



Topic 6

Case Study of Burn Injuries



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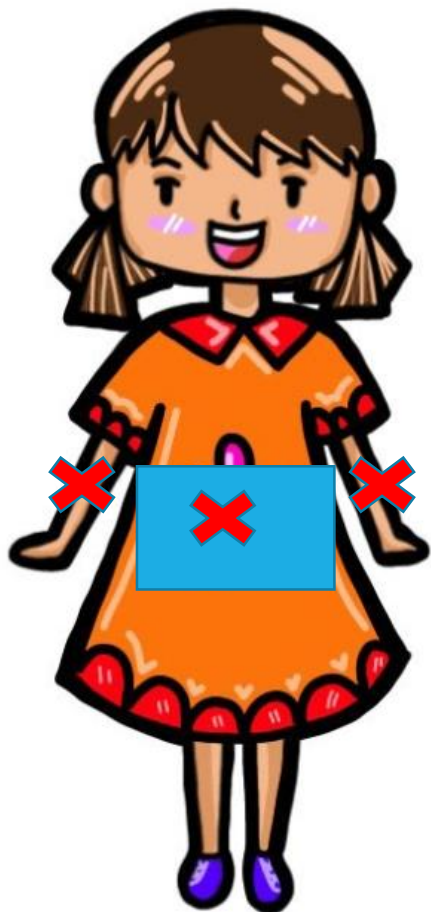
Lesson objectives

By the end of the topic students should be able to:-

- assess health problems according to patient with burn,
- provide primary management and care for a patient with burn



Case study



- A 22-year-old female patient was scalded by hot water during cooking a meal for her boyfriend.
- The part of the body that is exposed to hot water is the front body area of both arms and the front of the abdominal wall.
- She states that the pain score is 7 over 10.

Physical examination 1

Vital Signs

T = 37.4 °C, P = 74 beat/min (bpm), fullness, regular rhythm,

R = 20 bpm, BP = 110/80 mmHg.

= 99% of room air oxygen saturation

BW= 70 kg, Ht.=150 cm.

General

The patient is awake and good cooperated, look acutely ill.

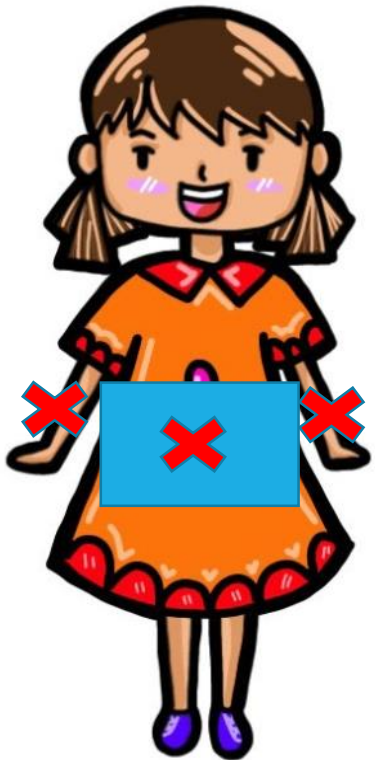
Heart & Lungs: No abnormality detected

(No) signs of dehydration: good skin turgor, no dry lip, no dry skin.

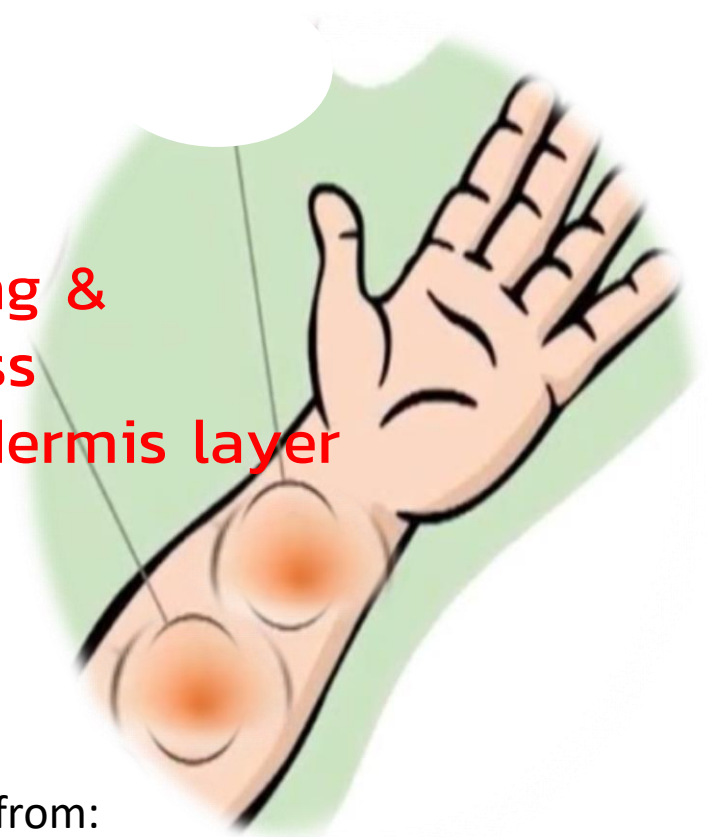
Physical examination 2

Skin :

area of the both arms and the front of the abdominal wall **dry, redness, with no blister.**



Swelling & Redness at epidermis layer



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How to assess a patient with burn injury?



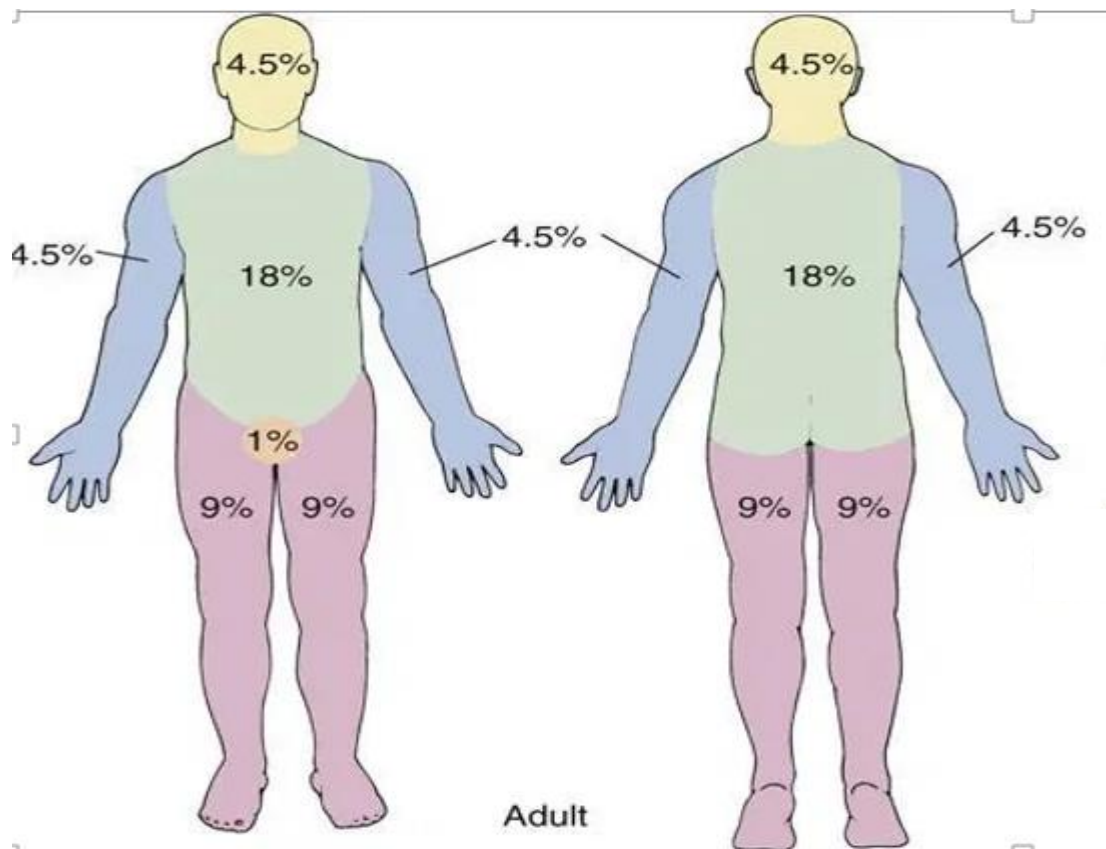


The “rule of nines” used in assessment of burn injury

This system allows a fast assessment a healthcare professional can quickly identify how much of a person is covered in burns.

- The “rule of nines” is a standardized method to assess and quantify the percent of a person’s body that has been burned.
- All body parts are worth a percent that are all multiples of 9 allowing for quick math.

The "rule of nines"



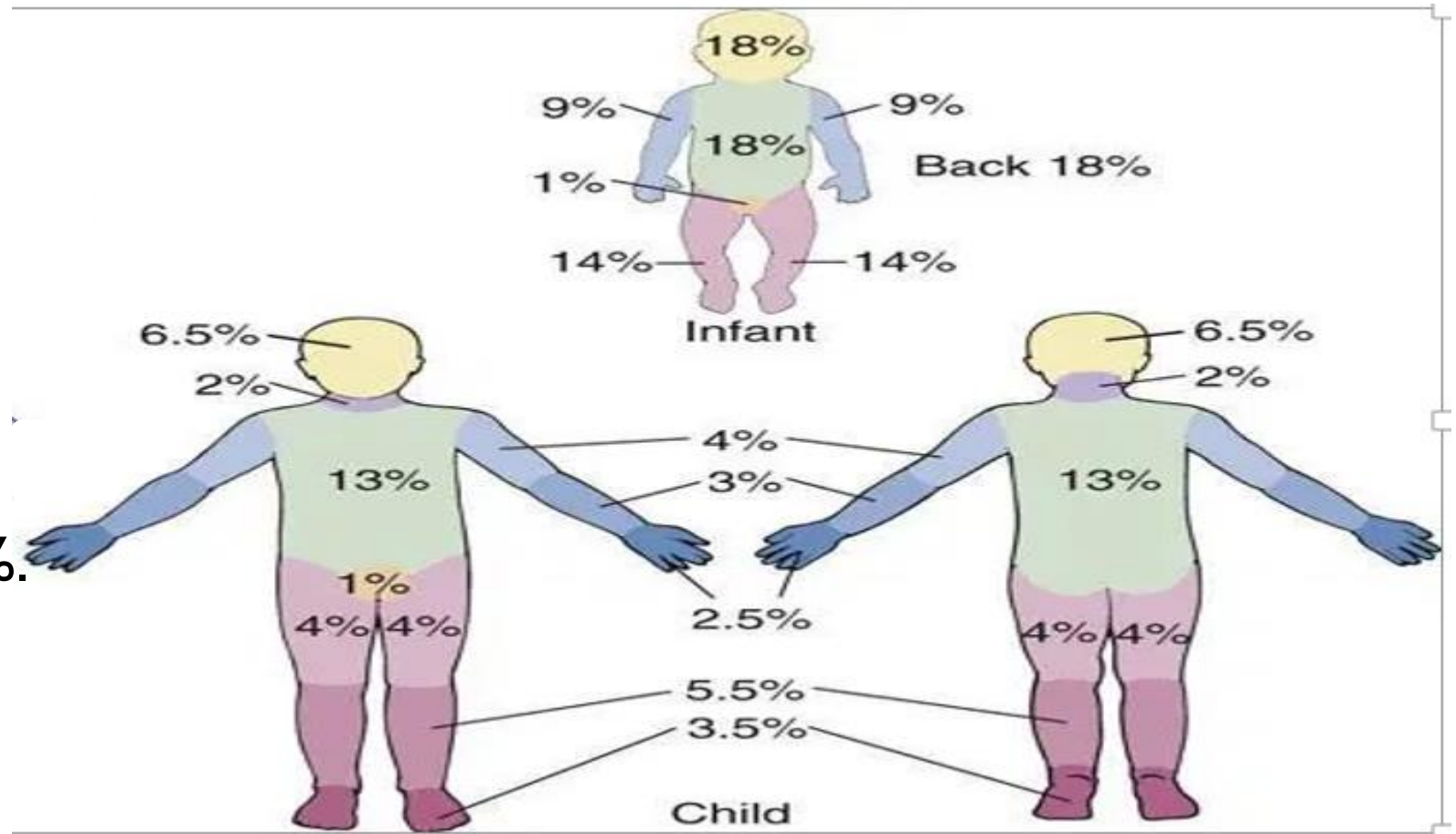
For an adult

- a leg, back, and chest are all considered 18%,
- arms and head are 9%, and
- the groin is 1%

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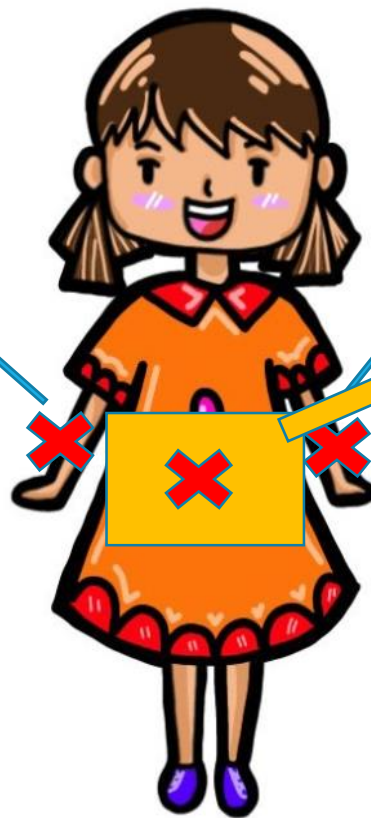
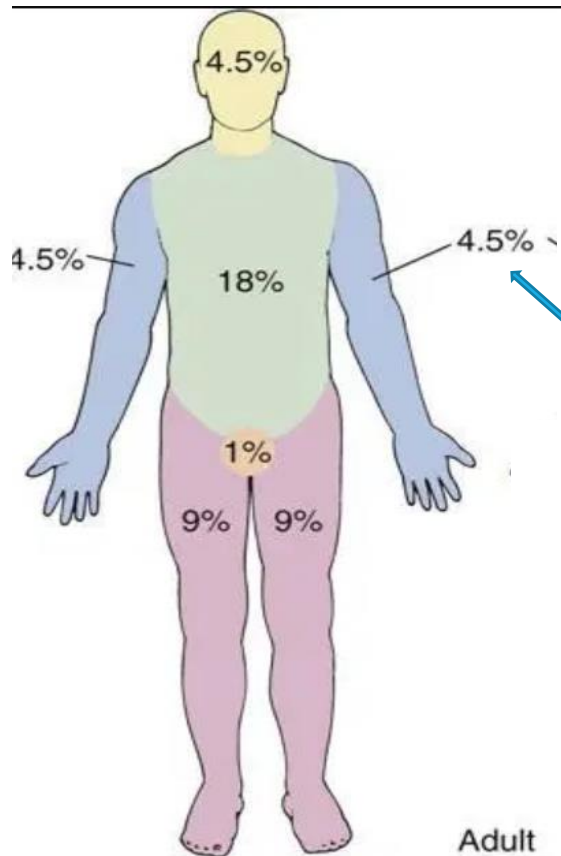
The "rule of nines"

- ✓ **For children** their back, chest, and head are 18%,
- ✓ arms 9%,
- ✓ legs each 14%, and
- ✓ groin again just 1%.



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Assessment of the case study



- Both forearms = 4.5% + 4.5%
- Front of the abdominal wall = 9%
- Total area of burn = 18%

Picture from: [F000248f024-003-9781455772605.jpg \(903x483\) \(wp.com\)](https://www.wp.com)

What is burn injury?

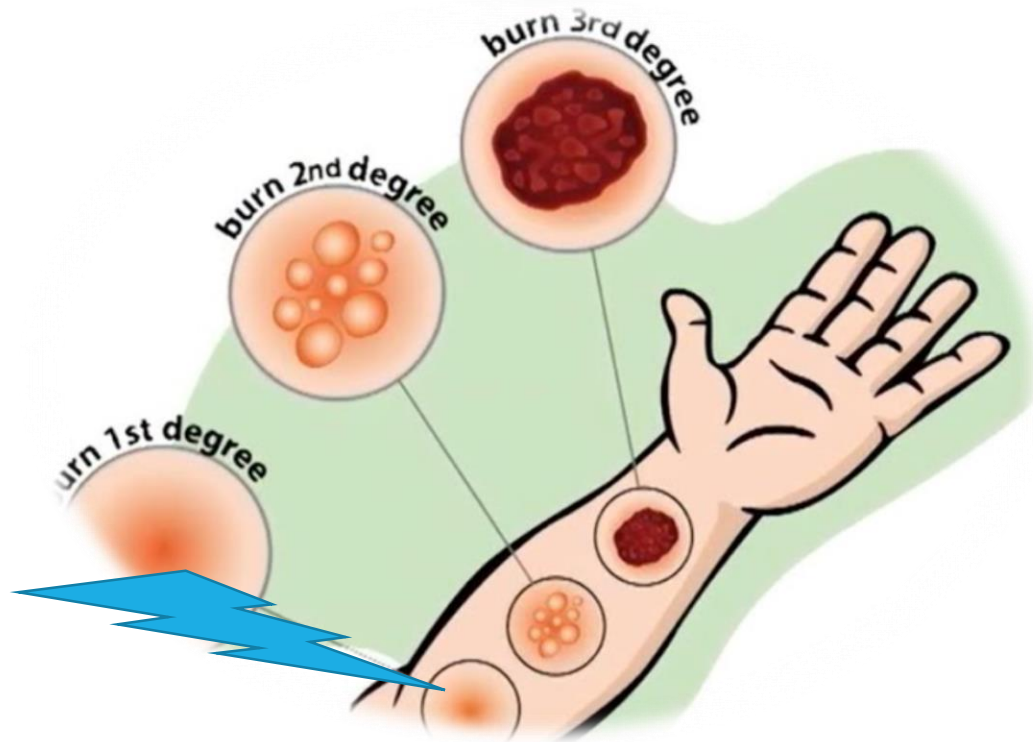
- Burns are tissue damage that results from heat, overexposure to the sun or other radiation, or chemical or electrical contact.
- Burns can be minor medical problems or life-threatening emergencies.



Picture from:
<https://www.bing.com/images/search?view=detailV2&ccid=LIwaCLzC&id>

Symptoms

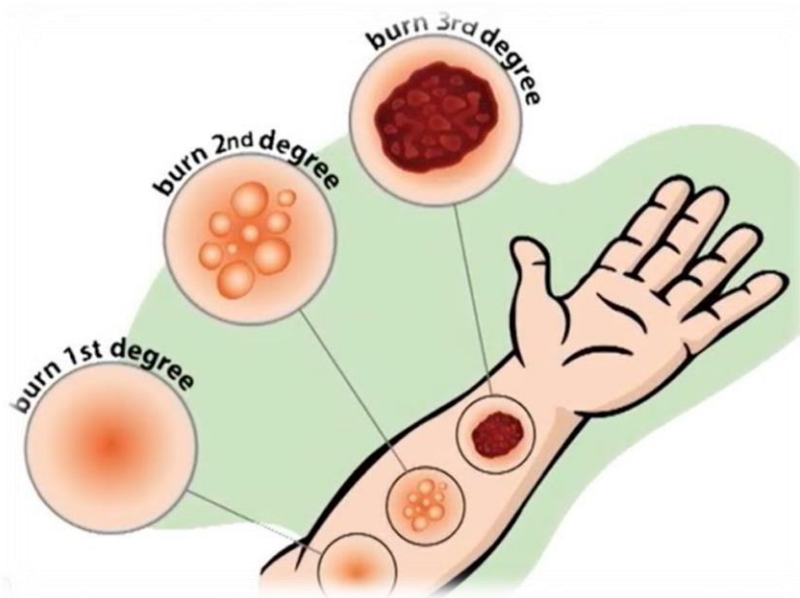
- 1st-degree burn. This minor burn affects only the outer layer of the skin (epidermis). It may cause redness and pain.



Picture from: <https://i.ytimg.com/vi/mSw68leNXPw/maxresdefault.jpg>

Symptoms

- 2nd-degree burn. This type of burn affects both the epidermis and the second layer of skin (dermis). It may cause swelling and red, white or splotchy skin. Blisters may develop, and pain can be severe. Deep second-degree burns can cause scarring.

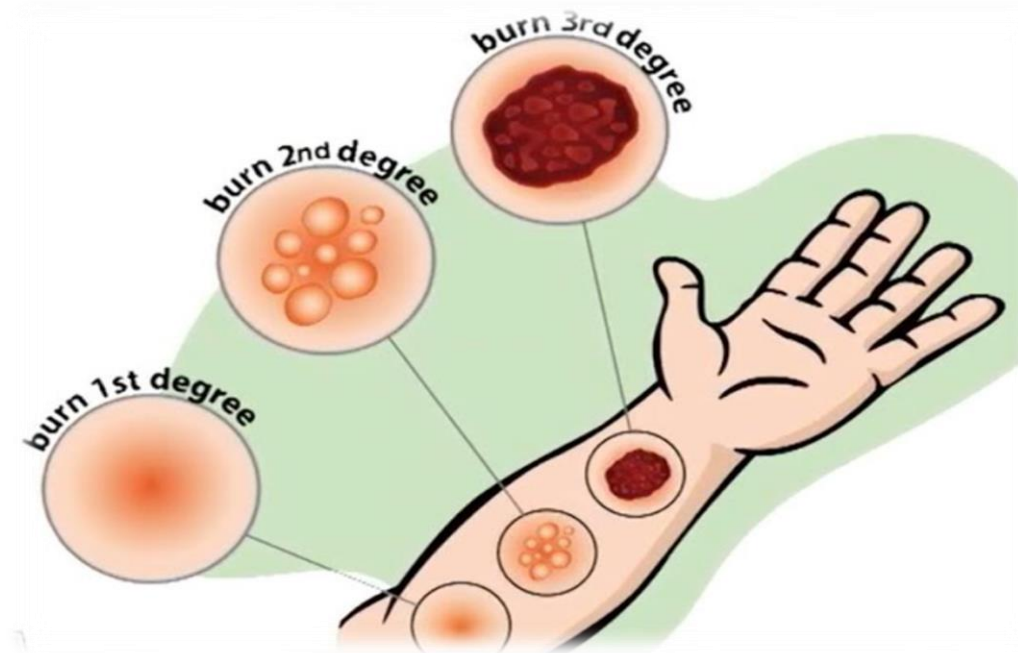


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Symptoms

- 3rd-degree burn. This burn reaches to the fat layer beneath the skin. Burned areas may be black, brown or white. The skin may look leathery. Third-degree burns can destroy nerves, causing numbness.



Burn wound treatment at home or before seeking medical assistance

- When handling a minor burn, it is important to follow specific steps:
- Thoroughly wash hands using antibacterial soap.
- Run cool, not cold, water over the wounded area to reduce pain and swelling.
- Use a mild soap and water to cleanse the affected area.
- Apply an antibiotic ointment if there is no opening of the skin
- Wrap the affected area loosely with sterile gauze to avoid agitation

Burn wound treatment at home or before seeking medical assistance 2

- The goals of treatment are to control pain, remove dead tissue, prevent infection, reduce scarring risk and regain function.
- Putting butter or ice on a burn won't help and could lead to further damage.
- For minor burns, hold the area under cool running water until the pain eases.
- To protect blistered skin, cover the area with a sterile gauze bandage.
- Use a nonstick dressing if available, and wrap the bandage loosely so it won't stick to burned skin.
- **Do not put a toothpaste or fish source on a burn**

Treatment

- The treatment of burns depends on the location and severity of the damage.
- Sunburns and small scalds can usually be treated at home.
- Deep or widespread burns need immediate medical attention.
- Some people need treatment at specialized burn centers and months long follow-up care.

Medication Treatment

- ✓ Pain killer such as acetaminophen 1.5 tabs oral prn. for pain or fever q 6-8 hours.
- ✓ No oral need antibiotic but use topical antibiotic to apply on the wound such as 1% Silver sulfadiazine.

Wound care

- Clean wound and change wound dressing daily
- Keep wound dry

Summary

- A 22-year-old patient was scalded by hot water.
- The body exposed to hot water is the front body area of both arms and the front of the abdominal wall that was the first degree of burn with 18% of the body area.
- She states that the pain score is 7 over 10.
- She had to care for the wound by wet dressing and apply 1% Silver sulfadiazine, take pain killer medicine, and wound dressing daily as an out-patient.



Thank You!



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