

Skin damage

A plain-English guide for you and your family

WHAT IS HAPPENING

Your skin stays healthy when pressure gets relieved regularly — like taking weight off your elbow after leaning on a table. When someone cannot move on their own (bedridden, paralyzed, or too weak), cannot feel pain to know they need to shift (nerve damage, coma), has wet skin from sweat or urine (makes skin weaker), or eats poorly (not enough protein to repair tissue), pressure on bony spots like the tailbone, heels, or hips squashes the tiny blood vessels under the skin. With the blood flow blocked, oxygen and food cannot reach that patch of skin, so it starts to die. At first you see red skin that stays red even when you press on it — that is the alarm that blood is trapped and not flowing. If pressure continues, a shallow sore forms (some skin peels away), then a deep sore (all the skin is gone), and finally muscle or even bone shows through. Every stage happens because the one before it was not stopped: pressure blocks blood, blocked blood kills skin, dead skin opens a hole, and the hole spreads deeper if pressure keeps going. The good news is that relieving pressure early — turning the person every two hours, using special mattresses, keeping skin dry and clean, and making sure they eat enough protein — stops the whole chain before it starts.

What you might feel

- Red or purple patches that do not turn white when you press them (stage 1 pressure injury)
- Shallow open sore or blister with pink or red base (stage 2 pressure injury)
- Deep crater or hole in the skin showing yellow fat underneath (stage 3 pressure injury)
- Very deep wound exposing muscle, tendon, or bone (stage 4 pressure injury)
- Dark purple or maroon skin, or blood-filled blister (deep tissue injury)
- Wound covered by thick yellow, tan, or black dead tissue so you cannot see the bottom (unstageable pressure injury)
- Pain, tenderness, or warmth over a bony area
- Skin feels softer, firmer, or warmer than surrounding tissue

Call the doctor right away if...

- Fever, foul-smelling drainage, or spreading redness around the wound (signs of infection that can lead to sepsis)
- Bone visible in the wound or suspected bone infection (osteomyelitis requires weeks of intravenous antibiotics)
- Rapid expansion of a pressure injury despite treatment (suggests continued unrelieved pressure or serious underlying disease)
- Black or very dark brown dry dead tissue covering a large area (eschar may hide deep infection underneath)

What the care team will do

- Reposition the patient every 2 hours around the clock using a turn schedule and document each turn with time and position
- Place patient on a pressure-redistribution mattress such as low-air-loss or alternating-pressure overlay within 1 hour of admission
- Elevate both heels completely off the bed surface using pillow under calves so knee is slightly bent at 5 to 10 degrees
- Inspect all skin over bony areas every 8 hours during bath and repositioning looking for non-blanchable redness and document findings with Braden Scale score
- Clean skin gently with pH-balanced no-rinse cleanser after each incontinence episode and apply moisture-barrier cream containing dimethicone or zinc oxide to buttocks and groin
- Give high-protein oral supplement with 30 grams protein plus 500 milligrams vitamin C and 15 milligrams zinc twice daily with meals
- Cover Stage 2 or higher wounds with hydrocolloid dressing for shallow wounds or foam dressing for deeper wounds changing every 3 to 7 days or when saturated
- Consult wound care specialist or provider for sharp debridement if black eschar or yellow slough covers more than 25 percent of wound bed

Medicines you may be given — and why

Silver sulfadiazine (Silvadene) cream 1%

Silver ions damage the cell walls and DNA of bacteria (the germs that cause infection), which kills them or stops them from multiplying in the wound.

Collagenase (Santyl) ointment

Collagenase is an enzyme (a protein that speeds up a chemical reaction) that breaks down collagen, the main protein in dead tissue, into small pieces the body can clear away.

Hydrocolloid dressing (e.g. DuoDERM, Tegaderm Hydrocolloid)

The dressing is a sticky, gel-forming pad that absorbs fluid from the wound and keeps the wound bed moist, which helps skin cells migrate and multiply faster to close the gap.

Foam dressing (e.g. Mepilex, Allevyn)

The foam is a spongy pad that soaks up wound fluid (exudate) while keeping the wound bed moist, cushions the sore from pressure, and lets oxygen reach the tissue to help repair.

Zinc (oral supplement, typically 15-50 mg elemental zinc per day)

Zinc is a mineral that cells need to multiply and build collagen (the scaffold protein in new skin), and it also helps enzymes that fight infection and repair tissue work properly.

Vitamin C (ascorbic acid, oral supplement, typically 500-1000 mg per day in divided doses)

Vitamin C is a helper molecule (cofactor) that enzymes need to build collagen, the main protein in skin and connective tissue. Without enough vitamin C, collagen is weak and wounds do not heal.

Where this information comes from

- National Pressure Injury Advisory Panel (NPIAP) 2016 staging system
- Agency for Healthcare Research and Quality (AHRQ) pressure ulcer prevention guideline
- Wound Ostomy and Continence Nurses Society (WOCN) 2016 guideline
- Cochrane systematic reviews on pressure ulcer prevention and treatment

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