

Pressure Sores (Decubitus Ulcers)

Judith Stevens, M.Ed.

With thanks to Dr. Toni Benton, Jennifer Thorne-Lehman, Araceli Domingo for contributing resource information.

Thanks to Ann Chase Stevens for sharing her experience of having pressure sores and how she, with her networks of support, participated in healing.

Definition

When a person stays in one position for too long a time without moving, the skin can break down and become a wound called a pressure sore. Too much moisture on the skin and friction can also contribute to pressure sores. Other names people call pressure sores are: bed sores and pressure ulcers. The term physicians use for pressure sores is: decubitus ulcers.

A pressure sore happens when areas of the skin or the tissue underneath the tissue are injured from unrelieved pressure. The skin and tissue affected by unrelieved pressure begin dying from too little blood flow to that area and a pressure sore develops. "Tiny blood vessels that normally supply tissue with oxygen and nutrients are squeezed shut and tissue begins to die". (Stevens 2002). Pressure sores often happen on parts of the body where bones are close to the person's skin, for example, on the hips, back of the head, shoulder blades, elbows, tailbone, or heels. Pressure sores, and the treatment they require, can be very painful and make it hard to move. Pressure sores can take weeks to heal. (American Academy of Family Physicians 1996; Bergstrom 1994; Evans 1995; Ivory 1999; Lindsey 2000, Stevens 2002)

There are four different stages of pressure sores, depending on the depth and extent of the damage (Bergstrom 1994; Evans 1995; Lindsey 2000):

- **Stage 1:** the top layers of skin are damaged but the skin is unbroken. The skin may be red but does not turn white when touched. The area remains red after the pressure is removed. People with darker skin color may see skin discoloration. There may also be signs such as warmth, skin hardness or other skin texture changes.
- **Stage 2:** the sore is superficial and may look like an abrasion, blister, or shallow crater.
- **Stage 3:** the skin, tissue and muscle are damaged. The sore looks like a deep crater. Adjacent tissue may or may not be damaged.
- **Stage 4:** there is extensive damage to soft tissue and muscle, bone or supports such as tendons.

Introduction

Evans (1995) described pressure sores as a "...serious and frequent occurrence among immobile and debilitated patients." Lindsey (2000) said that "...up to 80% of individuals with [spinal cord injury] will have a pressure sore during their lifetime, and 30% will have more than one pressure sore."

Anyone who stays in one position for too long a time can get pressure sores. However, some people are at more risk for developing a pressure sore (American Academy of Family Physicians 1996; Bergstrom, 1994; Evans 1995; Ivory 1999; Lindsey, 2000; Stevens 2002):

- People who spend most of their time in bed or in a wheelchair are at risk of lying or sitting in one position for too long and developing pressure sores.

- Lack of feeling in some areas of the body can keep a person from feeling the warning signs (such as tingling or pain) that (s)he has been in one position for too long a time and is in danger of developing a pressure sore.
- A person may not be able to express or respond to the pain they are feeling and, thus, the pressure sore may be undetected.
- People who have bowel and bladder accidents create moisture that can speed skin break down.
- People who wear a cast, support stockings, a brace, or other device may create moisture from sweating and/or experience rubbing that can increase the likelihood of a pressure sore developing and make it more difficult to diagnose.
- People who need to be lifted or transferred from one area to another can experience friction to the skin if they are dragged, which damages the skin. A person's skin can be placed at risk from simple happenings like sliding down from a propped up position, which can shear the skin.
- People who are malnourished have a difficult time healing pressure sores because they do not have the nutrients to keep their skin healthy.
- People who are dehydrated are more at risk of getting pressure sores.
- People who are very overweight are more likely to get pressure sores.
- People who have diseases like diabetes and hardening of the arteries may have a harder time healing pressure sores because the blood flow to the area is limited.
- Older people are more likely to get pressure sores because of skin changes. For example, their skin is less elastic and able to recover from pressure.

Diagnosis

Pressure sores may not progress or heal in order through the stages identified in the Introduction (Bergstrom, 1994). In fact, a pressure sore may be tricky to diagnose. A pressure sore may appear to be at an earlier stage when there is actually much more damage below the skin (Evans, 1995; Nickel 2000).

A professional health care clinician should complete an initial and periodic assessment of the whole person, including the specific pressure sore(s) they might have (Bergstrom, 1994). The health care clinician evaluates the whole person to see what capabilities, resources and strengths (s)he can bring to healing, what barriers to healing may exist, and the extent of the problem(s). This assessment could include (Bergstrom, 1994):

- Learning style and capabilities (for example: How can the person best learn about pressure sores and participate in prevention and treatment?)
- Complete history
- Complete physical examination
- Pressure sore site, stage (1, 2, 3 or 4), size (length, width, depth)
- Any complications from the sore (for example, tunneling to another site, dead tissue, infection)
- Nutrition (for example: Is the person taking in the nutrients needed for healing? Is the person malnourished?)
- Pain (What pain is the person experiencing from the pressure sore or other sources?)
- Current medication(s) and, if more than one, how they interact
- Psychological status (for example: Is the person motivated to heal the pressure sore or discouraged and depressed?)
- Networks of support (for example: What friends, family, community members and paid staff will support the person in their healing?)

Prevention and Treatment

The good news is that "95% of all pressure sores are preventable. The key to preventing a pressure sore is maintaining healthy skin." (Lindsey, 2000).

There are many ways to keep skin healthy and prevent pressure sores (American Academy of Family Physicians 1996; Evans 1995; Lindsey, 2000; Nickel 2000; Stevens 2002):

- Educate the person about pressure sores and how (s)he can help prevent them.
- Follow the individualized instructions in the Individual Service Plan (ISP) /Plan of Care for how frequently the person must be moved – change position often.
- In addition to following ISP instructions, the person should be checked frequently for comfort and safety.
- Use any positioning, turning, weight shifting, and transferring techniques recommended in the ISP and be gentle when doing them to avoid skin damage from friction from dragging.
- Use with adaptive equipment recommended by the ISP (for example: sheepskin, pillows, cushions, wedges, special mattresses).
- Avoid plastic seating materials which can cause excessive sweating.
- Bathe regularly with a mild cleansing agent and use warm, not hot, water.
- Clean skin after urination or bowel movements and follow cleaning and drying by, as recommended in the ISP, lubricants, protective films, dressings, protective padding, moisturizers, and dry clothing.
- Change bedding often keeping it clean, dry and smooth.
- Minimize skin exposure to moisture (urine, perspiration, drainage from existing pressure sores)
- Inspect skin frequently during the day and report skin breakdown problems or concerns immediately to a health care clinician.
- Replace tight or too loose fitting shoes, braces or clothing.
- Use prescribed protective pads under a brace or other device.
- Watch out for buttons, thick seams, zippers or other fasteners that put pressure on the skin.
- Avoid rough surfaces (for example: car or van upholstery).
- Follow the ISP recommended diet (Specialized Eating Program if applicable) with adequate intake of fluids, vitamins, minerals, proteins and calories to support tissue health.
- Drink a lot of water and limit drinks with caffeine (coffee, soda, tea).
- Avoid smoking as it limits oxygen getting to the skin.
- Maintain appropriate activity and range of motion.
- Massage only as directed in the ISP – avoid massage over bony prominences because the friction could create a pressure sore.

Once a pressure sore is diagnosed, treatment can involve many strategies – each person will have an individualized treatment plan that is best for that person and overseen by a health care clinician. Examples of treatment strategies include (American Academy of Family Physicians 1996; Bergstrom 1994; Evans 1995; Ivory 1999; Lindsey 2000; Stevens 2002):

- Involve the person in creating a treatment plan that suits that person's needs, capabilities, and preferences.
- Relieve any pressure or weight that caused the sore to develop – "stay off of the area" (Lindsey 2000) where the pressure sore is and use special accommodations.
- Clean the sore.
- Remove dead tissue (physicians call this "debridement" [Bergstrom 1994]), skin or fluid draining from the wound (this can hurt and sometimes the person may need to take a pain reliever before it's done – sometimes tissue has to be removed through surgery for stage 3 and 4 pressure sores).
- Cover the sore with a moist or special dressing that promotes healing and will not hurt when it is removed.
- Be sure the person is getting a diet that will help her/him heal.

- Practice procedures such as hand washing to prevent spreading infection.
- Keep physically active to keep the blood flowing.
- Frequently reassess how the pressure sore is responding to treatment.

How can the person know when the pressure sore is healing? "As a pressure sore heals, it will slowly get smaller. Less fluid will drain from it. New, healthy tissue starts growing at the bottom of the sore. This new tissue is light red or pink and looks lumpy and shiny. It may take 2 to 4 weeks of treatment before you see these signs of healing" (American Academy of Family Physicians 1996).

Emergency Situations – What can go wrong?

Without proper prevention and treatment, a pressure can become worse (going to another stage) and even become infected. Infections can lead to amputation and even death if the infection becomes systemic. Ivory (1999) says that "Sepsis – the general spread of bacteria throughout the body – is a further possibility, paving the way for potentially fatal complications."

The signs of a pressure sore becoming infected include (Ivory 1999; Lindsey 2000):

- Fever
- More warmth around the wound
- Thick pus (green or yellow) from the wound
- The edge of the sore becomes red
- A bad odor
- Pain

Signs that the infection might have spread include (American Academy of Family Physicians 1996):

- Fever
- Chills
- Confusion
- Rapid heartbeat
- Weakness

Any sign of infection should be reported to a health care clinician immediately so that a plan to treat the infection can be designed and put in place.

Conclusion

When a person remains in one position for too long a time without moving, the pressure on the skin can cause the skin to break down and become a wound called a pressure sore. Too much moisture on the skin and friction can also contribute to pressure sores. Pressure sores are categorized into 4 stages with Stage 1 being the least severe. Certain people (such as people who spend a lot of time in bed or in a wheelchair) are more at risk for pressure sores. The great majority of pressure sores (95%) can be prevented through a variety of techniques such as education, diet, movement, hygiene and individualized planning. Quick treatment can be effective and involves cleaning and treating the wound plus good health practices such as nutrition. Without effective treatment, the wound can become infected and spread to the entire body endangering the person's life. (American Academy of Family Physicians 1996; Bergstrom 1994; Evans 1995; Ivory 1999; Lindsey 2000, Stevens 2002)

Direct Support Professionals play a vital role to educate others about, prevent and help treat pressure sores. Direct Support Professionals can help by:

- Learning about the prevention and treatment of pressure sores
- Teaching the person about the prevention and treatment of pressure sores
- Educating the person about and encouraging wellness practices such as exercise, weight shifting, proper diet, cleanliness, as well as avoiding alcohol, drugs and smoking
- Gathering base-line information about the person including the normal texture and color of their skin and how the person communicates pain
- Visually checking, or teaching the person how to check, the person's skin for health and signs of pressure sores frequently
- Learning and following the ISP for positioning, transferring, and accommodating the individual – including using assistive devices
- Noticing if the ISP is working and notifying the team if the plan is not working for the individual
- Checking the person frequently for comfort and safety
- Making sure that bath water is warm, not hot
- Keeping clothing and bedding dry and clean
- Checking clothing to make sure fasteners, seams, and fit is comfortable and will not cause pressure sores
- When assisting a person to transfer from one place to another, move rather than drag, the person
- Learn and immediately report any signs of infection

References

American Academy of Family Physicians (October 1996). Coping with pressure sores. *American Family Physician*. Vol. 54 (5).

American Academy of Family Physicians (2002). Pressure sores.

Bergstrom, N., Bennett, M.A., Carlson, C.E., et. al. (December 1994). Pressure ulcer treatment. *Clinical Practice Guideline: Quick Reference Guide for Clinicians*, No. 15. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research. AHCPR Pub. No. 95-0653.

Evans, J. M., Andrews, K. L., Chutka, D. S., Fleming, K. C. and Garness, S. L. (August 1995). Pressure ulcers: Prevention and management – Symposium on geriatrics – Part II. *Mayo Clin Proc.* 70: 789-799.

Ivory, P. (February 1999). The lurking dangers of pressure sores. *QUEST*.

Lindsey, L., Klebine, P. and Oberheu, A.M. (December 2000). Prevention of pressure sores through skin care: Spinal cord injury – InfoSheet #13. *Spinal Cord Injury Information Network*.

Mayo Clinic (June, 2001). Preventing bedsores.

Nickel, R. E. and Desch, L. W. (2000). *The physician's guide to caring for children with disabilities and chronic conditions*. Baltimore, MD: Paul H. Brookes Publishing Co.

Stevens, J., Thorne-Lehman, J. and Witemeyer, S. (2001). *Pre-Service and Orientation Health Information*. Albuquerque, NM: Continuum of Care, University of New Mexico.

Judith Stevens, M.Ed.