

Station 4: Deresuscitation Station

During the 2009 Detroit Free Press / Flagstar Marathon, three men (ages 26, 36 and 65) died within minutes of each other near or at the finish line.

As the Detroit Free Press reported the next day:

“It had been a chilly, but buoyant morning. And then tragedy hit at 9:02 a.m.

That’s when Daniel Langdon, 36, of Laingsburg collapsed on Michigan Avenue between the 11- and 12-mile markers ...

Fifteen minutes later, at 9:17 a.m, 65-year-old Rick Brown of Marietta, Ohio, collapsed near where Langdon went down...

And then Jon Fenlon, 26, of Waterford collapsed at about 9:18 a.m., just after finishing the half-marathon in 1:53:37.

Marathon doctors and race officials said rapid, state-of-the- art resuscitation was provided. There were 14 doctors on the team of more than 60 health workers, directed by an emergency physician from Detroit Receiving Hospital.”



<https://www.youtube.com/watch?v=Wi-b-AKUHPY>

STORY · Published January 14, 2015 1:20am EST

Autopsies for Three Who Died in Detroit Marathon Inconclusive

f t p i m

DETROIT – The deaths of three runners who collapsed during a 13.1-mile half marathon appear to have been an aberration, but at least six runners have died while competing in such events in the last two months.

Autopsies were inconclusive Monday on the bodies of Rick Brown, 65, of Marietta, Ohio; Daniel Langdon, 36, of Laingsburg in central Michigan; and Jonathan Fenlon, 26, of Waterford, northwest of Detroit. The Wayne County medical examiner has requested toxicology tests.

The three died Sunday during or after running a half marathon at the Detroit Free Press/Flagstar Bank Marathon. Brown and Langdon collapsed near the end of the race, and Fenlon died after crossing the finish line. Friends and family of the men said they had trained for the 13.1-mile race and were in great shape.

<https://www.foxnews.com/story/autopsies-for-three-who-died-in-detroit-marathon-inconclusive>

You find yourself as part of the team tasked with preparing medical care for this year’s Detroit Marathon, which takes place Saturday Oct 18^h 2026.



References and illuminating articles to consider taking a peek at en-route to this station:

1. Dayer, M et al. *Mortality during marathons: a narrative review of the literature*. British Medical Journal Open Sport and Exercise Medicine, 2019.
2. Bennett, B et al. *Wilderness Medical Society Clinical Practice Guidelines for the Management of Exercise-Associated Hyponatremia: 2019 Update*. Wilderness and Environmental Medicine, 2019.
3. Malbrain, M et al. *Everything you need to know about deresuscitation*. Intensive Care Medicine, 2022.
4. Zavorsky, G et al. *Pulmonary Edema is frequently triggered by marathon running*. European Respiratory Journal, 2012.
5. Hanson, M. *The Most Bizarre Marathon in Olympic History*. Outside Magazine. Website, accessed May 2023.
<https://www.outsideonline.com/health/running/culture-running/history/strange-running-history-the-1904-olympic-marathon/>
6. Beaubien-Souljiny W, et al. *Quantifying systemic congestion with Point-Of-Care ultrasound: development of the venous excess ultrasound grading system*. Ultrasound Journal, 2020
7. *The VExUS Score: Fluid Status, Reconsidered*. Florida College of Emergency Physicians. https://fcep.org/the-vexus-score-fluid-status-reconsidered/?utm_source=rss&utm_medium=rss&utm_campaign=the-vexus-score-fluid-status-reconsidered



Station 4: Deresuscitation Station



1 Point Medical resources are finite and generally limited at a large event such as a marathon. During which stage of a marathon do most deaths occur?

One author notes “Marathon running is linked to an increased risk of pulmonary edema, and it seems that women are at higher risk than men regardless of marathon finishing time.”³

1 Point The most common cause of death in marathon runners is due to intrinsic heart disease, predominantly in men over 40.¹ What is a more common cause of death in younger marathon runners?

1 Point The Wilderness Medical Society recommends avoidance of overhydration. How much should you drink during endurance exercise?

1 Point You encounter a marathon runner that is displaying moderate respiratory distress and altered mental status. How can you use POCUS to differentiate between dehydration, cardiogenic pulmonary edema (such as MI), and noncardiogenic pulmonary edema (such as from exercise induced hyponatremia)?

The term “**deresuscitation**” was coined in 2014 and defined as active fluid removal in patients with fluid overload.³ It has become recognized that both fluid administration and fluid removal have potential for both harm and benefit.

1 Point The VEXUS score uses POCUS to assess if there is vascular congestion (volume overload). [REDACTED] ?

Measure your teammate’s VEXUS score using POCUS

1 Point Assess IVC

1 Point Assess Hepatic Vein

1 Point Assess Portal Vein

1 Point Assess Renal Vein

1 Point Complete this entire station within 10 minutes