

# Prevention of Burn Injuries

August 12, 2014



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## Objectives

- Describe the common home fire and burn hazards
- Identify 5 measures for burn prevention
- State how to prevent scald injuries in the home
- State kitchen safety strategies to prevent burn injuries



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## Epidemiology

- 4,500 fire and burn deaths per year
- More than 1 million burn injuries per year
- 45,000 hospitalizations for burn injuries
- 700,000 annual ED visits
- Majority of burn injuries ( 66%) occur in the home



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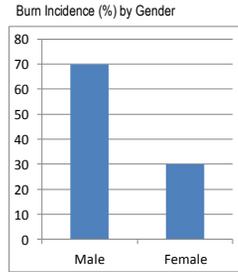
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### Statistics from Burn Admits 2001-2010

- Survival Rate = 96.3%
- A majority are Caucasian
- 66% of all burn injuries occur in the home



American Burn Association National Burn Repository (2014 report)



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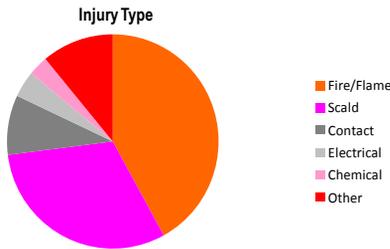
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### Statistics from Burn Admits 2004-2013



American Burn Association National Burn Repository (2014 report)



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### Risk Factors: Age

- Young children have thinner skin = deeper burn
- Children's developmental age is a factor in the etiology of burn – children age 6 months to 2 years are at higher risk for burn injury
- Hot tap water scald burns cause more deaths and hospitalizations than any other hot liquid burns in this population

▪ <http://www.safekids.org>



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### Risk Factors: Age

- The elderly have impaired senses and reaction times and tend to incorrectly assess risk.
- They have thinner skin, with decreased microcirculation and increased susceptibility to infection.
- These factors put them at greater risk for burn injury and lead to greater morbidity and mortality.



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### Ohio Disability Burn Injuries Epidemiology

Ohio Medicaid Claims from 2002 data for disabled and non disabled children less than age 12

- 4,307 burn injuries were identified
- Incidence of burn injuries for disabled children was significantly higher than nondisabled children
  - (103.00 per 10,000 vs. 77.41 per 10,000)
- Children aged 1 or 2 had the highest incidence of burn injury regardless of disability status
- For non-disabled children the incidence of burn injury decreased until 6 year of age
- The risk of burn injuries was significantly higher for disabled than non disabled children (Odds Ratio 1.80)

J Trauma. 2007 Mar;62(3):682-6. Incidence and pattern of burn injuries among children with disabilities. Chen G, Smith GA, Rankom L, Sinclair SA, Zhang H.



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### Mechanisms of Burn Injuries

- Thermal Burns
  - Scalds
  - Flames
  - Contact
  - Grease
- Chemical Burns
- Electrical Burns



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# Thermal Burns



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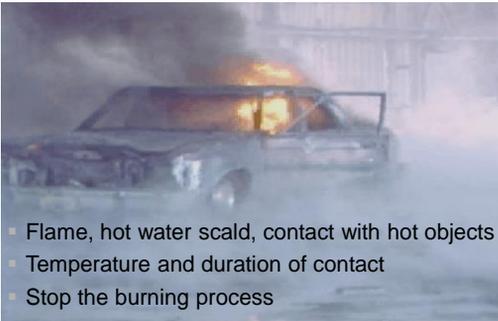
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## Thermal Burns



- Flame, hot water scald, contact with hot objects
- Temperature and duration of contact
- Stop the burning process



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## Thermal Burn Flame



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### SCALD INJURIES

TEMPERATURE	TIME
120	5 min
125	1.5 - 2min
130	30 sec
140	5 sec
150	1.5 sec
155	1 sec



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Contact burn



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## Grease Burn



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## Chemical Burns



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## Chemical Burns

- Chemical and petroleum burns account for only 6% of all burns
- ♦ Injury extent related to interval between injury & institution of appropriate medical therapy
- ♦ Initial appearance may be deceptive
- ♦ Refer to burn center



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## CHEMICAL BURNS

- Duration of contact
- Concentration of the chemical
- Amount of the agent
- Type of chemical
  - Acids
  - Alkalis
  - Organic Compounds




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## Chemical Burns

- Alkalis
  - Oven cleaners, drain cleaners, fertilizers, concrete
- Acids
  - Bathroom cleansers, sulfuric acid, drain cleaners
- Organic compounds
  - Gasoline, petroleum based products




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## Acid Burns

- Common household items
  - ✓ Hydrochloric acid in bathroom cleansers
  - ✓ Oxalic and hydrofluoric acid in rust removers
  - ✓ Hydrochloric and muriatic acid for pools
  - ✓ Sulfuric acid in drain cleaners
- Tissue damage by coagulation necrosis and protein precipitation




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## Acids

- Damages tissue by coagulation necrosis and protein precipitation
- Limits the depth of tissue damage
- Exception is hydrofluoric acid – causes severe pain and higher concentrations cause tissue necrosis.
  - Death occurs from hypocalcaemia. Fluoride binds to free calcium in the blood.



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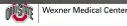
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## Alkali Burns

- Hydroxides, carbonates, caustic sodas of sodium, ammonium, lithium, barium, calcium
- Oven cleaners, drain cleaners, fertilizers, industrial cleaners
- Cement and concrete (wet pH = 12)
- Tissue damage by liquefaction necrosis and protein denaturation



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### Alkalis

- Damage tissue by liquefaction necrosis and protein denaturation
- Allows deeper spread of chemical
- More severe burns.



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### Alkali Burns



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### Alkali Cement



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## Ammonia Burns

- Type of alkali burn
- Common examples – due to exposure to urine
  - ✓ Diaper rash - ?abuse and neglect
  - ✓ Elder abuse and neglect

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## Petroleum injuries

- Gasoline & diesel fuel
- Tissue injury by delipidation
- Full-thickness skin damage
- Often in motor vehicle crashes
  - May be overlooked
  - Check back, buttocks, and lower extremities

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## Petroleum injuries

- Systemic toxicity seen 6 – 24 hours post exposure
- Hepatic enzyme elevation
- ↓ UOP
- Possible lead toxicity



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## Petroleum burn



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## Gasoline

- One of the major cause of burns in US
- Most injuries occur in the home
- Over 6,000 residential fires
- Nearly \$ 5 million in damages



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## Gasoline

### Proper Use



### Improper Use

- An accelerant (to a cooking grill or any fire)
- A solvent
- A cleaning solution
- A weed or insect killer
- A mind-altering substance
- A fuel in devices designed for kerosene



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## Gasoline

- Vapor 3-4 times heavier than air
- Explosions occur
- Can explode at any temperature close to room air
- Carburetor-Contact of gasoline or vapors with hot metal
- Ignition from spark



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## Burn From Throwing Gas on Fire



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**Burns associated with Illegal Activities**

▪ METHAMPHETAMINE



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**Methamphetamine  
The Chemicals**

- Ephedrine or Pseudoephedrine Cold Tablets
- Red Phosphorus (Match Heads)
- Methanol (Heet)
- Rubbing Alcohol
- Lithium (Batteries)
- Iodine Crystals
- Sulfuric Acid (Drano)
- Solvents (Camp Stove Fuel, Acetone, etc)
- Kitty Litter
- Salt
- Sodium Hydroxide (Lye)
- Toluene (Break Cleaner)
- Ether (Starting Fluid)

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**Risk to the child**

- Chemicals in carpeting and draperies as well as clothing so there is constant exposure to these chemicals
- Exposure to second hand smoke
- Risk for abuse and neglect
- Child is in constant contact to the active chemicals and their by products

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### Protect yourself

- **Universal Precautions**
  - **Gloves, gown, eye protection prior to patient contact**
  - **Caution with patient clothing and belongings**
  - **Failure to follow simple precautions may lead to significant provider injury**




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### Treatment

**Protect yourself**  
**Protect yourself**  
**Protect yourself**

- Remove saturated clothing
- Brush off powder agents
- Continuously irrigate area with copious amounts of water
- Neutralizing chemicals contraindicated—may generate heat




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## Electrical Injury




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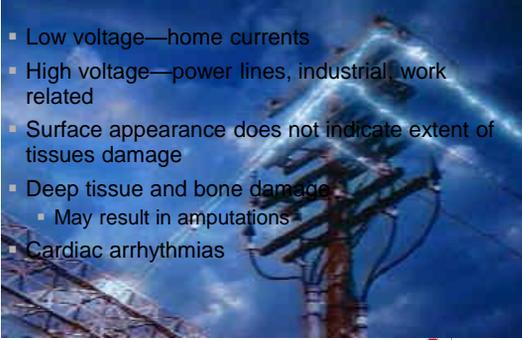
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### Electrical Burns



- Low voltage—home currents
- High voltage—power lines, industrial work related
- Surface appearance does not indicate extent of tissues damage
- Deep tissue and bone damage
  - May result in amputations
- Cardiac arrhythmias

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### Mechanisms of Electrical Injury

- Current
- Arc
- Flash
- Ignition of clothing
- Lightning



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## Burn Depth Assessment

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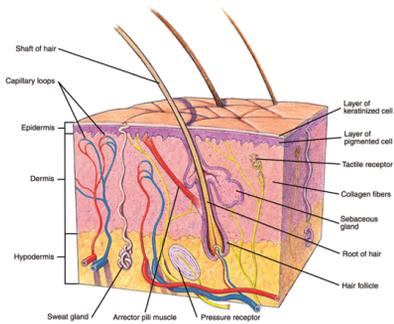
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### First Degree Burn

- Superficial - Epidermis only
- Pink or red
- Painful
- Heals in few days, injured epithelial cells peel
- This area is not counted in your TBSA calculations

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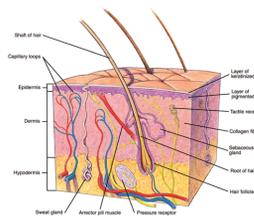
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### First Degree




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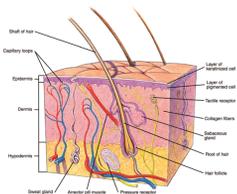
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### Second Degree Burn

- May be partial or deep partial thickness - Entire epidermis and portion of dermis
- Red, moist
- Capillary refill present
- Blisters
- Painful
- Heals in 2-3 weeks
- Prone to scarring
- Skin grafting may improve outcome
- Epidermal budding
- Hair follicles may remain intact




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### Third Degree Burn

- Full thickness - Entire epidermis and dermis
- White, gray
- Dry, leathery
- No hair
- May have decreased capillary refill
- Less pain
- Small area heals by epithelial ingrowth
- Require surgical skin grafts



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### Common Home Burn Injuries

- Scalds
- Flame
- Chemical
- Electrical

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## SCALDS



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### High risk Populations for scalds

- People with Disabilities
- Young children
- Elderly



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### What is a scald injury

- Occurs when:
    - Hot liquid or steam comes into contact with the skin damaging one or more layers
- 60% of all scald injuries are to young children  
75% of burns are scalds in young children

National Center for Health Statistics



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### Sources

- Hot tap water
- Hot Beverages
- Hot food
- Steam



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### Why young kids get scalds

- Curiosity
- Limited understanding of danger
- Limited ability to react quickly to hot contact
- Thin skin = deeper burn



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### Elderly and Scalds

- Thin skin
- Reduced mobility, agility
- Reduced ability to feel heat, due to health conditions or medication



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### People with special needs and scalds

- Sensory impairment
- Mobility or other physical impairment
- Diminished mental capacity



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### Where scald injuries occur in the home

- Kitchen or dining area
- Spills while handling or moving hot foods and liquids
- Often involving children
- Bathing area
- Inability to remove self from hot water



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### Scald history

- Length of contact with hot substance
- Temperature of substance
- Nature of substance
  - Is it thick or sticky?
  - Does it retain heat?
- Extent of body area scalded
- Location of scald



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### Preventing scald injuries

▪ **Household modifications Kitchen and Dining area**

- Mark and explain a "kid-free zone"
- Put away tablecloths
- Use spill-resistant "travel mugs"
- Keep friends, relatives, and sitters informed
- Turn pan handles away from stove front
- Observe safe microwave oven practices
- Protect electric cooking appliances and cords




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### Prevention – Kitchen

▪ **Scald-safe child supervision**  
 ▪ Supervise young children **at all times**

- Encourage use of "kid-safe" zone
- Never hold a child in your arm:
- While preparing or serving hot food
- While drinking a hot beverage
- Keep hot food and liquids high and out of the reach of young children
- Test temperature with cooking thermometer




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### Stay by your pan

- Stay nearby in kitchen to fry, broil or boil
- Stay in the home to bake, simmer or roast  
Use timer as reminder to check frequently
- For a grease fire, put on oven mitt and extinguish by smothering with matching pan lid, not by using a fire extinguisher
- For an oven fire, turn off oven, close door and wait until oven has cooled down




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### Stand By Your Pan



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### Kitchen Safety

- Kid Safe zone
- No dangling cords



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### Kitchen Safety

- Keep stove area clear of flammable items such as dish clothes
- Do not wear loose fitting clothes and sleeves when cooking and do not reach over the stove



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### Microwave safety



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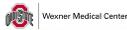
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### Bathroom scald prevention

- **Household Modifications**
- Establish safe hot water temperature
- If this is not possible, install tempering valve or safe faucet and shower heads
- Install non-slip bath, shower mats
- Install grab bar in shower stall



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- Recommended maximum residential standard:  
120°F (48°C)  
(U.S. Consumer Product Safety Commission)
- Nursing homes and child care facilities  
110°F (43°C)  
(Recommended and by some state or local regulations)



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### Bathroom Safety

- Run hot water up to two minutes at tap
- If initial test temperature is above 120° F (48° C), lower heater thermostat setting
- Initial test temperature below 120°F/48°C may not prove safety
- Retest several times until safe temperature setting is assured



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### Prevention

- **Indirect** (fall prevention)
- Grab bars
- Non-slip mats in tub/shower, on floor
- Shower/bath seat



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### Prevention

- For single control faucet, always turn on and off in the "cold" position
- For dual control faucet, always turn "cold" faucet on first, and off last
- Make sure all household members and caregivers understand these controls



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### Prevention



- Bath thermometers
- Check water temperature before placing child in tub or shower
- Instruct carefully any older siblings who help bathe young children
- Young children should never be left alone in the tub




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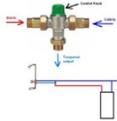
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### Equipment for Bathroom scald prevention

- Tempering valve
  - on water line
- Anti-scald valves
  - on shower heads and faucets




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### Keep appliances away from water in the Kitchen and Bathroom




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# Scald Injuries

Presented by: The Burn Center 614-293-BURN (2876)

### Where do scalds occur?

- Kitchen
- Bathroom
- Dining
- Hot tubs
- Foot soaking

### Why is this a problem?

- Scalds account for 22% of burns in people age 60 and above
- As we age our skin becomes thinner and increases our risk for burns and makes burns harder to heal
- According to the data collected by the American Burn Association persons age 60 and older with scald burns have:
  - Higher mortality rate
  - Increased length of stay in the hospital
  - Longer healing times
  - More complications than other persons with scald injuries

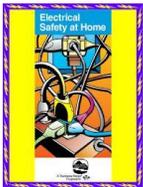
### Prevention



### How long does it take to get burned?

Temperature	Time to Produce Serious Burns
140 degrees Fahrenheit	10-15 seconds
150 degrees	About 5 seconds
160 degrees	About 2 seconds
170 degrees	About 1 second
180 degrees	About 1/2 second

# Electrical burn prevention in the home



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# Electrical Safety

- Check for damage cords
- Tamper resistant receptacles
- No extension cords under carpets or across doorways
- Do not overload circuits

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### Wall Outlets



GFCI =  
Ground Fault  
Circuit  
Interrupter



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### Where GFCI outlets are needed

- Kitchen counter top
- Bathroom
- Near a wet bar sink
- Swimming pool, spa, hot tub
- All outdoor receptacles
- Work area
- Garage
- Crawl space
- Unfinished room in basement or storage area



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### Hazards



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### Safety Plugs



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### Light bulb burn prevention



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### Extension cord burn prevention

- Use on temporary basis only
- Keep unplugged when not in use
- Keep slack: don't stretch tight
- Do not place across doorways, heavy traffic areas, under rugs
- Do not staple or nail to wall
- Do not alter a 3-prong plug to accommodate a 2-hole outlet



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- **Heating Pads and Electric Blankets** Never place anything heavy on pads or blankets  
Never sit or sleep on them
- Turn off after leaving bed
- **Heating pads**
- Never sit or sleep on one
- Limit use to 15-20 minutes Use automatic switch or timer to control use




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### Fireplace Safety

- Have your chimney or wood stove inspected and cleaned annually by a certified chimney specialist.
- Clear the area around the hearth of debris, decorations and flammable materials.
- Leave glass doors open while burning a fire..
- Close glass doors when the fire is out to keep air from the chimney opening from getting into the room.
- Always use a metal mesh screen with fireplaces that do not have a glass fireplace door.
- Install stovepipe thermometers to help monitor flue temperatures.
- Keep air inlets on wood stoves open, and never restrict air supply to fireplaces. Otherwise you may cause creosote buildup that could lead to a chimney fire.
- Use fire-resistant materials on walls around wood stoves.




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### Fire Place Safety




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### Candles in the Home

- On average, a candle fire in the home is reported to a U.S. fire department every **40 minutes**.
- **More than one-third of home candle fires started in the bedroom.**
- **More than half of all candle fires start when things that can burn are too close to the candle.**




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### Candle Safety

- Use heavy, sturdy, heat-resistant candleholders, big enough to collect wax
- Keep candles away from window coverings, other flammables, children
- Keep wick cut to ¼ inch
- Extinguish before leaving a room or going to sleep
- Never use candle if oxygen is in use in the home




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### Space heater

- Responsible for 25,000 residential fires a year
- Keep 3 feet away from combustibles
- Refuel kerosene heaters outside
- Use only special kerosene fuel cans
- Turn off when you leave the room
- Do not leave children unattended 3 foot kid free zone




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### Home heating safety

- Keep flammables away from the house heater, outside the residence
- Keep combustibles 3 feet away from heat source
- Do not use aerosol cleaning products nearby
- Service home heating systems annually




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### Gasoline Safety

- Always store Gasoline in an outdoor shed or garage
- Store in an approved container
- Never use gasoline as a cleaning agent
- Let small motors cool before you refuel
- Never fill gasoline motors in an enclosed space




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### Cigarette Smoking

- Average age of **cigarette fire death: 55+**
- **Careless discarding**
  - in beds, chairs, trash
- **Increases with alcohol, prescription drugs**
- **Visitors, caretakers, neighbors also at risk**
- **Don't Allow Smoking in Your Home**




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## Home Oxygen

- 800,000 people are using Home oxygen Therapy (HOT)
- Standard of care for people with hypoxemia related to COPD
- Burn injuries related to HOT therapy have increased



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## Oxygen

- Oxygen is nonflammable BUT it greatly accelerates the rate of combustion.
- More oxygen in the air means that hair, plastics, furniture can catch fire at lower temps.
- Safe use of oxygen demands that all flammable materials and potential ignition sources be removed from the area.



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## Smoking and Home Oxygen

THE SINGLE MOST IMPORTANT THING YOU CAN DO IS NOT TO SMOKE WHILE USING HOME OXYGEN



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## Smoking and Home Oxygen

**No-smoking signs** should be posted in your home or on exterior doors to alert visitors that oxygen is being used and/or stored in the home



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## Smoking and Home Oxygen

- **Store your oxygen** system in a clean secure area away from flammable items. Oxygen cylinders should be secured to prevent accidental falling.
- Have a **fire extinguisher** close by, and you may wish to notify your fire department know that you have oxygen in your home.
- **When using an oxygen concentrator:**
  - Avoid using an extension cord
  - Store in an area that will allow proper air circulation and prevent overheating (not a closet)
  - Store 12-18 inches from drapes or walls



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## Smoking and Home Oxygen

Stay at least 5 feet from open flames including:



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### General Safety

- Install, maintain smoke alarms
  - **on all levels of a residence**
  - **outside each sleeping area**
  - **in bedrooms if sleeping with door closed**
- Install carbon monoxide detector
- Test alarms on schedule
- Display home address outside




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### Smoke Detectors

- Properly installed on every level of your house
- Test monthly
- Change Batteries
- Replace if older than 10 years old
- Vacuum smoke detectors to keep free of dust
- CO detectors




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### Smoke Detectors

- Local Fire Department may be a resource for smoke detectors for homes
- Smoke Detectors are available for those who are hearing impaired.




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# Fire Escape Plan




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## Fire escape plan

- A working Smoke detector
- Never ignore a fire alarm
- Know 2 ways out
- Let fire department know if some one is disabled and may have difficulty getting out
- Have a meeting place
- Never go back into a burning building
- Have a contingency plan if child needs medical or mobility equipment if you have to evacuate your home




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## Home Fire Plan

- Practice your plan
- Crawl low and go
- Stop drop and roll




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Teach

- Stop Drop and Roll
- Wheelchair bound – lock chair and drop out of the chair then roll
- Get low and go if there is smoke
- If child can not crawl teach them to use a scooter board
- Teach them to dial 911
- Make sure school and other public buildings have a plan for getting g the child out who may be wheelchair bound




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Home Safety Checklist

<b>GENERAL ENVIRONMENT</b>	YES	NO
Is there an escape route from every room to the outside or to a bathroom or closet?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a smoke alarm located both near the sleeping areas and the rest of the house?	<input type="checkbox"/>	<input type="checkbox"/>
Do smoke alarms have a 10-year power source?	<input type="checkbox"/>	<input type="checkbox"/>
Have you received any fire safety education or training?	<input type="checkbox"/>	<input type="checkbox"/>
Are electrical appliances, pipes and wires in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Does any smoke alarm sound when there is smoke and carbon?	<input type="checkbox"/>	<input type="checkbox"/>
Are ladders and fire extinguishers and fire extinguishers in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a fire escape plan?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a fire escape plan?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have a fire escape plan?	<input type="checkbox"/>	<input type="checkbox"/>
<b>BATHROOM</b>	YES	NO
Does the toilet have a grab bar installed?	<input type="checkbox"/>	<input type="checkbox"/>
Is the bathroom floor slip resistant, dry mats, mats or a mat placed out of the way?	<input type="checkbox"/>	<input type="checkbox"/>
Are the shower and tub areas properly drained and not clogged?	<input type="checkbox"/>	<input type="checkbox"/>
Are the walls in a bathroom in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a fire extinguisher in the bathroom?	<input type="checkbox"/>	<input type="checkbox"/>
Is the fire escape route clear of clutter?	<input type="checkbox"/>	<input type="checkbox"/>
Is the fire escape route clear of clutter?	<input type="checkbox"/>	<input type="checkbox"/>

SGIO Proudly Supporting Kidsafe WA




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Safety For Older Consumers



Home Safety Checklist



Home Safety Checklist

- Project Checklist
- Smoke Alarms
  - Batteries
  - Fire Extinguishers
  - Escape Ladders
  - Extension Cords &
  - Multi Outlet Strips
  - Carbon Monoxide Alarms




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# Wound Care and Dressing



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## Goals of Wound Management

- Promote healing/preserve viable tissue
- Prevent/control infection
- Maintain function
- Patient comfort and relief of pain



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## Wound Healing

- Superficial partial thickness
  - Will heal in 10-14 days
  - Dressings done until healing occurs
- Deep partial and full thickness
  - Require surgical management
  - Dressings done before, between, and after surgical procedures until healing occurs
- Time to healing variable based on patient

Hermans, M.H.E. (2005). General overview of burn care. *International Wound Journal*, 2, 206-220.



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### Patient Preparation

- Tell patient what to expect
- Determine patient/family education needed during dressing change
- Give patient choices and some control during dressing change



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### Removal of Previous Dressing

- Cut carefully through layers of secondary dressing
- Can moisten/soak in warm water to loosen dried dressings
- This can be done in the shower



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### Wound Assessment

- Size
- Location
- Appearance
- Edema
- Signs and symptoms of infection



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### Cleansing

- Water temperature 96-98°F, to patient's comfort
- soap and water
  - Soap gentle soap no heavy perfumes or dyes
  - Liquid soap works well in the home and a separate washcloth
- Have patient maintain as much independence as possible




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### New Dressing Application

- Primary dressing against wound
  - Unique application methods to each type
- Secondary dressing
  - Covers and secures primary dressing
  - Can provide immobilization if needed




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### The Ideal Dressing...

- Cost-effective
- Simple to administer
- Least discomfort to patient
- Prevents infection (anti-microbial properties)
- Keeps wound bed moist
- Preserve function
- Provides effective and timely wound healing

Hermans. M.H.E. (2005). A general overview of burn care. *International Wound Journal*, 2, 206-220.

Jeffrey, S.L.A. (2009). Current burn wound management. *Trauma*, 11, 241-248




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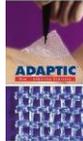
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### Adaptic

- Description: Low-adherent dressing, used in conjunction with Neosporin
- Burn Type: Over new grafts
- Dressing characteristics and application: Daily dressing change, used in conjunction with Bacitracin
- Advantages: Keeps healing grafts moist



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### Xeroform

- Description: Petroleum dressing with 3% Xeroform
- Burn Type: Donor sites (specific to MD), Steven-Johnson Syndrome, Toxic Epidermal Necrolysis
- Dressing characteristics and application: Outer dressing changed daily necessary only until adhered
- Advantages: Acts as temporary "scab" until areas healed
- Disadvantages: Inability to shower initially, as will fall off if not yet adhered
- Additional info: Can trim away as areas heal

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### Xeroform



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### Silver Dressings

- Examples: Acticoat, Aquacel Ag, Mepilex Ag, Restore




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### Mepilex Ag

- Description: Silver foam dressing
- Burn Type: Partial thickness burns
- Dressing characteristics and application: Application with 1" border onto good skin; If circumferential, can staple ends together; Change outer dressing when soiled
- Advantages: Allows for flexibility and ROM, decreased pain, shorter LOS
- Disadvantages: Cannot get wet
- Additional info: Stays in place for 7 days




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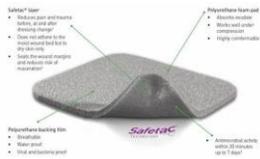
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### Mepilex Ag



PT and OT can make a custom-fit Mepilex Ag glove for hand burns




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Wesner Medical Center

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 Wesner Medical Center

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### Topical Agents and Creams

- Ideally have
  - Broad spectrum antimicrobial activity
  - Penetrate eschar
  - Minimal absorption, limited systemic effects
  - Limited metabolic complications
  - Promote epithelialization

 Wesner Medical Center

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### Silver Sulfadiazine 1% (SSD)

- **Description:** Water soluble cream with broad spectrum activity
- **Burn type:** Partial and full thickness
- **Dressing characteristics and application:** BID dressing change, work into kerlix fluff and apply to burn wound

Fuller, F.W. (2009). The side effects of silver sulfadiazine. *Journal of Burn Care & Research*, 30, 464-470.

 Wesner Medical Center

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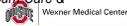
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### Silver Sulfadiazine 1% (SSD)

- **Advantages:** Bactericidal against gram (+) and gram (-) organisms; painless
- **Disadvantages:** Doesn't penetrate eschar, leukopenia
- **Additional info:**
  - Must remove ALL white residue with each dressing change
  - Often used with pigskin
  - Contraindicated in those with sulfa allergy

Fuller, F.W. (2009). The side effects of silver sulfadiazine. *Journal of Burn Care & Research*, 30, 464-470.



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### Other Topicals

- Glucan Pro cream
  - Healing donor sites
  - Healing graft sites
- Glucan 3000 ointment
  - Facial burns
- Bacitracin
- Bactroban



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### Other Topicals



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### Secondary Dressings

- Overwrap to keep primary dressing in place
- Examples – Softsorbs, conform roll, ACE wraps
  - Conform and ACE – wrap distal to proximal
- Never use tape, tear and tie only
- Minimize thickness



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### Burn dressings are art not science...

- No two burn dressings are the same
- Individualize to patient needs
- Change as wounds heal
- Change as patient becomes more mobile and active
- Use your imagination and creativity!!



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### Extremities

- Great functional importance
- Wrap fingers and toes separately
- Allow for active ROM if patient able
- If not, immobilize in splints to maintain functional position
- Elevate!



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### Face

- Males – Shave daily
- Soak for 20 minutes three times daily
- Gentle debridement after each soak
- Apply topical
- Fast healing due to good blood supply



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Consented burn patient willing to be in our face scrapbook

Face



Five horizontal lines for writing notes.

Resources:

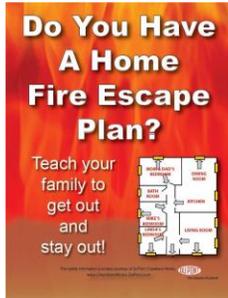
- [www.ameriburn.org](http://www.ameriburn.org)
- [www.safekids.org](http://www.safekids.org)
- [www.burnprevention.org/autism-safety](http://www.burnprevention.org/autism-safety)
- [http://www.autismspeaks.org/sites/default/files/safe\\_signals\\_section\\_2.pdf](http://www.autismspeaks.org/sites/default/files/safe_signals_section_2.pdf)
- [www.nfpa.org](http://www.nfpa.org)
- [www.burnprevention.org](http://www.burnprevention.org)



Five horizontal lines for writing notes.

Questions???

- Thank you



Five horizontal lines for writing notes.