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**The First Human Heart**  
**Transplantation - I**

**Lead: In December 1967, surgeons in South Africa performed the first human heart transplant. 53-year-old Lewis Washkansky survived for 18 days.**

**Intro: *A Moment in Time* with Dan Roberts.**

**Content: The work of Dr. Christiaan Barnard in transplanting the heart of 25-year-old auto accident victim Denise Durvall into Washkansky built on more than two centuries of experimentation in**

**immunology and surgery. This progress was enhanced by the late 19<sup>th</sup>-century work on antibodies by Paul Ehrlich, the blood typing research of Karl Landsteiner in 1900, and Ilya Metchnikoff's theory of host rejection.**

**By the beginning of the twentieth century improvements in surgery techniques, particularly suturing, encouraged surgeons to begin experimenting with organ transplants. Soon it was clear that xenographic or cross-species transplants did not work at all and that allogeneic transplants between candidates of the same species rarely succeeded. What did work was autographic transplantation or a transplant within a single individual such as skin grafting.**

**By the 1950s research had led to the conclusion that organs such as the heart could theoretically be transplanted. This required dealing with host rejection of an alien organ. The body sees a heart from a donor as an enemy to be destroyed. Chemicals could suppress this phenomenon, but that enhances the risk of infection because the patient's immune system is compromised. Next time: heart transplantation comes into its own.**

**At the University of Richmond's School of Professional and Continuing Studies, I'm Dan Roberts.**

## **Resources**

**Cheng, Allen, “Heart Transplantation,” *Journal of Thoracic Disease*, 6 (8, August, 1, 2014): 1105-1109.**

**Stuart, Frank P, Michael M. Abecassis, Dixon B. Kaufman. *Organ Transplantation*. Austin, TX: Landes Bioscience, 2000.**

**<http://hearttransplant.com/history.html>.**

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