

## What Are Pressure Ulcers?

A pressure ulcer is an injury caused by constant pressure to the skin and muscle. Pressure ulcers are also called bedsores. Severity ranges from mild (slight change in skin color) to deep (down to muscle and bone). When a person cannot change position, pressure closes tiny blood vessels. Blood vessels nourish the skin and supply oxygen. When skin lacks nutrients and oxygen for too long, the tissue dies and a pressure ulcer forms. Red or dark spots that fade after pressure is removed are normal, and not a pressure ulcer. Other things cause pressure ulcers too. If a person slides in bed or in a chair, blood vessels can stretch or bend and cause pressure ulcers. Even rubbing on the skin may cause minor pressure ulcers.

## Preventing Pressure Ulcers

### Purpose of This Booklet

Pressure ulcers are problems that can lead to pain, a longer stay in the hospital or nursing home, and slower healing from health problems. Anyone who must stay in bed, chair, or wheelchair because of illness or injury can get pressure ulcers. Most pressure ulcers can be prevented. When pressure ulcers do form, they do not have to get worse. This booklet describes where pressure ulcers form and how to tell if you are at risk of getting a pressure ulcer. It lists steps to take to prevent them or keep them from getting worse. It also suggests how to work with your health care team.

### Where Pressure Ulcers Form

Pressure ulcers form where skin and tissue are squeezed between the bone and an outside surface. Bony parts of the body may press against other body parts, a mattress, or a chair. In people who must stay in bed, most pressure ulcers form on the back below the waist (sacrum), the hipbone (trochanter), and on the heels. For people in chairs or wheelchairs, the spot where pressure ulcers form depends on the sitting position. Pressure ulcers can also form on the knees, ankles, shoulders, back of the head, and spine. People in bed who cannot move, may get pressure ulcers in as little as 1-2 hours. People who sit in chairs and cannot move also get pressure ulcers.

### Your Risk

Being unable to move from a bed or chair, loss of bowel or bladder control, poor nutrition, and lowered mental awareness are “risk factors” that increase the chance of getting pressure ulcers. Your risk depends on the number and type of risk factors you have.

1. **Bed or chair bound.** If you must stay *in a* bed, chair, or wheelchair, the risk of getting a pressure ulcer is **high**.
2. **Unable to move.** If you cannot change positions without help, you are at high risk. People who are paralyzed, or have a hip fracture, or who are in a coma are at high risk. Risks of getting pressure ulcers are lower when people can move by themselves.
3. **Loss of bowel or bladder control.** You have a higher risk if you cannot keep urine, stool, or sweat off your skin. Dampness may damage the skin.
4. **Poor Nutrition.** If you cannot eat healthy foods, your skin may not be well nourished. Pressure ulcers are more likely to form when skin is not healthy.

5. **Lowered mental awareness.** When mental awareness is lowered, a person cannot act to prevent pressure ulcers. Mental awareness can be affected by health problems, medicine, or anesthesia. You can lower your risk. Following the steps in this booklet can help you and your health care provider to reduce your risk of pressure ulcers.

### Key Steps

The following steps for prevention are based on research and medical judgment. These steps can also keep pressure ulcers from getting worse. Some steps are for all people; others are for special conditions. It may help to talk to a nurse or doctor about which steps are right for you.

#### **Take care of your skin**

Look at your skin at least once a day. Point out red or dark areas you see after you have changed positions. This can be done by yourself or your caregiver. A mirror can help when looking at hard-to-see areas. Pay special attention to bony points (shown on page 2). The goal is to find and correct problems before pressure ulcers form.

Your skin should be cleaned as soon as it is soiled with urine or stool. A soft cloth or sponge should be used to be gentle to skin. Take a bath only when needed for comfort or cleanliness. Too much soap and hot water can cause damage or dry skin. If a daily bath or shower is needed, steps should be taken to reduce irritation and prevent dry skin. When bathing or showering, use warm (not hot) water and a mild soap.

To prevent dry skin:

- Use creams or oils on your skin.
- Avoid cold or dry air.

Protect skin from urine or stool, sweat, or wound drainage. A urine leak may be treated.

When moisture cannot be controlled:

- Use pads or briefs that absorb urine and are quick drying to keep moisture away from skin.
- Apply cream or ointment to protect skin from urine, stool, or wound drainage.

#### **Protect your skin from injury**

Do not massage skin over bony parts of the body. Massage may squeeze and damage the tissue under the skin and make you more likely to get pressure ulcers. Change position or have your care giver move your body position to limit pressure over bony parts. If you are in bed, your position should be changed at least every 2 hours. If you are in a chair, your position should be changed at least every hour. (If you are able to shift your own weight, you should do so every 15 minutes while sitting.) Make sure you are lifted, rather than dragged, during position changes to reduce friction (rubbing). Friction can rub off the top layer of skin and damage blood vessels under the skin. Holding on to a trapeze, hanging from an overhead frame, (see cover) would allow you to help. If nurses or others are helping to lift you, bed sheets or lifters can be used. A thin layer of cornstarch can be used on the skin to reduce damage from friction. Do not use donut-shape (ring) cushions. Donut-shape cushions can increase your risk of getting a pressure ulcer by cutting off blood flow and causing tissue to swell.

**If you are confined to bed:**

A special mattress may help to prevent pressure ulcers. Most are made of foam, air, gel, or water. The cost and use of these products vary greatly. Talk to your health care provider about the best mattress for you.

(Add figure/ drawing for visual) Keep the head of the bed as low as possible. If the head must be raised, keep it as low as possible (see figure) and for as short a time as possible. Check with your doctor for any restrictions. When the head of the bed is raised more than 30 degrees, your skin may slide down the bed, damaging skin and tiny blood vessels.

Pillows or wedges should be used to keep knees or ankles from touching each other. Avoid lying directly on your hipbone (trochanter) when resting on your side. A position that spreads weight and pressure evenly should be chosen- pillows may help (see drawing on next page). If you cannot move, your heels must be raised off the bed. Place pillows under your legs from midcalf to ankle. Never place pillows behind the knee.

**If you are in a chair or wheelchair:**

Foam, gel, or air cushions should be used to relieve pressure. Ask your health care provider which is best for you. Do not use donut-shape cushions. They reduce blood flow and cause tissue to swell, which can increase your risk of getting a pressure ulcer. Move and shift your body often when sitting. Sitting in one position for too long can cause pressure ulcers. Good posture and comfort are important.

**Eat well**

Eat healthy foods. Protein and calories are very important. Healthy skin is less likely to be damaged. If you are unable to eat a normal diet, talk to your health care provider about food supplements. Ask to speak to a dietitian (a specialist).

**Improve your ability to move**

A physical therapy program can help some people regain movement and independence. (Figure) (Adapted from J. Maklebust. Pressure ulcer update. RN, December 1991, pages 53-63. Original illustration by Jack Tandy. Used with permission.)

<b>Be Active in Your Care</b>
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This booklet tells how to reduce the risk of getting pressure ulcers. Not all steps apply to every person. The best way to prevent pressure ulcers is to consider what you want, based on your condition.

Be sure you:

- Ask questions.
- Explain your needs, wants, and concerns.
- Understand how and why things are being done.
- Know what is best for you. Talk about what you can do to prevent pressure ulcers- at home, in the hospital, or in the nursing home.

**You can prevent most pressure ulcers. The extra effort can mean better health.**

## Care Risk Factors

Risk Factor	Preventative Actions
1. Confinement to a bed or chair	<ul style="list-style-type: none"> <li>• Look at skin at least once a day.</li> <li>• Bathe only when needed for comfort or cleanliness.</li> <li>• Prevent dry skin.</li> <li>• For a person in bed:               <ol style="list-style-type: none"> <li>1. Change position at least every 2 hours.</li> <li>2. Use a special mattress that contains foam, air, gel, or water.</li> <li>3. Raise the head of bed as little and for as short as a time as possible.</li> </ol> </li> <li>• For a person in a chair:               <ol style="list-style-type: none"> <li>1. Change position every hour or as often as possible.</li> <li>2. Use foam, gel, or air cushion to relieve pressure.</li> </ol> </li> <li>• Reduce friction by:               <ol style="list-style-type: none"> <li>1. Lifting, rather than dragging, when repositioning.</li> <li>2. Using cornstarch on skin.</li> </ol> </li> <li>• Do not use donut-shape cushions.</li> <li>• Join a physical therapy program.</li> </ul>
2. If You are Unable to Move	<ul style="list-style-type: none"> <li>• While seated, people should be repositioned every hour, if unable to do so themselves.</li> <li>• Change position at least every 15 minutes if you are able to shift your own weight.</li> <li>• Use pillows or wedges to keep knees or ankles from touching each other.</li> <li>• When in bed, place pillow under legs from midcalf to ankle to keep heels off the bed.</li> </ul>
3. Loss of Bowel or Bladder Control	<ul style="list-style-type: none"> <li>• Clean skin as soon as soiled with urine or stool.</li> <li>• Assess and treat urine leaks.</li> <li>• If moisture cannot be controlled:               <ol style="list-style-type: none"> <li>1. Use absorbent pads and/or briefs with a quick-drying surface.</li> <li>2. Protect skin with a cream or ointment.</li> </ol> </li> </ul>
4. Poor Nutrition	<ul style="list-style-type: none"> <li>• Eat a balanced diet.</li> <li>• If a normal diet is not possible, talk to health care provider about food supplements</li> </ul>
5. Lowered Mental Awareness	<ul style="list-style-type: none"> <li>• Choose preventative actions for the person with lowered mental awareness. For example, if the person is chair-bound, refer to the specific preventative actions outlined in Risk Factor 1.</li> </ul>

### Additional Resources

National and international groups can provide many resources for people concerned with pressure ulcers.

#### **Wound Ostomy Continence Nurses Association**

Will refer patients to local Enterostomal Therapy Nurses

1550 S. Coast Highway

Suite 201

Laguna Beach, CA 92651

888-224-WOCN

Www.wocn.org

#### **National Pressure Ulcer Advisory Panel**

Offers information for care givers, families providing care at home and others

11250 Roger Bacon Drive, Suite 8

Reston, VA 20190-5202

www.npuap.org

## Summary

The information in this booklet was taken from the *Clinical Practice Guideline on Pressure Ulcers in Adults: Prediction and Prevention*. The guideline was developed by an expert panel of doctors, nurses, other health care providers, and a consumer representative, and it was sponsored by the Agency for Health Care Policy and Research (now the Agency for Healthcare, Research, and Quality—[www.ahrq.org](http://www.ahrq.org).)