Estimating the burned surface area

Adults

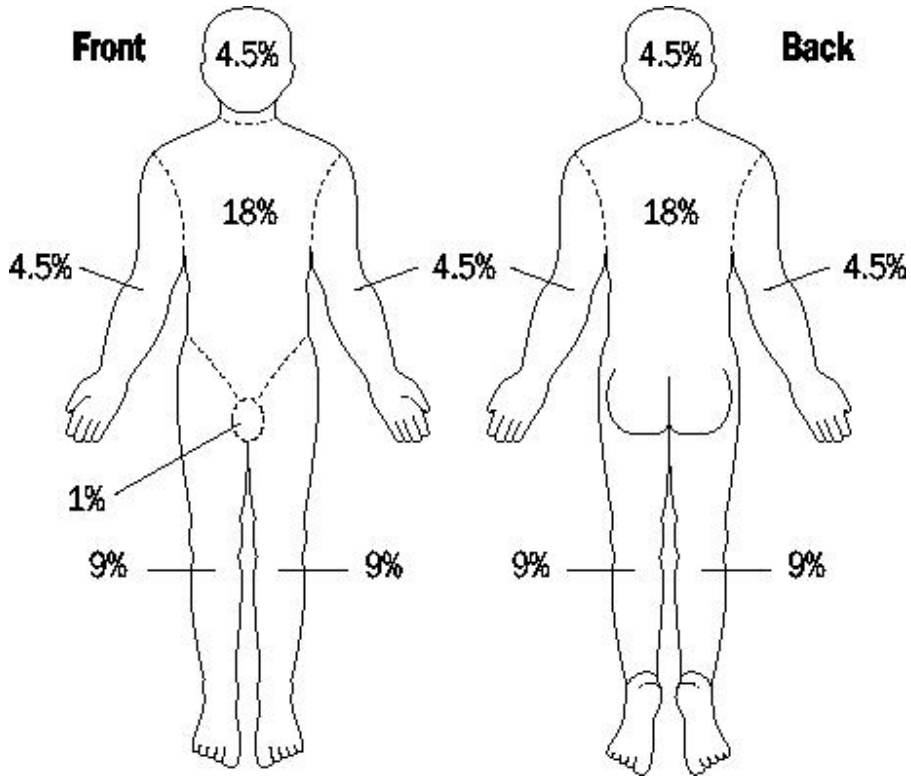
The ‘Rule of 9’s’ is commonly used to estimate the burned surface area in adults.

• The body is divided into anatomical regions that represent 9% (or multiples of 9%) of the total body surface

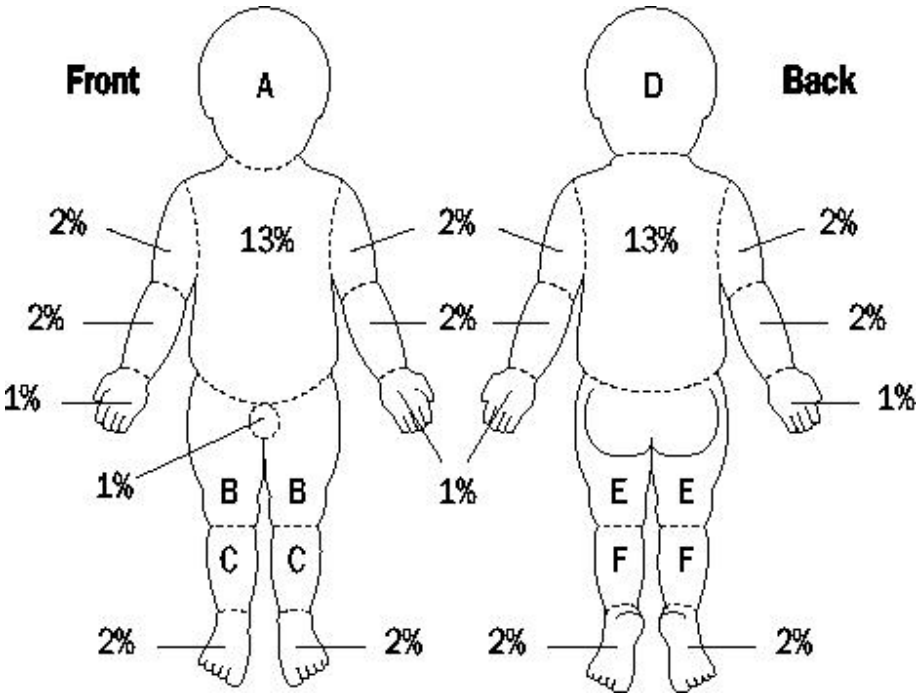
• The outstretched palm and fingers approximates to 1% of the body surface area. If the burned area is small, assess how many times your hand covers the area.

Children

The ‘Rule of 9’s’ is too imprecise for estimating the burned surface area in children because the infant or young child’s head and lower extremities represent different proportions of surface area than in an adult. Use the chart shown opposite to calculate the burned surface area in a child.



Estimating the burned surface area in the adult



Estimating the burned surface area in the child

Area	By age in years			
	0	**1**	**5**	**10**
Head (A/D)	10%	9%	7%	6%
Thigh (B/E)	3%	3%	4%	5%
Leg (C/F)	2%	3%	3%	3%

Estimating the depth of burn

Burns can be divided into three types. It is common to find all three types within the same burn wound and the depth may change with time, especially if infection supervenes. Any full thickness burn is serious.

Depth of burn	Characteristics	Cause
First degree (superficial) burn	• Erythema • Pain • Absence of blisters	• Sunburn
Second degree or partial thickness burn	• Red or mottled • Swelling and blisters • Painful	• Contact with hot liquids • Flash burns
Third degree or full thickness burn	• Dark and leathery • Dry • Sensation only at edges	• Fire • Prolonged exposure to hot liquids/objects • Electricity or lightning

Other factors in assessing the severity of the burn

Location/site of burn

Burns to the face, neck, hands, feet, perineum and circumferential burns (those encircling a limb, neck, etc.) are classified as serious.

Other injuries

Inhalation injury, trauma or significant pre-existing illness increase risk.