

BURNS

Burns are injuries to tissue that result from heat, electricity, radiation, or chemicals.

Thermal and chemical burns usually occur because heat or chemicals contact part of the body's surface, most often the skin. Thus, the skin usually sustains most of the damage. However, severe surface burns may penetrate to deeper body structures, such as fat, muscle, or bone.

When tissues are burned, fluid leaks into them from the blood vessels, causing swelling and pain. In addition, damaged skin and other body surfaces are easily infected because they can no longer act as a barrier against invading organisms.

TYPES

The depth of injury from a burn is described as first, second, or third degree. First-degree burns are the most shallow (superficial). They affect only the top layer of skin. Second-degree burns extend into the middle layer of skin. Third-degree burns involve all three layers of skin (epidermis, dermis, and fat layer), usually destroying the sweat glands, hair follicles, and nerve endings as well.

SYMPTOMS AND DIAGNOSIS

First-degree burns are red, moist, swollen, and painful. The burned area whitens (blanches) when lightly touched but does not develop blisters. Second-degree burns are red, swollen, and painful, and they develop blisters that may ooze a clear fluid. The burned area may blanch when touched. Third-degree burns usually are not painful because the nerves have been destroyed. The skin becomes leathery and may be white, black, or bright red. The burned area does not blanch when touched, and hairs can easily be pulled from their roots without pain. No blisters develop. The appearance and symptoms of deep burns can worsen during the first hours or even days after the burn.

COMPLICATIONS

Most minor burns are superficial and do not cause complications. However, deep second-degree and third-degree burns swell and take more time to heal. In addition, deeper burns can cause scar tissue to form. This scar tissue shrinks (contracts) as it heals. If the scarring occurs at a joint, the resulting contracture may restrict movement.

Severe burns can cause serious complications due to extensive fluid loss and tissue damage. Complications from severe burns may take hours to develop.

The longer the complication is present, the more severe are the problems it tends to cause. Young children and older adults tend to be more seriously affected by complications than other age groups.



Avoid direct exposure to the sun and open fires

TREATMENT

Before burns are treated, the burning agent must be stopped from inflicting further damage. For example, fires are extinguished. Clothing—especially any that is smoldering (such as melted synthetic shirts), covered with hot tar, or soaked with chemicals—is immediately removed. For first degree burns apply cool water to the injured area, for second degree burns seek medical attention (don't open the blisters), and third degree burns are medical emergencies (call 911).