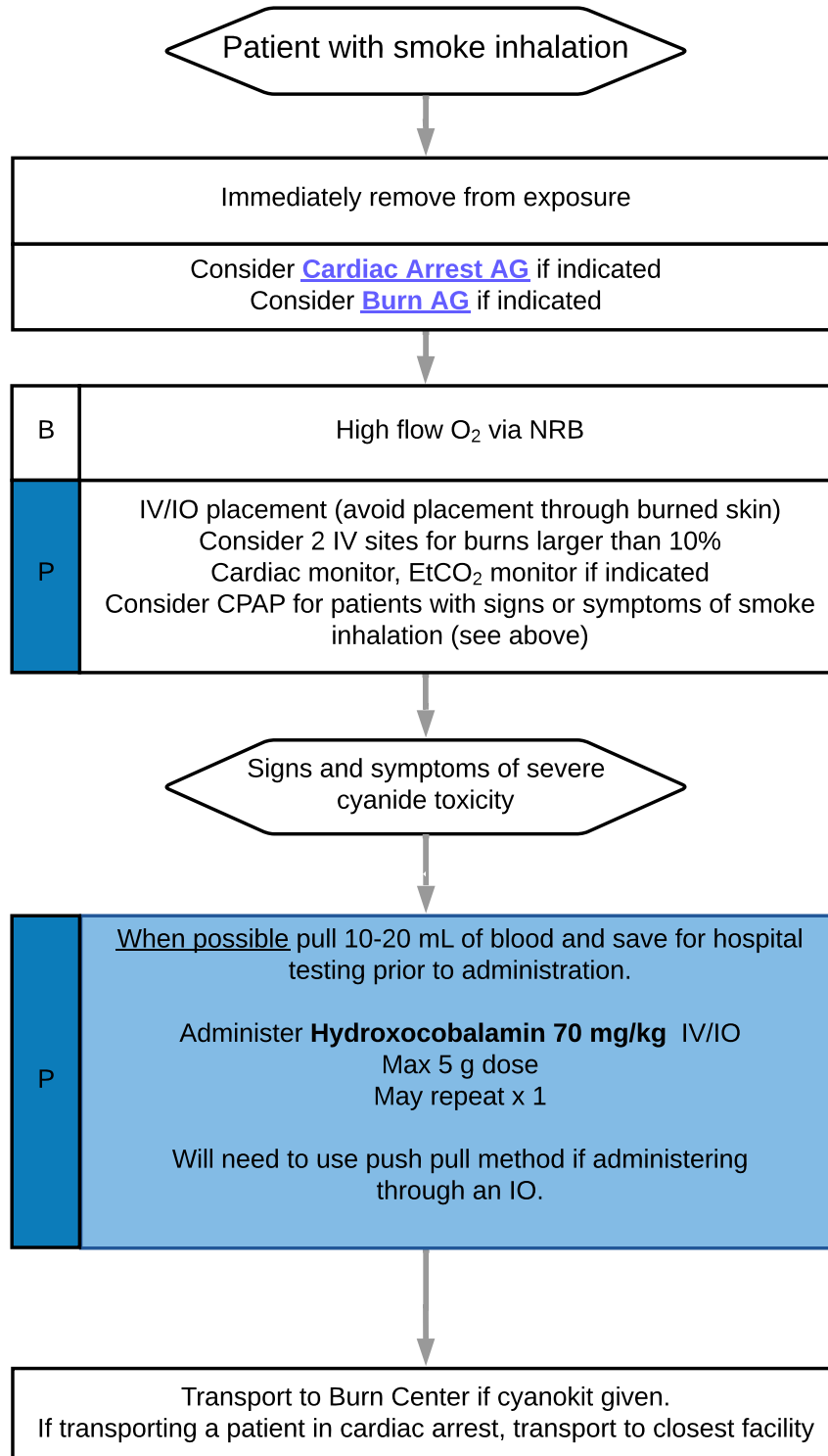




<b>History</b> <ul style="list-style-type: none"> <li>• Smoke inhalation</li> <li>• Time of injury</li> <li>• Other trauma</li> <li>• Airway/inhalation</li> </ul>	<b>Signs and Symptoms</b> <ul style="list-style-type: none"> <li>• Altered mental status</li> <li>• Dyspnea</li> <li>• Syncope</li> <li>• Cardiac Arrest</li> </ul>	<b>Differential</b> <ul style="list-style-type: none"> <li>• MI</li> <li>• Trauma/head injury</li> <li>• Other chemical exposure</li> </ul>
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**Severe Cyanide Toxicity:**

Dyspnea, respiratory failure, hypotension, dysrhythmias, altered mental status



## Education/Pearls:

Smoke inhalation can cause exposure to a variety of dangerous substances, including cyanide (CN), carbon monoxide (CO), and other chemicals.

### Cyanide Toxicity:

- HCN is developed from an incomplete combustion of any material containing nitrogen such as plastic, vinyl, wool, or silk.
- HCN can be produced when there are only burning embers.
- CN is a small lipid soluble molecule and penetration into cells is rapid.

**Hydroxocobalamin** treatment is indicated for patients with evidence of severe cyanide toxicity. This medication allows for harmless excretion of CN.

- Side effects are red coloring of skin and urine, urticaria (hives), rarely anaphylaxis. It may also cause tachycardia and hypertension.
- Administration of hydroxocobalamin must not delay any other basic life support such as securing of the airways, cardiovascular support, or oxygen administration.
- Administration instructions:
  - Reconstitute: Place the vial in an upright position. Add **200 mL** of 0.9% Sodium Chloride injection to the vial using the transfer spike. **Fill to the line.** (LR and dextrose are also compatible)
  - Mix: The vial should be repeatedly inverted or rocked, not shaken, for at least **60 seconds** prior to infusion.
  - Infuse Vial: Use vented intravenous tubing, hang and infuse over **15 minutes**. Will need to use push pull method if administering through an IO.
- **Pediatrics (70 mg/kg) is the starting dose. May round up to the nearest 1/4 of a bottle.**

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**CPAP** can be utilized in patients with suspected carbon monoxide to enhance oxygen delivery; however, the patient must be breathing spontaneously to tolerate CPAP.

