other Neuropathic Complications
Erectile Dysfunction
- Review annually as part of complication screening and care planning
- Discuss causes and contributory factors
- Discuss treatment options available
- Medical treatment
- Surgery
- Psychological support
- Exclude systemic disease.
- Consider referral to erectile dysfunction clinic.

Autonomic neuropathy
If any of the following symptoms exist consider autonomic neuropathy as a possible cause:
- Unexplained gastric bloating or vomiting
- Loss of warning signs for hypoglycaemia
- Unexpected diarrhoea especially at night
- Unexpected bladder emptying problems

Management
Further investigations are required to exclude other causes and diseases. Requires referral to specialist services if uncertainty about diagnosis and management

Questions regarding the presence of neuropathic symptoms should be a formal part of the Diabetes annual review.
- Take a detailed history of symptoms
  - Exclude systemic disease.
  - If present treat or refer if appropriate
- Symptoms
  - Pins & needles, pricking or tingling, often worse at night
  - Abnormally sensitive skin with tight/stretch sensations
  - Shock-like ‘jumping pain’
  - Burning pain/cold or numb
- If normal consider neuropathic pain management below in line with NICE guidelines: The Management of Type 2 Diabetes May 2009.

Symptoms present
- Discuss cause and prognosis of neuropathic symptoms (other causes excluded)
- Agree appropriate treatment options and review at each clinical contact
- Assess glycaemic control and how it may be impacting/causing painful neuropathy and agree management plan
- Explore psychosocial consequence and offer support depending on individual

Symptoms uncontrolled
Tricyclic drugs - These may be used to treat neuropathic discomfort
Start with low doses of amitriptyline and titrate as tolerated up to 75mg per day to minimise side effects
- Discuss the timing of taking the medication to have the most benefit and least side effects
- Advise this is a trial of therapy

Symptoms uncontrolled
- Offer trial of Duloxetine, Gabapentin or Pregabalin in addition to tricyclic drugs. Stop tricyclic drugs if not tolerated.
- Trial should be stopped if ineffective at maximum tolerated dose
- Try another of the drugs if side effects limit titration of doses

Symptoms uncontrolled
- Discuss with person and consider referral to specialist Diabetes service/pain management team

Symptoms controlled
- Consider stopping/reducing dose following discussion with patient

All patients with Diabetes should be on a register and minimum data should include annual measures for microvascular disease. Please see Cardiovascular Risk for additional requirements.