Heat stroke / Hyperthermia
Condensed Version

**Presentation:** LIFE THREATENING, medical emergency
Heat stroke risks: pediatric, geriatric; brachycephalic, laryngeal paralysis, long-fur, obesity, hx of heat stroke

Symptoms
- **Core body temperature > 105.8°F (41°C)**
- Brick red mucous membranes, excessive panting, tachycardia, hypersalivation, vomiting, diarrhea, petechiae, respiratory distress, shock, DEATH

**Test of choice:** ALL MAJOR ORGAN SYSTEMS VULNERABLE
- Rectal temperature 105°F - 110°F (41°-43°C), >110°F (43°C)=DEATH
- Severe dehydration, electrolyte & acid base imbalances, hypotension, prolonged coagulation, cardiac dysrhythmias, oliguria

**Rx of choice:** STABILIZE PATIENT 1st
- **O₂** supplementation, **IV** fluids
- Prompt active cooling to 103°F (39.4°C)
  - Use tepid water, NEVER COLD WATER or ICE
  - Monitor temp Q 5-10 min to avoid hypothermia
- **Prophylactic broad-spectrum antibiotics:** GI sloughing/bacterial translocation
- Rx sequelae: coagulopathy, DIC, acute renal failure, bone marrow dysfunction, multi-organ failure

**Prognosis:**
- **Good to Guarded** Early Rx; **Guarded to Good** Obtunded, coagulopathy, renal fail, 2° organ damage
- **Grave** Severe heat stroke; death may occur w/in 24 hrs, if survive >24 hrs better prognosis

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**Classic Question(s)**

It is July in the Southern United States. A 5 year-old dog presents as an emergency collapsed and panting, with a rectal temperature of 105.9 F (41.1 C). The client left the dog in the car with the windows cracked open for a few minutes while she went shopping.

What is the most appropriate initial treatment for heat stroke in this patient?

What are two contraindicated treatments for heat stroke?

What are three risk factors for heat stroke in dogs?