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## Blood Plasma Miracle at Boston

*Dr. Manary tells an amazing story of what blood plasma accomplished following Boston's tragic fire, relating why the precious fluid saved lives and telling how this medical miracle was accomplished. Every donor and prospective donor will read this fast-moving article with quiet pride.*

By **JAMES W. MANARY, M.D.**  
*Medical Director, Boston City Hospital*

**A**T LEAST 150 persons, nearly all of them horribly burned, owe their lives to the American Red Cross and to those men and women who have voluntarily given their blood to this great organization's Blood Donor Service.

They are the survivors of one of the most catastrophic holocausts in history—the disastrous fire in the Cocoanut Grove, the once ornate Boston night club, which became a funeral pyre for nearly 500 gay merrymakers. These 150 persons are the survivors of that night of horror and tragedy which surpassed the wildest experiences of medical men hardened by years of practice.

At the Boston City Hospital, where most of the victims were taken, the scene was one of utter confusion. Ambulances clogged the emergency entrances to unload charred lumps of humanity, some dead, some dying. Operating rooms and wards were filled with the agonized sufferers. The dead overflowed the morgue onto the floor of the laundry. The moans of the dying were an undertone pierced by the screams of the living.

The tragedy occurred a little

before 11 o'clock, Saturday night, November 28th, and the first victims started arriving at the hospital not much later. We immediately saw that here was a disaster of major proportions. Here were great numbers of people, seriously burned, at the point of death, nearly all of them suffering from severe shock. There was one thing we needed more than anything else—blood plasma.

At the City Hospital we have our own blood bank and it is adequate for normal needs. But we realized at once that this was not a normal situation, that our bank could not meet this terrible, overwhelming emergency. What could we do? We knew.

We put through an emergency call to the Boston Metropolitan Chapter of the American Red Cross, asking for 100 units of blood plasma. This plasma had originally been collected to save the lives of American servicemen fighting on the nation's far-flung battlefronts, but a small supply had been stored at the Red Cross Chapter House in Boston in case of enemy action in the area. Because of the disastrous nature of the Cocoanut Grove fire it was diverted to save these horribly burned men and women.

In less than half an hour after we called on the Red Cross for plasma, we were administering it to the patients. I am well aware that the Red Cross stands for service to humanity, but I have never seen a better example of it than I saw that horrible night. A few hours later it became apparent that the 100 units were not going to be enough, and again we called on the Red Cross. And again the Red Cross was there. This time it took just 20 minutes from the time of the call to the delivery of the plasma.



*Boston City Hospital's Medical Director:  
"What could we do?" . . .*

Obviously, speed was vital in treating these serious burns. The Red Cross not only gave us the plasma; it delivered it to us faster than we dared hope. All of those who were badly burned naturally lost a tremendous amount of body fluid, in many instances as much as two or three quarts. This had to be replaced if we were to avoid shock and keep our patients alive. It cannot be replaced by ordinary intravenous injections of salt solutions, because that, too, is immediately lost. It must be replaced by a protein solution, and there is only one protein solution that can be administered safely to a human being. That is blood plasma.

Thanks to the Red Cross, Dr. Charles C. Lund, who was in direct charge of the treatment of burns, had enough plasma on hand to prescribe routine injections of four to eight units for every patient showing signs of incipient shock—that is, with a pulse rate over 100 or abnormally low blood pressure. Approximately 80 per cent of our 135 patients were in this classification. Altogether we lost about 20 patients. Nothing could have saved them, not even plasma, for they did not die of shock or burns, but by asphyxiation when they breathed the hot gases which permeated the blazing inferno that was the Coconut Grove.

Some of our other patients were not so seriously burned and might have lived even without plasma, although it undoubtedly helped them tremendously. But all the others which we treated at the City Hospital, with few exceptions—possibly 75 in number—are alive today entirely because of plasma. The situation was comparable in other hospitals, staff doctors have informed me, and we estimate that plasma has saved at least 150 persons who without it inevitably would have died.

It was the most striking example of the miracle of plasma in the large-scale treatment of burns that I have ever known. It emphasizes more strongly than ever the urgent need for supplying our warships and our fighting fronts with unlimited supplies of this life-saving substance.

Some of the individual cases are amazing. Take that of a man who was severely burned on more than half his body. Our operating rooms were jammed when he was admitted

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JOSEPH R. HAMLIN  
CHAIRMAN  
BOSTON METROPOLITAN CHAPTER

I HAVE BEEN MOST GRATIFIED TO LEARN FROM ALL REPORTS OF THE EXCELLENT RELIEF SERVICE RENDERED IN CONNECTION WITH THE RECENT TRAGIC FIRE AND WARMLY CONGRATULATE YOU AND YOUR DISASTER RELIEF ORGANIZATION UNDER THE LEADERSHIP OF MR. WILLIAM A. PARKER AND YOUR VOLUNTEER SPECIAL SERVICES INCLUDING THE CANTEEN CORPS MOTOR CORPS AND OTHERS. THE EFFECTIVENESS OF THESE SERVICES OF THE BOSTON METROPOLITAN CHAPTER IS AT ONCE A TRIBUTE TO YOUR LEADERSHIP AND TO THE CAREFUL PREPAREDNESS WHICH HAS PLACED YOU IN POSITION TO MEET THE NEEDS OF ANY EMERGENCY HOWEVER UNFORESEEN. THE PAST TRADITIONS OF THE RED CROSS HAVE BEEN MAINTAINED AND A NOTABLE ADDITIONAL CHAPTER OF SERVICE HAS BEEN ADDED TO THE LONG LIST WHICH EXTENDS NOW OVER A PERIOD OF MORE THAN SIXTY YEARS.

NORMAN DAVIS

#### **Blood Miracle** (from page 3)

and he was sent directly to the ward. His blood pressure was so low it could not be measured. We were unable to treat his burns for at least two hours, but plasma therapy was started immediately. All night long and most of the next day that man was dying, but in the first 24 hours he had received 14 units of blood plasma. His blood pressure came back to normal without incident. Today his chances for recovery are better than 80 per cent. It is due entirely to blood plasma.

Or take the case of a woman seriously burned over half her body. She was in severe shock when admitted and under ordinary circumstances would have died within half an hour. Sixteen units of blood plasma were administered within the first 24 hours. She is alive today and has a fifty-fifty chance of living. Again, it is due entirely to blood plasma.

Another case was that of a woman severely burned over at least 40 per cent of her body. She seemed to have a better chance for life than the others when admitted, but she started

to fail rapidly. Her blood pressure dwindled to almost nothing. The next day after she was given 12 units of plasma, she rallied almost immediately. Except for plasma, she, too, would be dead today.

Many other cases could be cited to prove—if proof be needed—the value of blood plasma. There was no need to follow the patient's chart to notice the improvement. At first they presented a gruesome picture with their badly burned faces blown up like balloons, their lips swollen to four or five times normal thickness. Plasma drew this excess fluid out of their tissues and kept it where it belonged, in the circulatory system. One woman, whose own family couldn't recognize her at first, resumed an almost normal appearance in an amazingly short time.

Our doctors were particularly impressed with the manner in which the

Red Cross packages the plasma—a complete unit which is ready for use, easily and conveniently—within five minutes.

Of course this was the most dramatic part of the story at the City Hospital, but I cannot refer to the Red Cross' superb performance without mentioning the unselfish and extremely helpful work of the Red Cross Volunteer Nurse's Aide Corps; of the trained First Aiders who helped us unload and sort the living from the dead; the Canteen Corps, which fed our over-worked staff and the throngs of relatives and friends of the victims; the Red Cross nurses who rallied to our call for help; the Red Cross Motor Corps, whose ambulances shuttled back and forth between the hospital and the scene of disaster.

We needed help and we needed it badly. We got it—from the American Red Cross.



To blood plasma, Dr. Manary attributes the saving of 150 lives when weary doctors and nurses administered the precious fluid to horribly burned victims of the nation's second worst fire. Photo by courtesy the Boston Herald-Traveler