

The Collapsed Athlete



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Disclosures

None of the faculty for this educational activity have relevant financial relationships with ineligible companies to disclose.

Outline

- Initial evaluation of a collapsed athlete
- Build the differential
- Rapid diagnostics
- On-field management

Case 1- The Struggling Athlete



CHAMP

Consortium for Health and Military Performance

SICKLE CELL TRAIT AND MILITARY SERVICE

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Differential Diagnosis

- Exertional Heat Illness
- Dehydration
- Exercise Associated Muscle Cramps
- Exercise Associated Collapse with Sick Cell Trait
- Rhabdomyolysis
- Electrolyte derangement

Exertional Heat Illness

Heat cramps



Heat exhaustion
stroke



Heat stroke

- Risk factors: Heat and humidity, dehydration, poor acclimatization, meds & supplements, history of heat stroke
- Exhaustion: Collapse during exercise, no CNS changes, modestly elevated core temp
- Heat stroke: Core temp > 104 F + CNS dysfunction. End-organ damage
- Sideline Treatment: Cool on site to 102 F. 1C every 5 minutes of cold water immersion. Cool then Transport

Weather Alert : Heat Advisory from FRI 1:00 PM CDT until FRI 8:00 PM CDT

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Another Kansas football player died during practice. What we know so far

CCUR | By Sam Zeff Aug 20, 2026 Updated 21 hrs ago

WBGT LEVEL/ZONES	ACTIVITY MODIFICATION
≤ 79.9° F	- Normal activities - Provide at least 3 separate rest breaks each hour with a minimum duration of 3 minutes each.
80° - 84.6° F	- MINIMUM 3 separate rest breaks each hour with a minimum duration of 4 minutes each. - Cold water immersion tub or other rapid cooling method should be prepared and ready.
84.7° - 87.7° F	- MINIMUM 4 separate rest breaks each hour with a minimum duration of 4 minutes each. 2 HOUR MAXIMUM length of practice (not including rest breaks) - Cold water immersion tub or other rapid cooling method prepared and ready - Consider competition alterations - Coordinate with contest officials to allow for additional breaks - Shorten length of sub-varsity competitions - Shorten length of course (Cross Country) - Football specific: - Protective equipment should be limited to helmets and shoulder pads, and these should be removed for conditioning. - If practice begins in a cooler range (green or yellow), but increases to orange during practice, players may continue practice in full protective gear.
87.8° - 89.7° F	1 HOUR MAXIMUM length of practice (not including rest breaks) - MINIMUM 20 minutes of rest breaks distributed throughout the 1 hour of practice - Cold water immersion tub or other rapid cooling method prepared and ready - Consider competition alterations - Coordinate with contest officials to allow for additional breaks - Shorten length of sub-varsity competitions - Shorten length of course (Cross Country) - Consider delaying practice/competitions until a cooler WBGT is reached - Football specific: - No protective equipment should be worn. - No conditioning activities
≥ 89.8° F	No outdoor workouts. Delay practice/competitions until a cooler WBGT is reached.



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Extreme Heat Warning

until PM 8:00 PM CDT, Farnen County, Denton County, Cooke County, Kaufman County, Rains County, Hunt County, Hood County, Delta County, Ellis County, Van Zandt County, Parker County, Palo Pinto County, Tarrant County, Wise County, Johnson County, Lamar County, Sevier County, Jack County, Rockwall County, Hopkins County, Collin County, Dallas County

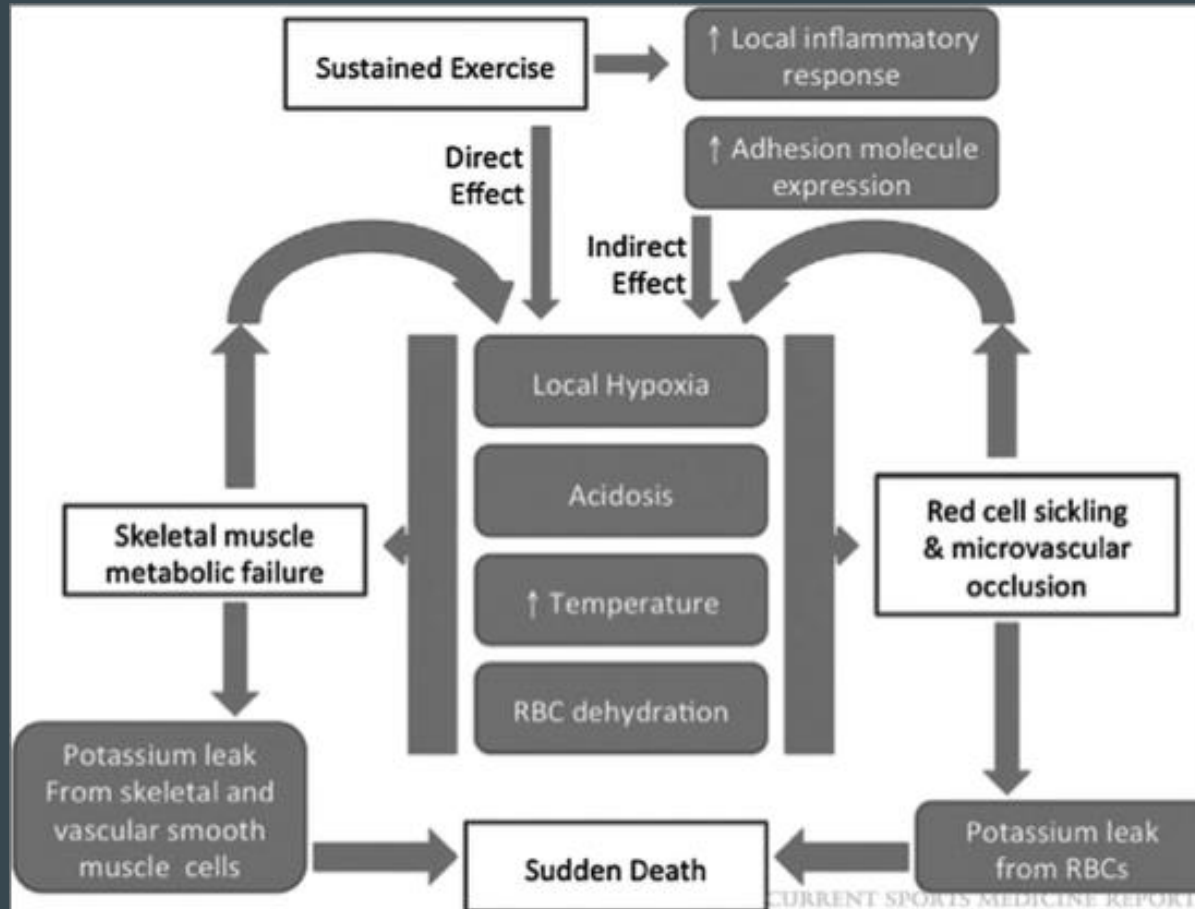
Lancaster football player dies after suffering heat emergency during practice

By Dionne Anglin and Tracy DeLatta | FOX 4 | Lancaster | Updated August 20, 2025 4:25 PM CDT | Published August 20, 2025 12:39 PM CDT

EAMC & ECAST

- Exercise Associated Muscle Cramping: Heat, dehydration, injury, etc
- Sideline Treatment: Stretch, cool, oral hydration

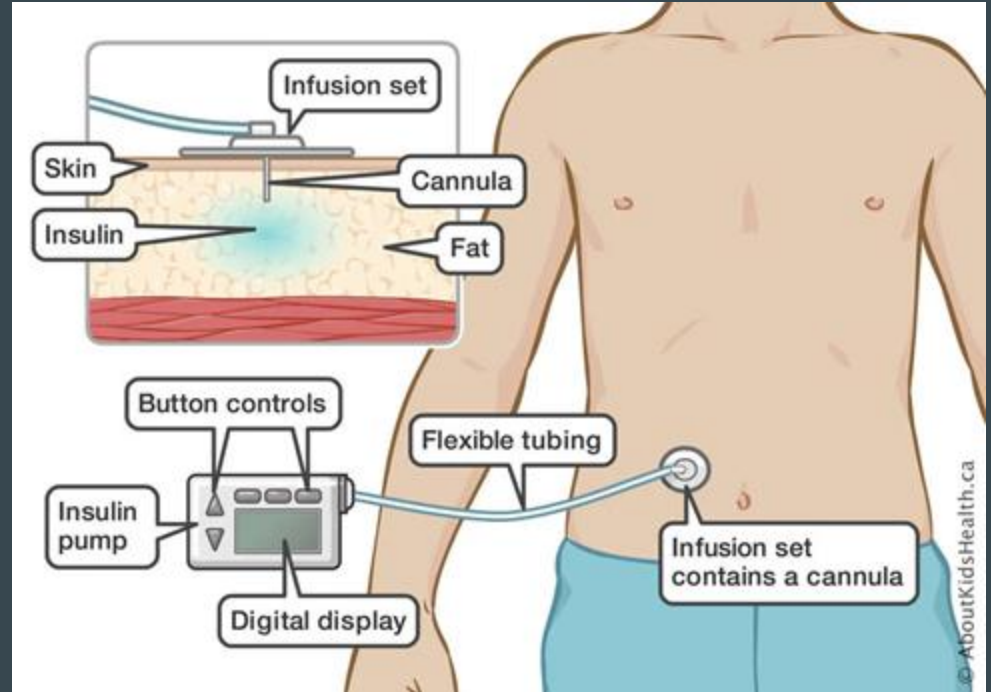
- Exercise Collapse Associated with Sickle Cell Trait (ECAST): SCT is usually benign, but can result in sickling during intense activity.
- Risk of death in D1 athletes 37x higher for those with SCT.
- Intense pain and weakness without cramps
- Cascade of rhabdomyolysis, electrolyte derangements, acidosis, organ failure
- Sideline Treatment: Recognition is key. Emergent transport



Glucose & Sodium

- Hypoglycemia: blood glucose < 70 mg/dl. Consider in undifferentiated AMS. Look for insulin pump, bracelets, etc.
- Sideline Treatment: Oral glucose, D50 if unable to tolerate orals & have IV access. Pause the pump

- Hyponatremia: sodium < 135 mmol/L during or up to 24 hours after event.
- Excessive free water consumption, possible hypothalamic activation, ADH activation, renal reabsorption. NSAIDs
- Lightheaded, malaise, nausea, headache to AMS, seizure, oliguria, death
- Sideline Treatment: Free water restriction, dietary salt. Severe- 100ml bolus hypertonic saline q10m x 3, emergent transport



Case 2- “they just dropped”



Primary Survey

Airway

Breathing

Circulation

Disability

Exposure

Is the airway open?

Are they breathing?

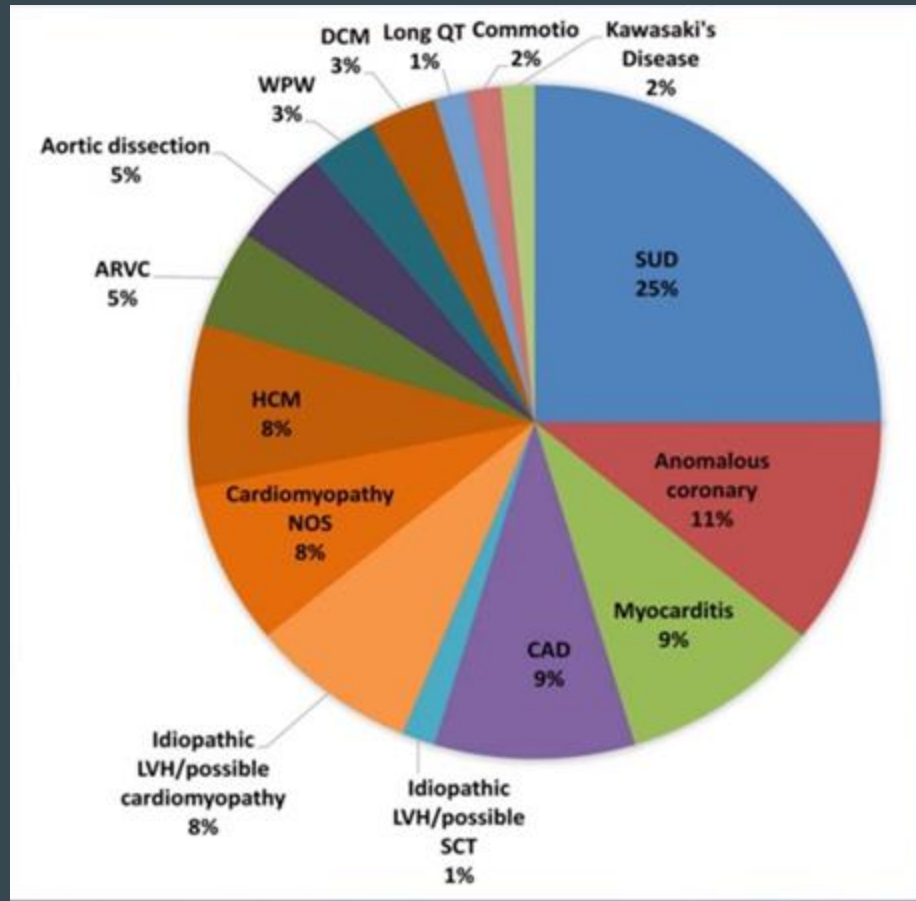
Do they have a
pulse?

Do they have a
neuro deficit?

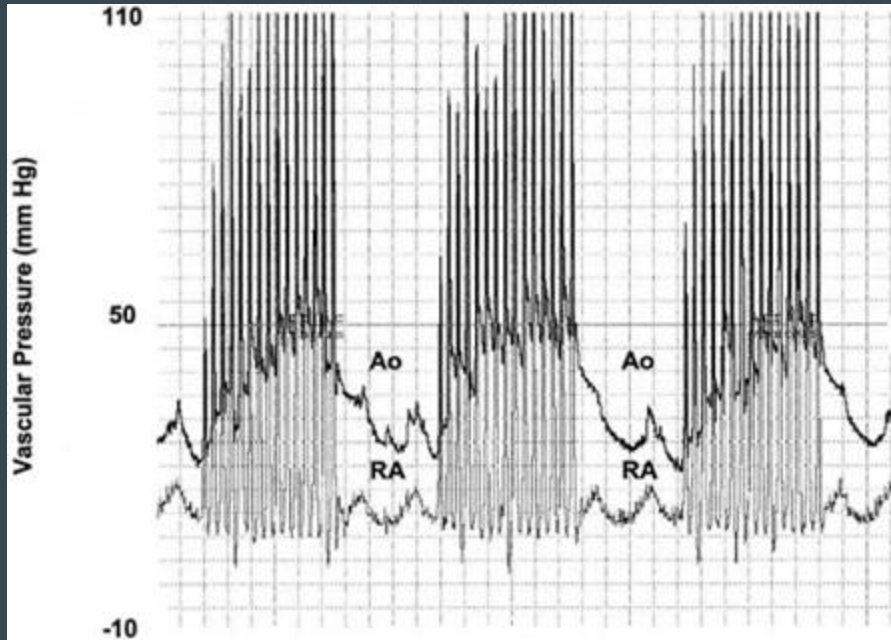
Can I see any other
cause?

Differential Diagnosis:

- Sudden Cardiac Arrest
- Traumatic Brain Injury
- Cervical Spine Injury
- Seizure
- Airway Emergency
- Trauma



CPR & AED



CPR is as easy as

C-A-B



Compressions
Push hard and fast on the center of the victim's chest.



Airway
Tilt the victim's head back, and lift the chin to open the airway.



Breathing
Give mouth-to-mouth rescue breaths.

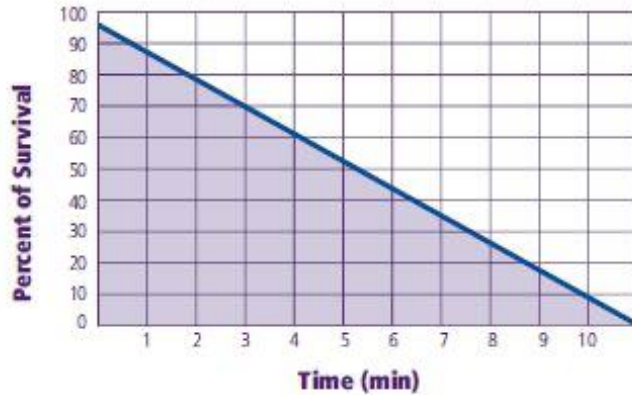
American Heart Association 

Learn and Live

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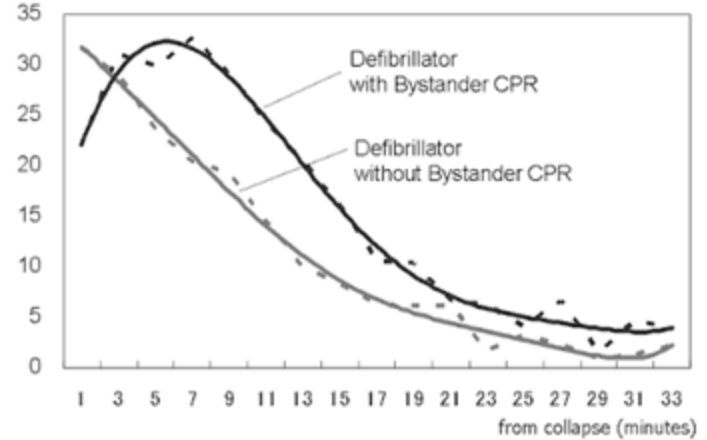
CPR & AED

Figure 1. Survival rates after V-Fib cardiac arrest decrease 7-10% with every minute that defibrillation is delayed.



Adapted from Guidelines 2000 for Cardiovascular Resuscitation and Emergency Cardiovascular Care. *Circulation* 2000; 102 (suppl) 8.

Proportion of survival with good neurological outcome (%)



Effective CPR and Early Defibrillation

SAVES LIVES

Case 3- Fall at the Finish



FIVE LOOPS. SIXTY HOURS. ONE LEGEND.

THE FINISHER



Differential Diagnosis

- Sudden Cardiac Arrest
- EAMC/ECAST
- Hyponatremia/Hypoglycemia
- Respiratory Emergency
- Environmental
- Stroke
- ACS
- Trauma

Respiratory Emergencies

- Asthma: Wheezing progressing to “dead quiet”
- Sideline Treatment: Albuterol, supplemental O₂, emergent transport

- Airway trauma: Swelling, hoarseness, difficulty swallowing
- Sideline Treatment: Emergent transport

- Airway foreign body: Stridor, choking
- Sideline Treatment: Heimlich, finger sweep, emergent transport.
- ~~Pocket knife & a pen~~

Trauma

- Head: Intracranial Hemorrhage. Lethargy, AMS, repeated vomiting, vision change, seizure
- Cervical Spine: Fracture, spinal shock. Sudden or progressive bilateral paresthesias, weakness, loss of coordination.
- Thoracic: Pneumothorax, commotio cordis. Shortness of breath, syncope, cardiac arrest.
- Abdominal: Internal bleeding, spleen & liver, hollow viscus (handlebars). Abdominal pain, bruising, distension, hypotension
- Sideline Treatment: Supportive care, spinal precautions, emergent transport

Exercise Associated Collapse

- Exercise associated postural hypotension- transient, impaired baroreflexes with peripheral vasoconstriction, volume depletion, increased vasomotor tone
- Diagnosis of exclusion
- Sideline treatment: Supportive care. Raise legs, cools, hydrate, monitor

Review

- Case 1: The struggling athlete
 - EHS, ECAST, Metabolic
- Case 2: Cardiac arrest
 - CPR and AED
- Case 3: Delayed collapse
 - All of the above, Trauma, Respiratory, Exercise Associated Collapse

Collapsed Athlete Triage (Master Algorithm)



Questions?