

## Module 4 Burns and Scalds

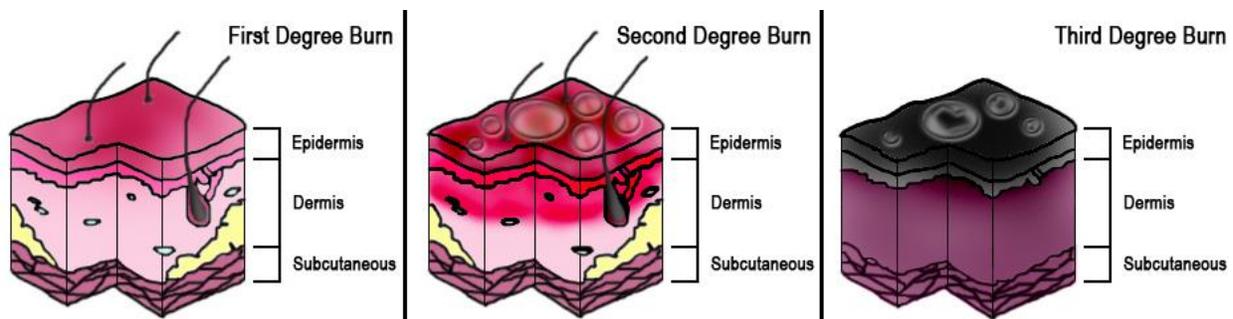
### Unit 1: Classifications of Burns

Burn injuries can be classified by their **type** and **depth**. The size of burns is expressed as a percentage of total body area.

Types of burn

- Scald – caused by a hot liquid
- Friction – caused by rough surfaces, e.g: carpet
- Radiation/sunburn
- Electrical – will have an entry burn and an exit burn
- Chemical
- Dry – touching hot objects, e.g: a cooker.

### Depths of burn



**Superficial (1st degree)** – this is when only the top layer of skin has been damaged. These are the most minor burns. Often the only sign is a reddening of the skin. Minor sunburn falls into this category of burns.

**Partial thickness (2nd degree)** – these burns cause blisters in the skin due to the damaged tissue releasing fluid.

**Full thickness (3rd degree)** – this is the most serious type of burn. In a full thickness burn, every layer of the skin has been affected and the underlying bone, muscle or fat may have also been damaged.

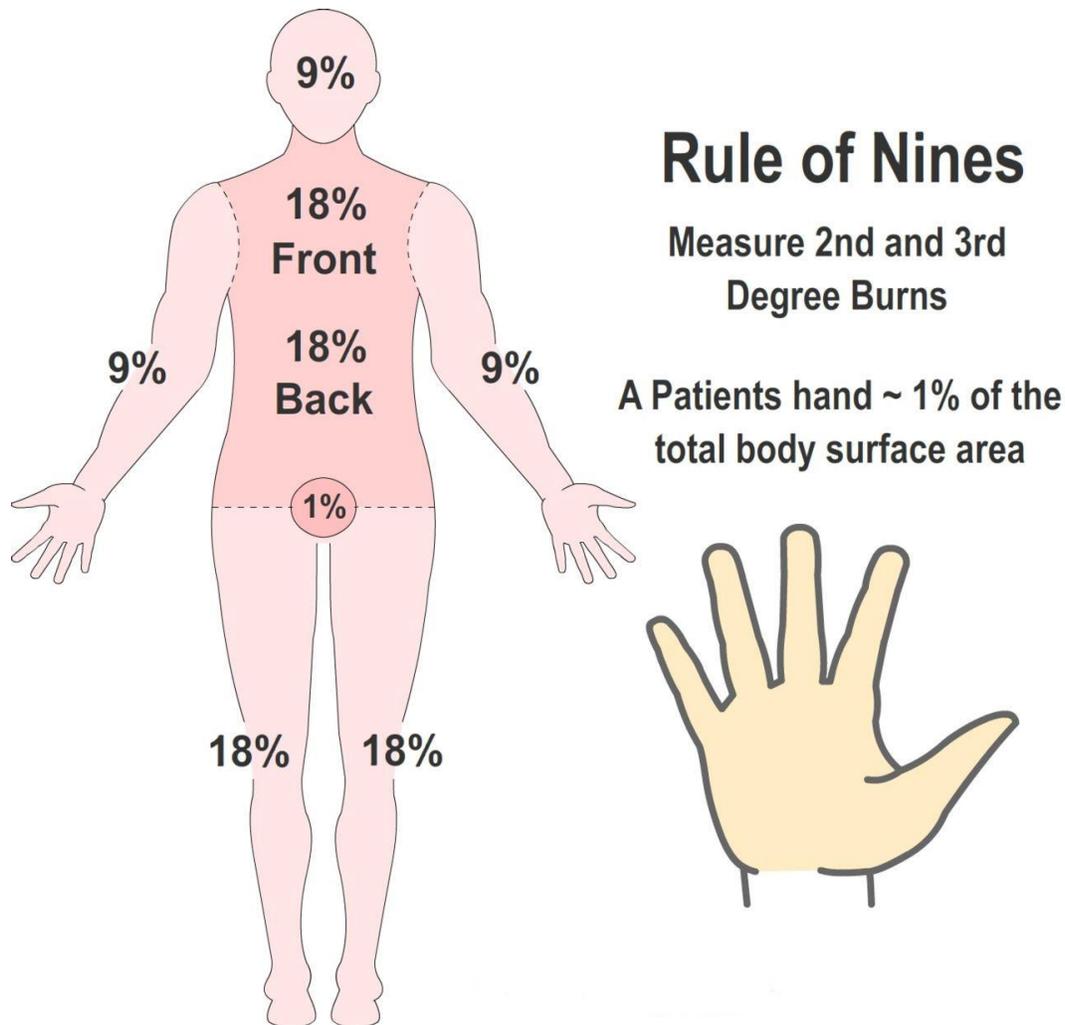
### Assessment of burn size

Correctly estimating the size of the burn is important. Burn area is measured as a percentage of total body surface area.

There are two techniques which can be used:

- Palm of hand: roughly speaking, the palm of the victim's hand will be approximately 1% of their body surface area
- Rule of nines (see image)

Burns in the region of 10% of body area are serious and may produce severe shock.



## Unit 2: Treatment of Burns

Minor burns are incredibly common household injuries. Our homes are full of items which can cause burns – hair straighteners, kettles, toasters, electric heaters. The list is endless. Generally, burns are caused by touching something hot which damages the skin. However, they can also be caused by radiation (for example, from the sun), chemicals, electricity, and friction. As well heat, burns can also be caused by the extreme cold – these are known as freeze or ice burns.

### First aid for a minor burn



**Step 1:** Immediately run the burn under cold running water for a **minimum** of 10 minutes. If running cold water is not available, then improvise! You can use other non-toxic liquids such as drinks. Your aim is to cool the burn.

**Step 2:** Expose the affected area and if possible, remove anything that could be constricted (watches, jewelry etc.). Do not remove clothing sticking to the burn, instead cool through the clothing.

**Step 3:** After cooling the burn, cover with a non-fluffy dressing/covering. If you have access to a first aid kit, use a non-fluffy sterile dressing. If not then improvise with whatever is available (plastic bag, kitchen clingfilm, tea towel etc.). Be careful not to constrict the burn!

**Step 4:** Seek medical advice for anything except the most minor of burns. Call an ambulance if serious or if the burn is near the face/neck.

## What not to do

- Do not try to remove clothing sticking to a burn, instead cool through the clothing
- Do not apply toothpaste / butter / creams to a burn. Running water is the most effective cooling method.
  - Exception: “Aftersun” lotion is useful for sunburn
- Do not burst any blisters
- Do not stop cooling before 10 minutes is up!

## Chemical burns



There are a wide variety of chemicals and substances which can cause chemical burns. These can range from household chemicals such as bleach, cleaning products, pesticides to strong industrial chemicals used in the workplace. Chemical burns can be incredibly serious as the chemical will keep damaging the skin and tissue until it is removed.

**Step 1:** Check for any dangers to yourself. The chemicals that caused the casualty’s injuries could also pose a danger to you. Try to establish what caused the burn and how safe the chemicals are. If you are in an enclosed area, move the casualty outside or open windows to prevent the buildup of fumes. Wear disposable gloves.

**Step 2:** Cool the burn with copious running water for at least **15 – 20 minutes**. Ensure that you do not touch the water used to cool the burn as it may contain the harmful chemical.

**Step 3:** If any clothing has touched the chemical, it should be removed providing it isn't sticking to the burn. Try to identify the chemical involved and its container.

**Step 4:** Cover the burn with a sterile, non-fluffy first aid dressing. If no dressing is available, then improvise. Good items to use include cling-film and plastic bags.

If the burn is serious, the casualty shows signs of shock or the casualty becomes drowsy/loses consciousness then call an emergency ambulance immediately. If a large chemical spill has occurred, then also ensure the fire brigade and police have also been informed.

If you become exposed to the chemical involved, then you should seek medical advice immediately.

## End of Module 4 Quiz

### Module 4 quiz

Question #1: You should cool a burn for at least X minutes

- a) 10
- b) 5
- c) 15
- d) 25

X = number of minutes

Question #2: Why should you cover a burn after cooling it?

- a) To prevent bleeding
- b) To prevent swelling
- c) To prevent further burning
- d) To prevent infection

Question #3: Clingfilm is a good item to use to cover a burn

- a) True
- b) False

Question #4: A major burn can cause a casualty to go into shock

- a) True
- b) False

Question #5: Sunburn is a type of radiation burn

- a) True
- b) False