



## Foot and nail health

Although not often thought of as a critical health issue, improper foot and nail care can lead to serious and painful complications for residents.

Minor foot ailments such as **bunions**, **hammer toes**, **heel pain**, **athlete's foot**, and **ingrown nails** can affect a resident's ability to walk, and therefore the individual's quality of life. Proper foot hygiene can prevent **fungi** and other forms of **infection**.

This month's lesson will also discuss major foot problems such as **arthritis** and **diabetic foot ulcers**. If left untreated, foot ulcers can become infected to the point that **amputation** is required. It is important for CNAs to pay special attention to the needs of diabetic residents and others who require unique foot and nail care.

CNAs must also understand three forms of arthritis: **osteo-**, **rheumatoid**, and **gouty arthritis**. If not detected and treated early, each type is capable of causing severe pain.

Have a good day of training, and stay tuned for next month's issue of **CNA Training Advisor**, which will cover caring for residents with cancer.

### "Figure" out the foot

With so many bones, joints, ligaments, and muscles in a foot, it is easy to confuse the locations of common foot problems. Ask your CNAs to draw a rough sketch of a foot and label:

- Heel
- Plantar fascia
- Metatarsophalangeal joint
- Bunionette
- Corn

### PROGRAM PREP

#### Program time

Approximately 30 minutes

#### Learning objectives

Participants in this activity will learn how to:

- Perform basic foot and nail care
- Identify minor ailments as well as major foot problems
- Practice special care techniques with diabetic residents

#### Preparation

- Review the material on pp. 2–4
- Duplicate the **CNA Professor** insert for participants
- Gather equipment for participants (e.g., an attendance sheet, pencils, etc.)

#### Method

1. Place a copy of **CNA Professor** and a pencil at each participant's seat
2. Conduct the questionnaire as a pretest or, if participants' reading skills are limited, as an oral posttest
3. Present the program material
4. Review the questionnaire
5. Discuss the answers

### Tips and tools for CNA training

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## FOOT AND NAIL HEALTH

Approximately 75% of Americans will suffer from some form of foot ailment within their lifetimes. The majority will be women, who are four times as likely as men to suffer from foot problems because many women wear high-heeled shoes.

The foot contains 26 bones, 33 joints, 107 ligaments, 19 muscles, and many tendons.

The feet play a very important diagnostic role for gauging a resident's general health. For example, the first signs of arthritis, diabetes, and nerve and circulatory problems can be detected in the feet. Therefore, it's important to keep a close eye on your residents' feet and emphasize proper foot care.

Residents have a special need for foot care because as humans age, feet lose their cushioning, which makes them more susceptible to joint and bone damage, cuts, infections, and other painful foot problems. Skin and nails also begin to deteriorate, becoming dry and brittle.

### Minor foot problems

Minor foot impairments such as bunions, hammer toes, and nail ailments may be very painful, but in most cases—when cared for properly—they are not debilitating. However, if foot problems are ignored, they may cause other issues for residents and perhaps even affect their ability to walk.

Minor foot ailments include the following:

► **Bunions.** A bunion occurs when the joint at the base of the large toe (metatarsophalangeal joint, or MTP) becomes enlarged. The enlargement of the MTP joint happens when the bone or tissue moves out of place, which forces the large toe to bend toward the others. Because the large toe is pushed in the wrong direction, a lump of bone forms on the outside of the affected foot.

When we walk, much of the body's weight is placed on the MTP joint, which causes the joint to stiffen and become sore. If left untreated, a bunion can become irritated and cause serious pain. Bunions can also develop on the outside of the small toe. These bunions are called "bunionettes" or "tailor's bunions."

To help relieve pain caused by a bunion, check residents' footwear. Make sure that the toe area, or toe box, is wide enough.

► **Hammer toes.** A hammer toe occurs when the toe joint buckles, causing the toe to curl under. This often results from wearing shoes that are too small. There are two types of hammer toes: flexible and rigid. A flexible hammer toe is a clenched toe joint that can be straightened by hand. A rigid hammer toe cannot be moved and may cause the resident more pain than a flexible one. Flexible hammer toes may become rigid over time.

► **Corns and calluses.** Corns and calluses are built-up skin that forms because of constant friction against the skin. They are hard or soft. Hard corns are tough bumps that usually form on the tops or outer edges of the toes. Soft corns are generally found between the toes

where sweat and moisture lie. Both types of corns can be painful when touched and should be immediately cared for in diabetic residents to avoid serious infection.

Unlike corns, calluses are not painful and often develop on areas of the foot other than the toes. Normally, calluses are cared for with a pumice stone, which is a lightweight, porous stone used to rub away dead skin. However, always check with the charge nurse before administering such foot care.

► **Ingrown nails and fungal nails.** There are two main nail ailments that cause pain for residents: ingrown nails and fungal nails. Ingrown toenails are very common and occur when the sides of the nail begin to dig, or grow, into the skin on the sides of the nail. Ingrown nails most commonly affect the large toe, but can also occur on fingers. Heredity, constant pressure on toes from shoes or activities, and improperly trimmed nails can cause ingrown nails.

To avoid causing ingrown nails, clip nails straight across and make sure the nail does not go past the length of the toe or finger. Also, stress the importance of properly fitting shoes.

Fungal infection of the nails is called onychomycosis. A fungal infection can strike underneath the nail's surface, sometimes even penetrating the nail. The fungi, similar to mold or mildew, attack the keratin, the protein substance found in nails. When the fungus takes over the nail, the nail becomes thick and yellow-brown in color. If left untreated, the thick nail may be difficult to trim and will cause pain when the resident walks or wears shoes.

It's important that nursing staff members do not ignore nail ailments. Although they may seem cosmetic in nature, nail problems can cause infection, which could be very harmful for residents suffering from diabetes, peripheral vascular disease, or other circulatory disorders.

► **Athlete's foot.** Another fungal infection that strikes residents' feet is athlete's foot. Athlete's foot is a skin disorder that causes irritation—particularly between the toes—such as redness, blistering, peeling, and itching.

Prevent foot pain and fungal infections by helping residents follow these five foot hygiene rules:

1. Wash feet with soap and water.
2. Dry feet thoroughly, getting between toes.
3. Avoid walking barefoot, especially at pools, at the beach, or in showers.
4. Wear lightweight, well-ventilated shoes.
5. Ensure that socks are dry at all times. Change socks at least once per day, or more often if perspiration is heavy.

### Heel pain

There are many red flags that should go up when a resident complains of heel pain. Most heel pain is the result of an abnormal gait—often caused by bunions, pronation (i.e., when the feet roll inward and

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arches flatten), obesity, and other issues that impair one’s ability to walk properly. It is typically treated with orthotic inserts to adjust an abnormal gait, anti-inflammatory medications, supportive shoes, and proper stretching before activities.

The two main ailments associated with heel tenderness are:

- **Heel spurs.** Heel spurs are calcium deposits that form on the heel when too much pressure is placed on the bone and the tissue surrounding it. A heel spur is extra bone that grows on the bottom of the heel and can protrude from the heel bone. This growth may cause serious pain.
- **Plantar fasciitis.** The plantar fascia is the fibrous band of tissue that runs along the bottom of the foot and connects the heel bone to the ball of the foot. This tissue covers important muscles, such as those used to move the toes. Plantar fasciitis refers to swelling of the fibrous tissue (plantar fascia), which occurs when the tissue is strained and tiny tears develop in the tissue that then become inflamed.

**Arthritis**

Arthritis describes the condition that occurs when the cartilage and lining of the body’s joints become inflamed. It can be a debilitating disease. Arthritis often strikes the feet because each foot has 33 joints, all of which are possible targets for the disease. Causes of arthritis vary—some forms are hereditary in nature and others are a result of aging. Arthritis can strike at any age, but people over age 50 are more likely to develop the disease.

Symptoms of arthritis include:

- Swollen joints
- Consistent pain or soreness in one or more joints
- Redness or warmth in a joint
- Limited movement of the joint
- Early morning pain and stiffness of joints

There are more than 100 types of arthritis. The following are three of the forms most commonly associated with older adults:

- **Osteoarthritis** is also called degenerative joint disease. It refers to the natural breakdown of cartilage that happens as people age. Osteoarthritis is the most common form of the disease and is characterized by painful flare-ups that occur at night and in weakened muscles.
- **Rheumatoid arthritis (RA)** is considered one of the most severe forms of arthritis and can be crippling. RA is destructive to its victims because it’s not just one chronic inflammatory disease, but rather a system of diseases that methodically attack the body’s smaller joints. For example, it’s common for a person suffering from RA to experience arthritis pain in the same two fingers in both hands, or the same toes in both feet. Common symptoms of RA include morning stiffness of joints, fatigue, and weight loss. RA can hit its victims hard and fast, which is the opposite of osteoarthritis. Residents usually experience periods of remission during which symptoms stop. In serious cases, joint deformity can occur, causing the person to lose all use of the joint.
- **Gouty arthritis (gout)** is closely connected to a person’s diet. It is caused by a collection of salts from a person’s diet in the joints. A diet heavy in red meat, salty foods, and alcohol—as well as other protein-heavy foods—may cause the onset of gout. It is extremely

**Questions? Comments? Ideas?**

**Contact Associate Editor  
Justin Veiga**

**E-mail [jveiga@hcpro.com](mailto:jveiga@hcpro.com)**

**Phone 781/639-1872, Ext. 3933**

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painful and can even make walking a challenge. This is because the joint in the large toe, which is the most commonly affected joint, bears the most weight when walking, causing excruciating pain.

If left untreated, arthritis can cripple its victims. However, early detection will likely save a person from unnecessary pain and suffering associated with the disease. Early diagnosis is important because damaged cartilage cannot be restored and may cause more injury to bones and further stiffening of the joints. Most treatments of arthritis involve physical therapy, exercise, and medication. However, in severe cases, surgery is used to replace defective joints with artificial ones to alleviate the crippling pain that arthritis can cause.

### Diabetic foot ulcers

Diabetic foot ulcers are commonly found on the bottoms of diabetic residents' feet. They are open sores that can lead to infection.

If left untreated, infected diabetic foot ulcers may require amputation. It's estimated that out of all diabetics who develop foot ulcers, approximately 14%–24% will need to undergo an amputation. For that reason, it's important for CNAs to pay extra attention to the status of diabetic residents' feet. CNAs should check residents' feet for cuts, bruises, blisters, redness, ulcers, or any other lesions that might lead to infection.

Diabetic foot ulcers can be caused by several factors, such as poor circulation, irritation from rubbing within poorly fit shoes, and foot deformity. The length of time a resident has suffered from diabetes also plays a factor in whether he or she develops a foot ulcer. The longer a person has had diabetes, the more likely it is that he or she will develop a foot ulcer.

CNAs should also be aware that high blood glucose levels and vascular disease can slow the healing process as well as increase the chances for infection in residents.

Treat diabetic foot ulcers by practicing the following care measures:

- Do not allow residents to walk barefoot
- Keep residents from putting pressure on the wound by using crutches or a wheelchair, if necessary
- Monitor residents' blood glucose levels, when appropriate
- Suggest residents stop smoking and drinking alcohol

### Nursing care measures

Properly caring for your residents' feet and nails will help alleviate pain and possibly prevent other ailments or infections from occurring.

When administering care, remember the following tips:

- Inspect residents' feet and nails on a regular basis—daily for diabetics. Alert a charge nurse of any problems you discover.
- Wash feet with a mild soap in lukewarm water.
- Dry feet thoroughly, especially between toes.
- Moisturize feet with a hypoallergenic lotion.
- Alert the charge nurse when a resident's nails need to be trimmed.
- Check that pantyhose, stockings, socks, and shoes all fit correctly and are not cutting off the resident's circulation or restricting natural foot or toe movement.
- Suggest walking as a way to keep circulation healthy. ■

Illustration by  
David Harbaugh



*"I'd like you to get reacquainted with the 10 pills you brought in—four of which are M&M's."*

### Editorial Board

HCPPro

Group Publisher: **Emily Sheahan**  
Executive Editor: **Elizabeth Petersen**  
Associate Editor: **Justin Veiga**  
*jveiga@hcpro.com*

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*Mark the correct response.*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. As people age, their nails become \_\_\_\_\_.
  - a. stronger
  - b. dry and brittle
  - c. smoother
  - d. larger
2. Bunions outside of the small toe are known as \_\_\_\_\_.
  - a. "pinkie bumps" or "little ouchies"
  - b. "junior's bunions" or "pinkettes"
  - c. "mini bunions" or "pebble bunions"
  - d. "bunionettes" or "tailor's bunions"
3. Corns, not calluses, are painful.
  - a. True
  - b. False
4. Nail problems can cause infection, which could be very harmful for residents suffering from \_\_\_\_\_.
  - a. diabetes
  - b. peripheral vascular disease
  - c. circulatory disorders
  - d. all of the above
5. Fungal infections, including athlete's foot, can potentially be prevented by making sure residents \_\_\_\_\_.
  - a. avoid walking barefoot, especially at pools, at the beach, or in showers
  - b. wear lightweight, well-ventilated shoes
  - c. both a and b
  - d. none of the above
6. The plantar fascia is \_\_\_\_\_.
  - a. a small bone at the tip of the big toe
  - b. the fibrous band of tissue that runs along the bottom of the foot
  - c. another term for fingernails
  - d. an insect native to Brazil
7. Which form of arthritis is the most destructive, systematically attacking the body's smaller joints?
  - a. Rheumatoid arthritis
  - b. Gout
  - c. Osteoarthritis
  - d. Bursitis
8. Which form of arthritis is closely related to a person's diet?
  - a. Rheumatoid arthritis
  - b. Gout
  - c. Osteoarthritis
  - d. Bursitis
9. If left untreated, diabetic foot ulcers may require amputation.
  - a. True
  - b. False
10. Diabetic foot ulcers can be caused by \_\_\_\_\_.
  - a. poor circulation
  - b. irritation from rubbing within poorly fit shoes
  - c. both a and b
  - d. bee stings