

## Burn information

# Burn wound depth

This Health Fact is designed to provide patients, parents and care providers with information about burn wound depth to increase understanding of their child's care and treatment.

The skin is the largest organ in the body. It is responsible for many functions that can affect the whole body and your child's response to this injury. The skin is very thin in the very young and is mostly less than 5mm thick.

### How deep is the burn?

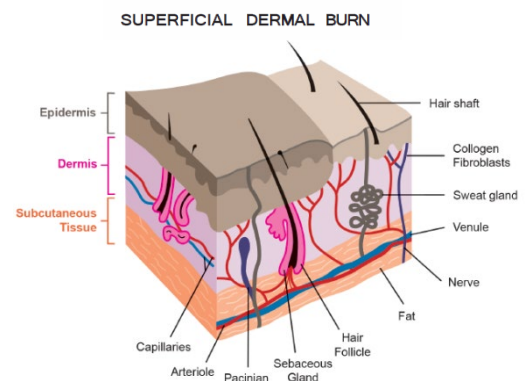
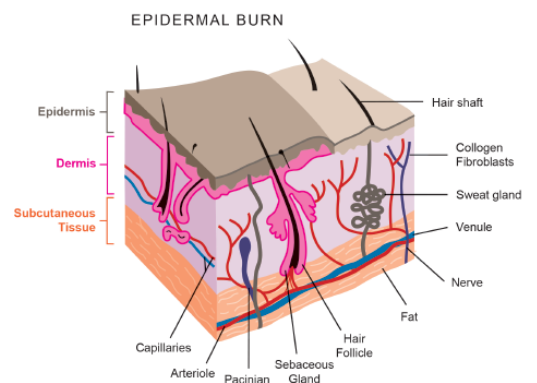
The difference between the depths of burn is often only a few tenths of a millimeter. Burns often have various depths within one injury. It is therefore very difficult to accurately assess the burn's depth in the first few days. This is why it is difficult to accurately tell you whether your child will need surgery (grafting or skin cells) or when you will be going home.

### Superficial (epidermal) burns

Superficial burns used to be referred to as "first degree". These injuries are when the epidermis (top layer) of the skin has been burnt and there is no skin loss. An example of a superficial burn is sunburn. Superficial burns are often red, very painful and usually heal within a week with no long term scarring.

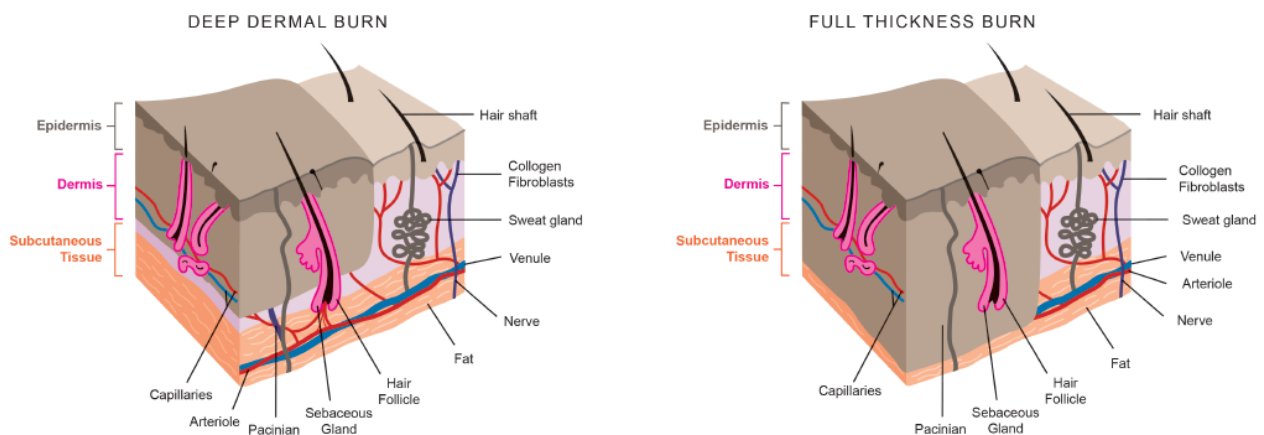
### Partial thickness (dermal) burns

Partial thickness burns used to be referred to as "second degree". These injuries are when the epidermis has been destroyed and the second layer of skin (dermis) has been damaged. These burn injuries take over two weeks to heal and have increased scarring risk. Partial thickness burns can vary in depth from superficial to deep.



Superficial partial thickness burns occur when the epidermis and the superficial layer of the dermis is destroyed. These burns are pink, moist, blistered, have skin loss and are painful.

Deep partial thickness burns occur when the epidermis and most of the dermis is destroyed. These burns can blister and may appear a “mottled” pink or pale in colour, the wound bed is dry, and the appearance can change to be paler over a few days. These burns are less painful as the nerves have been damaged, and usually take more than three weeks to heal. Your child’s burn team may recommend an operation to remove the burnt skin to assist healing and reduce long term scarring.



## Full thickness burns

Full thickness burns used to be referred to as “third degree”. These injuries are when all the epidermis and all the dermis is destroyed. These injuries can sometimes extend into the fat, muscle or bone.

Full thickness burns can immediately appear mottled or red; changing to a dry, pale or brown appearance over the first few days. Other times full thickness burns may appear pale, dry and sometimes translucent with visible blood vessels that will not change colour when pressed, due to the deep destruction of blood vessels.

Full thickness burns are not painful as the nerves have been destroyed; they are not sensitive to pressure and will not heal within three weeks. The burn team may recommend an operation to remove the skin that is not alive and apply a skin graft or substitute in order to heal the wound faster and reduce scarring.

## Burn depth and burn care

The care we provide is aimed at healing your child’s burn wounds quickly, thereby giving them the best possible scar. For more information on dressings, skin grafts and donor

sites, scarring and other important aspects of your child's care, please ask your child's burns team.

Nutrition and activity impacts wound healing. Any concerns will be discussed with you.

Keep the dressings clean, dry and on. The frequency of dressing changes will be determined by your child's burn team. When the dressing needs to be changed, the wound can be very sensitive and painful due to the open nerve endings. Do not remove dressings without discussion with the burns team.

Please read the health fact handouts on burns for further advice.

### What do I need to look for?

Infection in burns patients can be very serious and must be treated urgently. Observe your child and the dressing site frequently.

Phone PCH Ward 1B immediately on 6456 3630 if any of the following occur:

- If your child's temperature is below 35.5°C or above 38°C
- If they develop a rash or increased pain, redness or swelling at the wound site
- Changes in your child's behaviour such as poor appetite, sleep disturbances, lethargy (quiet or lack of energy or flat mood)
- Excessive ooze (fluid from wound) however a small amount is often expected
- Offensive odour.



Government of **Western Australia**  
Child and Adolescent Health Service



**This document can be made available in alternative formats on request for a person with a disability.**

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