



Virtual Learning

Medical Interventions

Heart Transplant

May 19, 2020



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Lesson: May 19, 2020

Objective/Learning Target:

Recognize that there are many similarities and differences between a heart transplant and a kidney transplant. (4.3.6)



Let's Get Started:

1. Review the anatomy of the heart by completing this [quiz](#).
2. Review the structure and function of the heart and what needs to happen for a heart transplant [here](#).



Lesson Activity

View the this [interactive video](#) showing a heart transplant procedure and read this [background information](#). Summarize the procedure in a paragraph. Think about what skills would be required to perform this surgery as well as what specific medical interventions would be required.



Practice

Answer the following questions after completing the activity.

1. Why is the heart/lung machine necessary when performing heart transplant surgery?
2. What is the purpose of leaving behind the back wall of the left atrium of the patient's heart?
3. How does the defibrillator work to cause the heart to beat normally?
4. Why do you think there are fewer heart transplants performed each year than kidney transplants?
5. How do the heart and kidney transplants compare with each other?



Practice - Answers

Answer the following questions after completing the activity.

1. This machine acts as the heart to deliver oxygen throughout the body until the new heart has been transplanted.
2. the surgeon can connect the donor heart by sewing together the recipient and donor vena cava, aorta, pulmonary artery, and left atrium. Leaving behind the left atrium makes it easier for the surgeon to place the new heart in.
3. The defibrillator processor analyzes the rhythm of the heart to determine what shock is required to bring it back to normal. An electrical current is delivered to the heart through the patients chest (through the pads placed near the pecs and side of the stomach). The shock interrupts the unusual rhythm of the heart and causes it to return to normal.
4. Far fewer donors with a much more invasive procedure than kidneys.
5. Both require compatible donors, heart transplant requires more invasive/longer procedure, more kidney donors, etc.



Additional Practice/Resources

1. Check your understanding by creating a Venn Diagram comparing a kidney transplant with a heart transplant. What are the similarities and differences between them?
2. View the heart transplant procedure by accessing the [PBS website](#).
3. Learn more about the first adult heart transplant operation in the US [here](#).