

## Case Discussion: Introduction

You are called to a 24yr male who collapsed while running, now is unable to get up and isn't making sense per bystanders. Breathing normally but with an altered mental status. On arrival you find said patient in the care of some bystanders who are trying to get him to drink water as they were concerned he was dehydrated. He is speaking in full sentences that are not quite making sense (he keeps talking about needing to make it to his dinner reservation despite it being 2pm), rapid trauma assessment is negative. Vitals are HR 123, BP 110/70, RR 28, SpO2: 98% RA, Glucose 110. He has no focal findings on exam and BE-FAST is negative. He feels warm to touch and his skin is very sweaty. ECG with sinus tachycardia. You take an axillary temperature and find it to be 100F.

- What are you most concerned about? Are you worried or not worried?
- What are your immediate priorities?
- What do you need to evaluate for in a collapsed athlete like this?

## Last Known Well Time

This is a reminder to complete the Last Known Well field in ImageTrend when documenting a call for a stroke patient. This data field really helps the hospital stroke coordinators with specific data fields for CMS reports. Thank you on behalf of the hospitals!

## Upcoming Events and Training

**August 21st - UW Health Monthly Training: Respiratory Emergencies**

Register at [uwhealth.org/een](http://uwhealth.org/een)

**August 31st - EVOC Driving Range  
2302 Fish Hatchery Rd. Madison**

Register [here](#)

**September 18th - CEVO V Lecture (Virtual)**

Register [here](#)

## July Viz Quiz: An Unfortunate Dilemma

There is a multivehicle MVC with over 50 patients and is being treated as an MCI. An EMT-B is caring for a female patient with significant respiratory distress and extensive bruising to the chest. She is able to say her name and "help me" but makes no other purposeful movement. She has a weak pulse and there is no significant bleeding. What should they do next?

- A. Administer oxygen via non-rebreather
- B. Administer a duoneb
- C. Categorize as "immediate" (red)
- D. Perform a needle decompression

Submit your answer at <https://www.surveymonkey.com/r/3YHRBXC>.

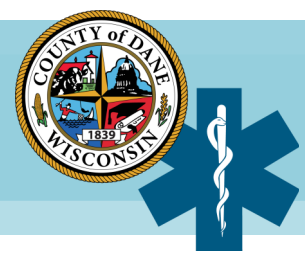
## June Viz Quiz Follow Up

**Answer: B. Rocky Mountain Spotted Fever and Requires Transport**

- Rocky Mountain spotted fever (RMSF) is a bacterial disease spread through the bite of an infected tick.
- The most common symptoms of Rocky Mountain spotted fever (RMSF) are a fever, headache, and rash.
- A rash is a common sign of RMSF. It usually develops 2 - 4 days after fever begins. The look of the rash can vary widely over the course of illness. Some rashes can look like red splotches and some look like pinpoint dots. RMSF is challenging to diagnose since the rash, a common symptom, often appears late in the illness.
- There is no vaccine to prevent RMSF.
- RMSF can be deadly if not treated early with doxycycline.



Congratulations to Kristi from Belleville for winning the June Viz Quiz prize!



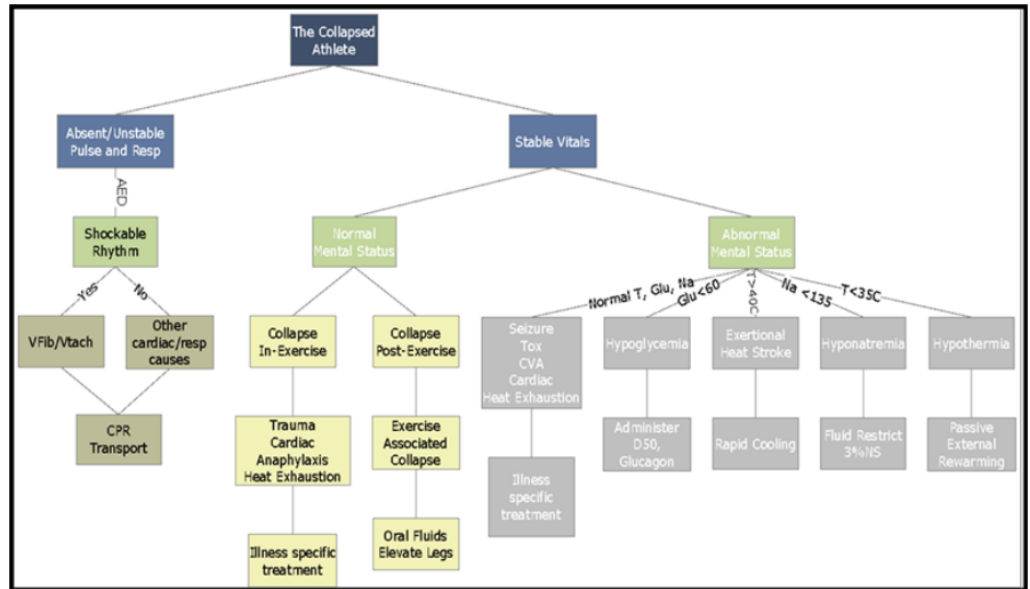
## Case Discussion Continued: Caring for the Collapsed Athlete

When caring for a patient who collapsed while exerting themselves (henceforth termed 'collapsed athlete'), there are some unique considerations to keep in mind. In general, the initial approach is the same as every patient- Airway, breathing, circulation- but there are other important etiologies to keep in mind during your assessment. Below is a general algorithm you can use during your assessment. Terms: T= Temperature; Glu=Glucose; Na= Sodium; CVA=Cerebral vascular accident; NS= Normal Saline.

**Cardiac arrest** - This needs to be your first assumption when approaching a collapsed athlete. There is a higher likelihood of a shockable arrest, so make sure you have an AED or know how to quickly access one.

**Mental Status** - This is a branch point as someone with an abnormal mental status warrants prompt evaluation for exercise specific pathologies:

**Exertional Heat Stroke** = Core temp >104F + CNS dysfunction (most commonly presenting as altered mental status).



- ◆ Key here is **CORE** temperature, surface temperatures are not reliably accurate in these situations, rectal at best.
- ◆ Another key is **COOLING**, which should be done prehospital if feasible. The goal is to lower the core temp within 30 min of collapse. Cool first, transport second. Best way to do this is cold water immersion (CWI); packing groin and axilla is another option but not as effective as CWI.
- ◆ Delayed cooling can have detrimental consequences such as rhabdomyolysis, disseminated intravascular coagulation (DIC), and liver failure.
- ◆ Common misconception: Heat Stroke means lack of sweating, this is false, you can have heat stroke and be very sweaty.

### Hyponatremia:

- ◆ More of an issue with more prolonged activities (i.e. marathons). Precipitated by volume loss from sweat and increased free water intake.
- ◆ Empiric isotonic fluids (i.e. NS) can worsen hyponatremia, so sodium should be checked prior to initiating IVF on a collapsed athlete with an ALTERED mental status.
- ◆ Treatment = hypertonic saline

### Hypoglycemia:

- ◆ More common in your patients with underlying history of diabetes
- ◆ Treat with dextrose

Returning to the case: You are able to obtain a POC sodium which is 140. Therefore, this case is most concerning for exertional heat stroke and should be treated as such. Remember, non-core temps are not reliable in this situation and with other causes of AMS being ruled out, EHS is the next, most likely etiology of this patient's presentation. If able, it is best to cool this patient on scene through cold water immersion so we can get that core temp down quickly. Placing the patient on a tarp and filling it with cold water/ice can be a creative way to achieve this on scene. Otherwise, rapid transport to the ED is paramount so that the patient can be cooled quickly. These patients will commonly be hypotensive and tachycardic, so IVF will likely be needed. As long as hyponatremia has been ruled out, isotonic (NS) IVF are appropriate.