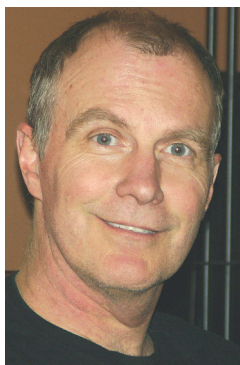


# The 60-second Foot Exam for People with Diabetes



BY Shane Inlow

**W**hen it comes to the rate at which medical professionals checking the feet of people with diabetes (PWD), the results are very disappointing. Although no real “excuses” have been offered for this gross oversight, I suggest that the very ordinary business of medical professionals being too busy and seeing too many patients is most likely to blame in most cases.

Certainly, an hour (or more) can be easily spent doing a history and physical on a PWD. Even then, the foot aspect of the exam can be cursory. To ensure a more complete exam, I suggest piecing together existing information, then combining it with a “targeted” physical and a fast screen called “The 60-second Foot Exam for PWDs.” This screen employs a series of four questions that David Armstrong<sup>1</sup> showed to have a very high, positive correlation to foot problems if even one answer is “yes” [Editor’s note: see our interview with Dr. Armstrong on page 26 of this issue].

While asking these questions, simultaneous exams can be performed as described in Table 1.

The “physical” part of the exam should proceed in the following manner.

**Look at the Feet/Shoes:**

**Skin:** Dryness is the most common problem that cascades to serious concerns. Cracks along the heels often become portals of infection. Initial treatment with a moisturizer containing 10 per cent lactic acid helps remove the callous build-up while re-hydrating the skin. This acid cream should be stopped after two to three weeks of use, and the switching to a simple moisturizer should be made.

**Shoes:** A proper fitting, low-heeled shoe is very important in PWDs. A poor fitting shoe is often the initiator of serious foot problems. The shoe needs to be wide, deep and long enough; often a good running shoe is the best investment. A shoe needs to have a removable insole so orthotics can be fitted if needed, as well as a cushion sole for shock absorption. Establish a referral link to a local shoe store that is interested in fitting high-risk individuals.

**Structure:** A quick glance at the foot at rest and in weight-bearing will tell you if the foot anatomy is normal or not. X-ray when in doubt, or refer, especially if there is pain associated with redness.

TABLE 1

## The 60-second Foot Exam for People with Diabetes

	Questions	Physical Exam
First 15 seconds	Are your feet ever numb?	Look at the feet/shoes. Visually examine the foot for skin condition, colour, callouses, toenail condition and structural deformities.
Next 15 seconds	Do they ever tingle?	Palpate the foot for temperature and ROM in general, (but of the big toe specifically).
Final 30 seconds	Do they ever burn? Do they ever feel like insects are crawling on them?	Check for sensory intactness, especially light touch using a 10-gram monofilament.

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### Palpate:

Feel for temperature, as pedal pulses are often difficult to palpate and can be misleading. A "bounding" pedal pulse will usually be seen as normal, when often it can represent advanced pedal arteriosclerosis with calcification. The range of motion (ROM) at the ankle often shows a reduced dorsi-flexion. The ROM of the big toe will often be limited as in hallux rigidus or hallux limitus. If there is a callous under the first metatarsal head (MTH), it will lead to an ulcer very quickly and needs prompt action/referral. Often, this callous will already be the top of an ulcer, called a sub-keratic hematoma (see Figure 1). Sharp debridement of the callous is needed, along with pressure downloading (shoe or orthotic modifications).



### Sensory Exam:

The Web link to the LEAP program site provides instructions for a sensory exam of the foot, and even offers free monofilaments and patient hand-outs ([www.bphc.hrsa.gov/leap/default.htm](http://www.bphc.hrsa.gov/leap/default.htm)).

Although there are limitations to the 60-second Foot Exam, the effectiveness of the questions, along with the results of the brief physical, should identify nearly all PWDs at risk for foot-related morbidity. This exam should be a minimum standard for

any health-care professional when seeing a PWD who has not already developed a high-risk status. By identifying risk earlier on in the disease, one hopes this will allow for greater preventative strategies and reduce the morbidity of foot disease in PWDs. ☺

### Reference

1. Armstrong DG, Lavery LA, Vela SA, Quebedeaux TL, Fleischli JG. Choosing a practical screening instrument to identify patients at risk for diabetic foot ulceration. *Archives of Internal Medicine*. 1998;158:289-292.



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