

## Referring and caring for high risk feet



### High risk foot conditions

*'If crocodiles had taken 34 legs and 14 lives in 3 years and had cost the taxpayer \$3.5 Million dollars, every person in Australia would know about it, and there would be an outcry for action'*

O'Rourke I, Heard S, Treacy J et al. ANZ Journal of Surgery 2002; 72 (4): 286

**T**he main risk factors for patients with high risk foot are peripheral neuropathy, peripheral arterial disease and structural deformity. High risk foot disorders can be the result of a range of underlying medical conditions including rheumatoid arthritis, vascular disease, renal disease and neurological disorders, with the most common contributor to high-risk foot conditions being diabetes.

Peripheral neuropathy can lead to ulceration, oedema and — if left untreated — sepsis, osteomyelitis and amputation. Regular check ups are crucial for high risk patients to assess numbness and protective sensation, structural or gait changes and autonomic problems. Examination can also monitor and treat minor problems such as corns and calluses before chronic ulceration develops. Although very serious, ulceration is usually preventable if treated early.

Peripheral arterial disease (PAD) is a common cause of foot ulceration and usually results from atherosclerosis. Cuts or abrasions can lead to major infections in patients with chronic medical conditions largely due to immunodeficiency. Left untreated, infection can lead to gangrene and often combines with ulceration and gets right down to the bone. Once infection has reached the bone it is unlikely that the wound will heal. Sepsis then becomes a major risk and amputation may be required. Smoking cessation should be recommended for at-risk patients to decrease the dangers of PAD.

Bone deformity and joint mobility problems resulting from conditions such as rheumatoid arthritis can further contribute to the formation of ulcers and infection. Signs of hammer toes, enlarged metatarsal heads and hallux valgus along with any indication of inflammation can contribute to ulceration with increased risk for patients that also have PAD or peripheral neuropathy. Diabetics should be monitored for symptoms of Charcot Joint, which can also increase the likelihood for ulceration and infection.

Patients with high-risk foot conditions should have a foot exam at least once a year to assess and monitor risk, with more regular examinations required for patients with multiple risk factors. The foot exam should assess protective sensation, foot structure and biomechanics, vascular status and skin integrity. Good foot care will halve the risk of disease-related amputation.

# Amputation rates and care

**P**atients at risk for amputation include those with cardiovascular, retinal or renal disorders and those who have had diabetes for more than ten years (risk is increased for males and patients with poor blood glucose management). According to the Australian Diabetes Society, the leading cause of amputation in Australia is diabetes. Diabetics account for 50% of non-traumatic lower-limb amputations nationwide.

Symptoms with an increased risk of amputation include peripheral neuropathy with loss of protective sensation (diagnosed using monofilament testing), altered biomechanics and/or unstable gait, erythema, bone deformity, peripheral vascular disease and a history of Charcot foot, lower extremity ulcers or amputation.

Lifestyle factors also contribute to exacerbation of high-risk foot disorders. Smoking, alcoholism, high cholesterol and high or uncontrolled blood glucose levels all contribute to high-risk symptoms that can lead to amputation.

Patient education should include information on the seriousness of risk factors that lead to amputation, advice on smoking cessation and the relationship between smoking and vascularisation, careful blood glucose monitoring and referral to a podiatrist for regular foot examinations.

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