

Assessment of footwear

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- **Shoes are not just a fashionable accessory, but essential medical devices.**

 - **Even the very best wound care physician, surgeon or at-risk foot care manager in the world will not be effective if the patient is wearing a substandard shoe.**
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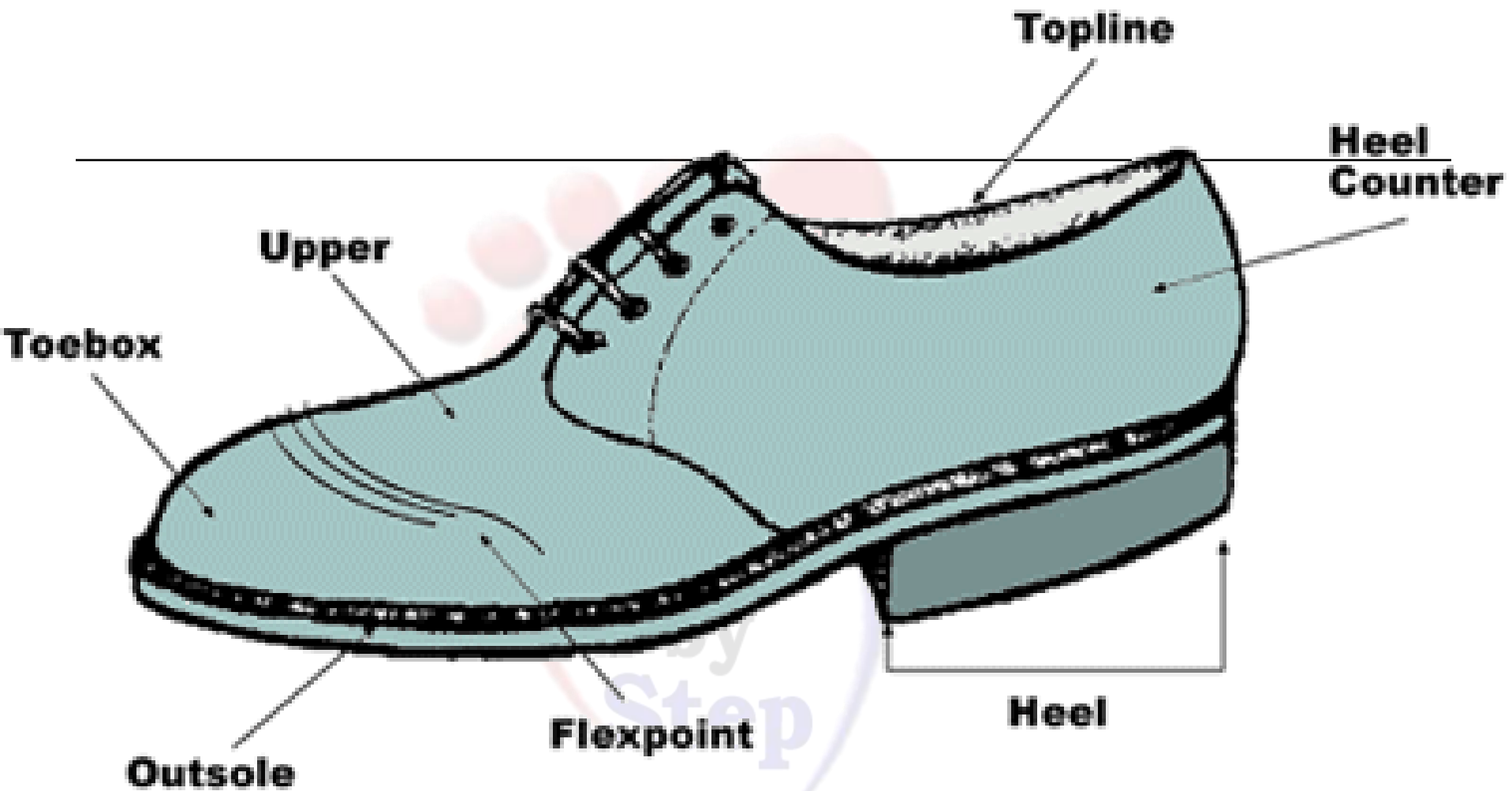
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- ❑ **Shoes and inserts should be inspected frequently and replaced when necessary.**
 - ❑ **For patients with diabetes, proper footwear is a critical part of the equation for preventing or reducing the risk of lower extremity complications**

**Step
by
Step**

Candidate for therapeutic shoes

Diabetic patient who has one or more of the following conditions:

- **Previous amputation of the other foot, or part of either foot**
- **History of previous foot ulceration or either foot**
- **History of pre-ulcerative calluses of either foot**
- **Peripheral neuropathy with evidence of callus formation on either foot**
- **Deformity of either foot**
- **Poor circulation in either foot**




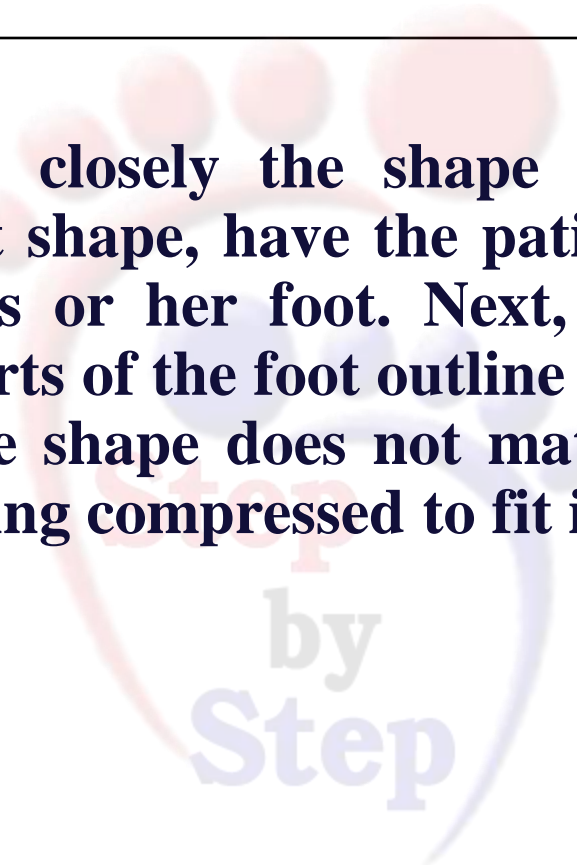
Size

- ❑ **Sizes vary from manufacturer to manufacturer – and often from style to style – the fit of a shoe is more important than the number size printed on the shoebox.**
- ❑ **You have to check that the shoe is wide enough and that the widest part of the foot rests comfortably in the widest part of the shoe.**
- ❑ **You have also to check that the shoe is the correct length – leaving about a thumb's width (1/2 inch)between the end of the longest toe and the front of the shoe.**

Size

- Fit shoes on both feet while weight bearing.
- Patients who have diabetes and neuropathy get used to wear footwear that is much tighter than their actual size. “When you get them the right-sized shoes, they often complain that they are way too big,” .

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Step

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- **To test how closely the shape of the sole matches a patient's foot shape, have the patient stand and draw an outline of his or her foot. Next, put the shoe over the outline. If parts of the foot outline extend outside the shoe, then the shoe shape does not match the foot shape, and the foot is being compressed to fit in the shoe.**
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Depth

- **The toebox should be of sufficient depth to accommodate the toes. This is particularly important in individuals with claw or hammertoes for whom a shoe with a deeper toe box is necessary.**
- **If orthoses is needed, extra depth shoes will be essential. An extra-depth shoe is roomier inside the toe box, the instep and arch, and around the heel. This extra room allows for proper fit following necessary modifications**

Uppers



- ❑ **The upper must comply with the morphology of the foot.**
- ❑ **Should be constructed of soft, flexible material to be moldable to accommodate any deformities.**
- ❑ It is a good idea to avoid a lot of seams in the shoe upper; these can rub and lead to skin breakdown.

The top line

- ❑ **The top line should always be located below the malleoli.**
- ❑ A padded collar and tongue will add additional comfort.



Step
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INSOLES

- **Shoe insoles must be removable to allow for cleaning and replacement when necessary. Removable insoles also accommodate greater versatility in modifying the shoe's interior.**



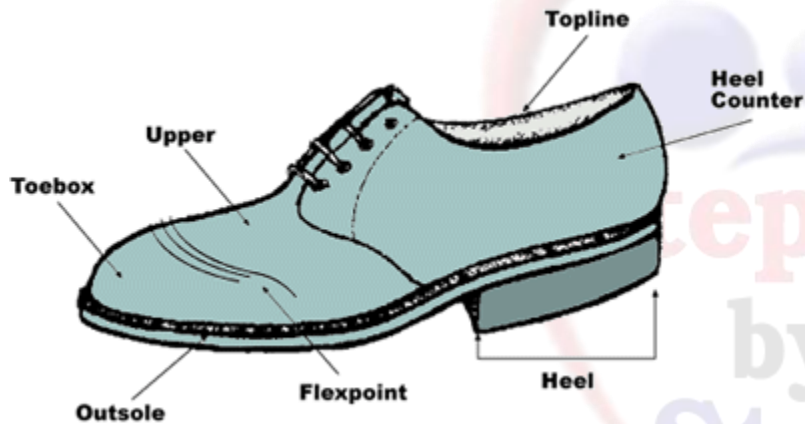
Step
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Adjustable closure

- Determine that proper fit over the instep has been achieved by an appropriately high vamp, preferably with laces or Velcro to allow adjustability.
- A shoe with laces or Velcro is best because it allows for a better fit and is adjustable.

Step
by
Step

The heel counter



- **The heel counter stabilizes the foot in the footwear.**
- **The shoe should have a strong counter to provide support around the heel.**
- **An external lateral counter. This shoe modification is helpful when patients supinate too much or roll laterally off the base of the foot.**

The outsole



- should be constructed of soft, flexible, long-wearing materials such as crepe or urethane.
- the sole should offer stability as well as good shock absorption.
- Shoes should flex under the ball of the foot, not in the middle at the arch area.

A rocker sole



- A rocker sole is simply an additional amount of crepe that one adds to the midsole and bevels from a point just proximal to the metatarsal heads distally to the toe.
- It is analogous to stepping off a curb with the curb under the distal part of the arch.

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- **Variations on rocker soles include moving the apex of the rocker sole either further proximal or distal.**
 - **One may rotate the apex as well. For instance, if someone has an out-toed gait, the apex should not be perpendicular to the long axis of the shoe. One should rotate the apex to match the angle of gait.**



“rocker soles are like an
aspirin for the foot.”



The heel height

- ❑ **The heel height should not exceed 2.5 cm.**
- ❑ **Raising the heel height can either reduce pressure from the heel region and even the forefoot in certain situations such as equinus.**
- ❑ **Lowering the heel to a level below the ball of the foot — also known as a negative heel — may be helpful in reducing pressure from the forefoot.**

Custom molded shoes

- **Some feet that we treat cannot possibly fit into a pair of shoes taken off the shelf, no matter how wide or large a size you try. In those cases, custom molded shoes are necessary.**
- **An estimated 5 percent of our population actually needs custom molded shoes because of severe deformities.**