

H-07  
HYDROFLUORIC ACID

See **Corrosive Agents [H-05]**  
for general approach to  
decontamination and treatment.

First Responder  
EMT  
AEMT  
Paramedic

DESCRIPTION:

- Causes corrosive burning of the skin and deep underlying tissue, and also binds with calcium and magnesium from the nerve pathways, bone, and blood stream.
- The results are spontaneous depolarization producing **excruciating pain**, and hypocalcemia, resulting in **tetany and cardiac dysrhythmias**, which may degenerate to cardiac arrest.
- Systemic effects may be delayed.
- Skin may look deceptively normal at the surface. **Pain is an indication for treatment**, and that it's managed through the administration of calcium not analgesic.

Treat as per  
**Corrosive Agents** E-05

With hydrofluoric acid exposure ONLY.

| HazMat Medic  |   |
|---|---|
| SKIN  | Apply <b>Calcium Gluconate Gel</b> ( <i>see below</i> ) to burned area  |
|   | Peds: same dose   |
|   | <b>If pain continues, contact Medical Control to consider:</b>  |
|   | <b>Calcium Gluconate (5% solution)</b> - inject SUBCUTANEOUSLY (0.5 mL/cm <sup>2</sup> ) every ¼ inch into the burned area, and ½ inch around the circumference of the burned area  |
|   | <ul style="list-style-type: none"> <li>• Gel: mix 10 mL of 10% Calcium Gluconate into a 2-ounce tube of sterile water soluble (KY) jelly.</li> <li>• 5% solution: mix 5 mL of 10% Calcium Gluconate and 5 mL of NS</li> </ul> |
| EYES  | <b>Irrigate Eyes with Calcium Gluconate</b> (mix 50 mL of 10% solution in 500 mL NS)  |
|   | Peds: same dose   |
| INHALED   | <b>Nebulize Calcium Gluconate</b> (mix 3 mL of 10% solution with 6 mL of NS)  |
|   | Peds: same dose   |
|   | <ul style="list-style-type: none"> <li>• Do not mix with albuterol or other medications</li> </ul>  |
| <b>If there are signs of severe systemic involvement (seizures, tetany, cardiac dysrhythmias or conduction disturbances), consider:</b> |   |
| SYSTEMIC  | <b>Calcium Gluconate 1 gram IV/IO</b> over 5 minutes  |
|   | Peds: 50 mg/kg  |
|   | <ul style="list-style-type: none"> <li>• Repeat every 5 minutes as needed</li> <li>• Contact Medical Control for escalation of dosing if needed</li> </ul>  |

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**QI Review Parameters:**

1.

**NOTE:** Poison Control may be contacted [**1-800-222-1222**] for **INFORMATION ONLY**. Treatment modalities must utilize these guidelines, or may be received through online Medical Control.