



GRATEFUL TO BE ALIVE

DAMAR HAMLIN COURAGEOUSLY PREPARES FOR NFL COMEBACK

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Commotio cordis. In Latin, it means “agitation or disruption of the heart,” where a blunt force trauma creates a distortion of the cardiac muscle to cause an inappropriate depolarization (and dangerous fibrillations)

in an otherwise structurally normal heart. Commotio cordis has been in the nomenclature for centuries, first appearing in the medical literature in the mid-18th century in the context of chest trauma among workers. Prior to January 2nd, 2023, case reports had been published but the condition was relatively unknown to the general public.

Then, on the final week of ESPN’s Monday Night Football, Damar Hamlin, a 24-year-old safety in his second season with the Buffalo Bills, had a near-fatal collapse several minutes into the first quarter of the game after making an open field tackle into Cincinnati Bengals wide receiver, Tee Higgins. There was nothing particularly



violent about the tackle; Higgins' right shoulder hit Damar in the chest area overlying the heart, leading to cardiac arrest.

As the Twittersverse reacted in real time to the events unfolding on the field, 23.8 million viewers tuned into the game watching to see if Damar would survive. Grief-stricken teammates surrounded him while witnessing eight minutes of CPR being administered until his heartbeat was restored. Medical professionals then used an automated external defibrillator (AED) to shock his heart into a normal rhythm so that it could pump blood to the rest of the body.

An hour after the incident, NFL executives postponed the game due to the gravity of the situation. It would become the most watched telecast in NFL history, and would bring awareness of Commotio Cordis to the general public.

Denny Kellington, a Buffalo Bills assistant athletic trainer, rushed onto the field and administered life-saving CPR to restore Hamlin's heartbeat. Hamlin was then transported to Cincinnati Hospital in critical condition and, thankfully, lived to share his story. Kellington received special recognition and a vote for NFL MVP for his heroic actions

to save Damar's life. Damar truly beat the odds. According to the American Heart Association, 350,000 resuscitation attempts are made outside of hospitals annually, with an average survival rate of just 10%.

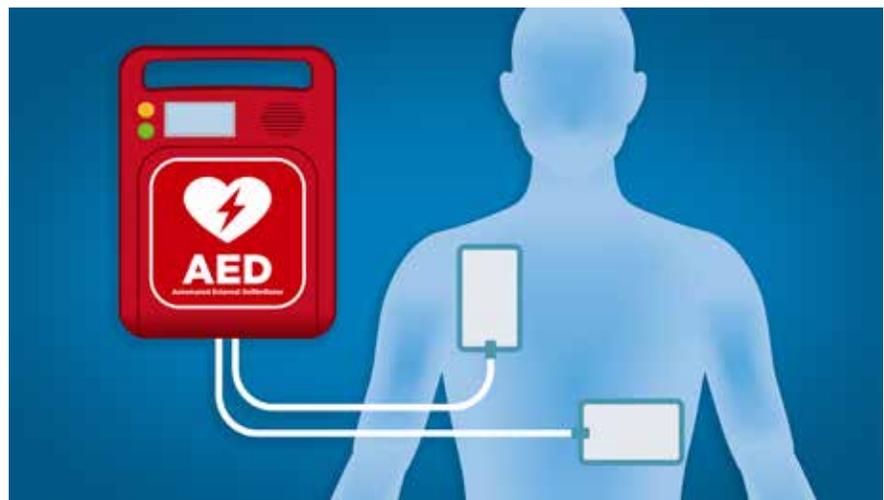
WHAT IS COMMOTIO CORDIS?

Commotio cordis is a sudden cardiac arrest secondary to blunt, nonpenetrating trauma to the chest wall without damage to the ribs, chest, or heart. It is a rare disruption of the heart rhythm that occurs as a result of a blow to the area directly above the heart at a critical instant during the heartbeat. Higher survival rates occur if resuscitation begins within three minutes.



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Thankfully, survival rates for Commotio Cordis have increased over the past decade due to rapid response times, access to on-site automated external defibrillators (AEDs), and a greater public awareness of the condition. Most cases currently reported are in young male athletes (mostly under the age of 20) who participate in sports that incur blows to the chest from projectiles (baseballs, softballs, hockey pucks), or body contact with other athletes (lacrosse and football).





HOW COMMON IS COMMOTIO CORDIS?

As of 1980, only 334 cases have been documented in the medical literature. A National Commotio Cordis Registry was started in 1995 to determine the number of new cases per year. We are unaware of the true incidence of the condition because reporting to the registry is voluntary, not mandatory. Reported cases are infrequent, with less than 30 per year.

BOBCAT CLASSIC		
 AUG 26 (FRI) / 10 A.M. VS SAN FRANCISCO		BOZEMAN / SHROYER GYMNASIUM
 AUG 26 (FRI) / 7 P.M. VS GRAND CANYON		BOZEMAN / SHROYER GYMNASIUM
 AUG 27 (SAT) / 1 P.M. VS ST. THOMAS		BOZEMAN / SHROYER GYMNASIUM
BRYANT TOURNAMENT		
 SEP 2 (FRI) / 2 P.M. (MT) BOSTON COLLEGE		SMITHFIELD, RI
 SEP 3 (SAT) / 8 A.M. (MT) HARVARD		SMITHFIELD, RI
 SEP 3 (SAT) / 11 A.M. (MT) BRYANT		SMITHFIELD, RI
NORTH DAKOTA TOURNAMENT		
 SEP 8 (THU) / 6 P.M. (MT) NORTH DAKOTA		GRAND FORKS, ND
 SEP 9 (FRI) / 4 P.M. (MT) FORDHAM		GRAND FORKS, ND
BOBCAT INVITATIONAL		
 SEP 15 (THU) / 7 P.M. VS BOISE STATE		BOZEMAN / SHROYER GYMNASIUM
 SEP 16 (FRI) / 7 P.M. VS WASHINGTON		BOZEMAN / SHROYER GYMNASIUM
 SEP 17 (SAT) / 1 P.M. VS NORTH TEXAS		BOZEMAN / SHROYER GYMNASIUM
 SEP 22 (THU) / 7 P.M. VS EASTERN WASHINGTON	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 SEP 24 (SAT) / 7 P.M. NORTHERN COLORADO	BIG SKY	GREELEY, CO
 SEP 30 (FRI) / 7 P.M. VS MONTANA	BIG SKY	BOZEMAN / BRICK BREEDEN FIELDHOUSE
 OCT 6 (THU) / 8 P.M. (MT) AT PORTLAND STATE	BIG SKY	PORTLAND, OR
 OCT 6 (SAT) / 2 P.M. (MT) AT SACRAMENTO STATE	BIG SKY	SACRAMENTO, CA
 OCT 13 (THU) / 7 P.M. VS NORTHERN COLORADO	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 OCT 15 (SAT) / 7 P.M. VS NORTHERN ARIZONA UNIVERSITY	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 OCT 20 (THU) / 7 P.M. VS IDAHO STATE	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 OCT 22 (SAT) / 7 P.M. VS WEBER STATE	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 OCT 27 (THU) / 7 P.M. (MT) AT IDAHO	BIG SKY	MOSCOW, ID
 OCT 28 (FRI) / 7 P.M. (MT) AT EASTERN WASHINGTON	BIG SKY	CHENEY, WA
 NOV 3 (THU) / 7 P.M. VS SACRAMENTO STATE	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 NOV 5 (SAT) / 7 P.M. VS PORTLAND STATE	BIG SKY	BOZEMAN / SHROYER GYMNASIUM
 NOV 11 (FRI) / 7 P.M. AT MONTANA	BIG SKY	MISSOULA, MONT.
 NOV 17 (THU) / 8 P.M. AT WEBER STATE	BIG SKY	OGDEN, UT
 NOV 18 (SAT) / 7 P.M. AT IDAHO STATE	BIG SKY	POCATELLO, ID

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BIG SKY TOURNAMENT	
NOV 23 (WED) / TBD	
QUARTERFINALS	OGDEN, UT
NOV 25 (FRI) / TBD	
SEMIFINALS	OGDEN, UT
NOV 26 (SAT) / TBD	
CHAMPIONSHIP	OGDEN, UT



HOW TO PREVENT COMMOTIO CORDIS AND IMPROVE SURVIVAL RATES?

As football is an inherently dangerous sport, it is wise to be aware of the known risks and mitigate them. The importance of athletic trainers knowing CPR and being prepared for these unique instances where sudden cardiac death can occur from heart rhythm disturbances cannot be emphasized enough. This includes someone witnessing the event, starting CPR, using an external defibrillator, and alerting medical authorities. Without immediate resuscitation and defibrillation, the prognosis of survival is low. The Buffalo Bills players and coaching staff are learning how to perform CPR and how to use an AED in preparation for Damar Hamlin's return to the team this fall.

According to the AHA website, after Damar's collapse, they reported a 620% increase in page views of Hands-Only CPR content pages.

DAMAR HAMLIN'S PARTNERSHIP WITH THE AMERICAN HEART ASSOCIATION

Damar Hamlin has spent the off-season recovering, and using his status as a role model to be a powerful force for good. He has partnered with the American Heart Association (AHA) as an ambassador for CPR awareness with his 3 for Heart challenge, outlining three easy steps to save a life (below). According to the AHA website, after Damar's collapse, they reported a 620% increase in page views of Hands-Only CPR content pages.

LEARN ABOUT HANDS-ONLY CPR

Donate to the American Heart Association to fund CPR awareness and education
Share Your Support on Social Media (#3forHeart)

DAMAR HAMLIN'S GRATITUDE FOR LIFE

I encourage everyone to watch the heartfelt message of gratitude Damar filmed on Instagram @d.ham3 for his friends, family, fans, teammates, first responders, the Bills training, athletic and medical staff, the University of Cincinnati Medical Center, the Buffalo Medical Center, the Bengals, the City of Cincinnati, and the

NFL, for showing an outpouring of love and support during his recovery. There were so many impactful moments, but this one really resonated with me:

Hamlin thanked the City of Cincinnati, the Bengals, and the rest of the NFL “for putting team allegiance aside to root for one kid’s life and just the humanity of a player that’s wearing Buffalo Blue. You put humanity above

team loyalty. You showed the world unity over division. I’m not surprised by it, but I’m deeply grateful, and I’ll be forever thankful and indebted for that.”

Damar’s story of survival (against the odds) and the heartfelt appreciation for the medical attention, love, and support he received is a beautiful reminder to us all to be grateful for every moment of our lives.

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 2. Maron BJ, Doerer JJ, Haas TS, Estes NA, 3rd, Link MS. Historical observation on commotio cordis. Heart Rhythm. 2006;3(5):605-606.
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