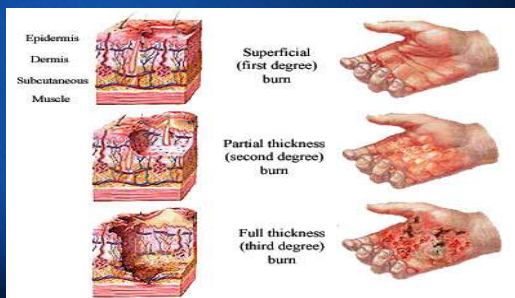


Child Burn Injuries for Investigators

Sgt. Jim Twardesky, MPA
Warren Police Department

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Burn Classifications



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Inflicted Burns

- Inflicted burn injuries account for approx. 10% of child abuse cases
- Younger children are more vulnerable
- Scald burns are the most common
 - Any hot liquid, but water is most common
 - Can be a spill/splash or immersion burn
- Contact burns are similar to branding & will mirror the object used

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Investigating Burn Injuries:

- Is the explanation of what happened consistent with the injury?
- Is there a clean line of demarcation or a pattern inconsistent w/ the account
- Are the burns located on protected areas?
- Does the child's development match the caretakers account of the injury?

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Spill & Splash burns

- Occurs when hot liquid falls onto the victim
- Burn has irregular pattern & depth
- The liquid will cool as it moves downward
- Clothing can affect the shape



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Immersion Burns

- Child fell or was forced into a tub of hot liquid
- Uniform depth & clear, defined lines indicate child was held in place
- Accidents will show signs of thrashing by child to escape
- Toilet training is a common trigger



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Immersion Burns

Investigative considerations

- Water temperature
 - Is the water heater working & set properly?
- Exposure time
- Burn depth
- Evidence of sparing

Water Temperature	Time to 3rd Degree Burn
155° F	1 second
148°	2 seconds
140°	5 seconds
133°	15 seconds
127°	1 minute
124°	3 minutes
120°	5 minutes
100°	Safe temperature for bathing

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Common Patterns in Abusive Immersion Burns

- Donut pattern on the buttocks
- Sparing on the soles of the feet
- Stocking or glove patterned burns
- A clear distinct waterline



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Contact Burns

- Caused by contact w/ flame or hot solid object
- Accidental will be irregular, shallower & less defined
- Inflicted "branding" burns mirror the object used & are deeper and more defined

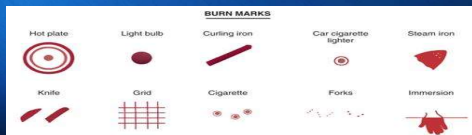


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Contact Burns

- Investigative considerations
 - Does the child have access to the object that caused the injury?
 - Is there a distinctive pattern or is it shallow & irregular, as from a glancing blow?
 - Are there multiple burns?



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Skin Conditions that can Mimic Burn Injuries

Cigarette burn



Impetigo



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Skin Conditions that can Mimic Burn Injuries

Hypersensitive skin reactions



Folk remedies



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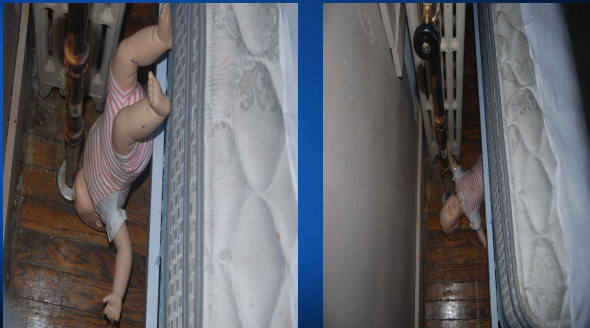
Case study: Burn Injury

- Child alone w/ mom
- Rolled off bed onto radiator
- Child brought to hospital by grandma
- Happened 2 days ago
 - Mom stated she didn't want to deal w/ CPS



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Caretaker doll reenactment



14

Injury Reconstruction



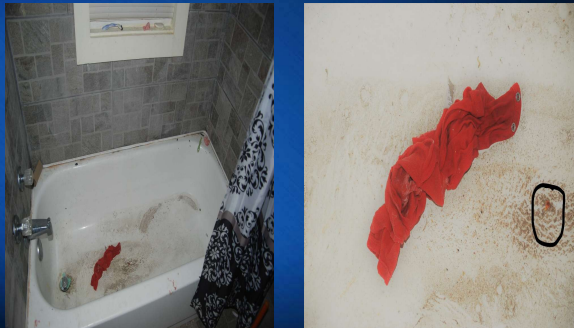
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Physical Evidence doesn't Lie



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Delay in Care?



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Any Signs of Neglect?

- Child unable to crawl or even roll over
- Older kids drinking out of the toilet
- Lengthy CPS & police history



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Case Study #2



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For more information & available
training:

Check out my website at
Twardeskyconsulting.weebly.com

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