

Preventing Moisture-Associated Skin Damage

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Our skin, the largest organ and greatest defender of our body, averages seven pounds and twenty square feet (Zulkowski, 2017). It protects us from disease while still hosting billions of bacteria, viruses, and fungi. Our skin regulates moisture and temperature, tells us when we've pressed too hard on something or grabbed something hot. While functional and strong, skin is also soft and beautiful, letting us enjoy our world through touch, and giving us a covering that is easy to look at (Zulkowski, 2017).

The way we age, including our skin, varies by individual and is influenced by genetics and lifestyle. Everyone will experience skin thinning, loss of elasticity, and wrinkles, but how we treat our body plays a significant role. Even older skin is remarkable in how well it can heal if it has what it needs. We can make a significant difference in the health and appearance of our skin by avoiding excess sun exposure, not smoking, getting adequate sleep, eating a healthy diet that includes protein (Banharak et al, 2021), managing stress, and providing proper care for illness and injuries (Wong & Chew, 2021).

Up to 15 feet of blood vessels feed one square inch of skin (Zulkowski, 2017). Without proper blood flow and nutrients, skin can fail like any other organ. Once skin breaks down, it may never regain its health, so prevention is key (Zulkowski, 2017). For older adults, direct caregivers play a critical role in prevention. Caregivers know their person and can identify subtle changes to address common skin issues before they become a problem.

Skin that is rarely exposed to air or daylight

Many people struggle with too much moisture in areas that rarely receive air or light, such as under the breasts, skin folds, buttocks, peri-area, and between the toes. The same way that a shady, damp forest floor grows mushrooms, these moist areas are a fertile place for yeast and fungi (see Figure 1). If this skin is never allowed to air out and dry, it becomes weak. Either by friction or infection, the skin will break down and cause a cycle of itching, pain, and worsening open areas, that is hard to stop (Zulkowski, 2017).



Figure 1 Candida rash (Intertrigo (Rash in Body Folds): Causes, Images, and More — DermNet, n.d.)

Moisture from sweat, edema, or wounds are bad enough, but many residents are also incontinent, which can add to the problem. The outer layer of the skin has a protective, acidic crust called the acid mantle with a pH of about 4.5-5.5 (similar to something between a tomato and milk) (Figure 2). Urine made by healthy kidneys has a pH between 4.5 and 6.5, which is similar to the pH of normal skin.

However, residents who are dehydrated or have a urinary tract infection may have urine that contains ammonia. The alkaline pH of ammonia can break down the acid layer and lead to irritated and inflamed skin (Figure 2). The condition can be made worse if exposed to stool (especially liquid stool), which has enzymes that

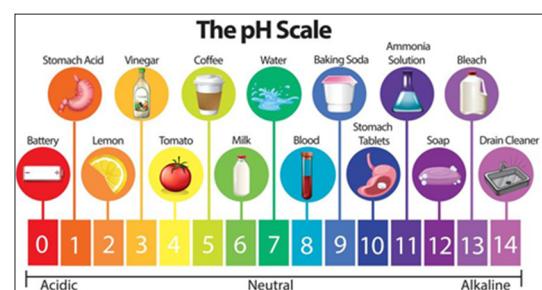


Figure 2: pH Scale (Cole, 2019)

further eat this inflamed skin (Zulkowski, 2017). Care must also be taken with the soap used to clean the skin. Plain soap has a pH of 12 (Figure 2) and is more alkaline than ammonia. If plain soap causes dryness or tightness to the skin, then the skin does not contain enough proteins or fats to adjust for the alkaline pH (Hawkins et al, 2021). It is a sign the soap is too harsh for that skin.



Figure 3. Dermatitis from urine (Intertrigo (Rash in Body Folds): Causes, Images, and More — DermNet, n.d.)

A skilled and proactive caregiver is the first line of defense against skin breakdown. Best practice includes examining high-risk areas cut off from light or air. Notice any color or temperature changes, moisture or dryness, and open or painful/itchy areas. Think about the products or equipment that touch the skin. Is anything causing a rash, rubbing, or applying pressure?

The goal is to keep skin clean, dry, and protected. Use a gentle pH-friendly cleanser to clean these areas every day and whenever the resident is incontinent (Flanagan, 2020). Next, either gently pat the area dry or let it air dry. Finally, use a good barrier cream (Flanagan, 2020).

For any area where the skin rubs and will not stay dry, such as under the breasts and belly, ask the ElderPlace nurse for a special cloth to place in the skin folds. Also, report to the nurse any skin concerns as soon as possible.

Great care with prevention may seem time-consuming or unimportant, but in the end, keeping skin healthy takes less time than nursing skin back to health. Great skin care is an investment that gives to both the resident and the caregiver. Both benefit when there is no wound care, no pain from wounds, and no behaviors or sleeplessness from the pain.

Please contact your nurse with questions or concerns about skin care.

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