
Heart Transplants - The Human Body

We live in a day and age of science. We live in a day and age of advancement of exponential technology. We live in a day and age of discovery. A world where a new thing pops up, and a new discovery is learnt and found through factors such as hints/clues of evidence which leads to what we live with today and a detrimental hazard if we did not have it, knowledge. Knowledge is what comes with these discoveries and it changes rapidly and for some people it is seen as unlimited, a source of intelligence, information and most importantly the stupendous world of science. Specifically, in this case, the topic of heart transplants and all the discovery, science, and knowledge we will learn in a few moments.

A major topic of science is the grand human body. And like how we have learnt in class, the human body is extremely important for us people. The human body is extraordinary and is a fascinating topic in itself, however what makes it functional is its body parts. Especially the heart and the brain. In this assignment I will be more focused and address the heart rather than the brain for later circumstances.

So, we know a lot about the heart and how it has 4 chambers, 2 ventricles and the atriums' and that it supports the body as it is a gateway for oxygen and blood cells to travel through to get around the body and do its thing right? However we do not know much about other subtopics of the heart such as heart transplants which I will be elaborating further on.

Hearts being so important to the body it is a calamity if it is suffering, ill or in pernicious health and a heart transplant is an act of kindness and sacrifice to support this problem and possibly turn it around but in some eyes seen as a dilemma. In literal terms a heart transplant is an operation in which a diseased or failing heart is replaced with a healthier heart and the process is only completed as it is a process of donation to save a loved one. This means it is a very prominent decision as it is giving your life away to save another which is extremely selfless which sends a message and role model of that an act of kindness can save the world. But in present day, most people do not do this, and it is not the reality people expect when they first hear about heart transplants. Not all heart transplants are necessarily kind donations/a donation that gives away a normal life in order to save another out of selflessness and wellbeing. This is the case for many heart transplants as lots of heart transplants revolve around dead people. I know it's dark but a dead person with a suitable and healthy heart could work to save someone on the brink of death due to heart failure because they are dead or they are brain dead but their organs are perfectly fine. For example, a car crash, the person is brain dead but their organs are fine. The family or if the person can, can choose to donate their organs or not to the person with the failing heart. Some do, but some do not. Most people do to save a life as the donor is brain dead or will most likely die soon so they might as well donate it. On the other hand, most people do not do this as the donor could be a family member or a loved one, and they want to stay attached to the loved one, or have some sort of belonging to them. Throwing them away feels like goodbye for them, or a different and worse way of saying goodbye and when loved ones are about to die, the family would most likely want to be with each other and the family member or keep the body for respects and in general, still being with their loved ones.

The process of heart transplants goes something like this...

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1. Your doctor informs you or encourages you or recommends you to do a heart transplant as it is the only resort
 2. Evaluate if you're eligible and then you will have to wait for a donor and see if their heart is suitable for you.
 3. Heart transplant surgery must be done immediately as the procedure of transplanting must start within 4 hours of removal of the organ.
 4. Surgery takes several hours and in this process will open up your chest, remove the diseased heart and replace it. Then the doctors will proceed to sew up your chest waiting for recovery in the future
 5. After the procedure you will have to take a lot of medicine, rehabilitation and doctor check ups to see whether the heart rejects your body or not.

Science research and discovery of new knowledge has contributed deeply to finding a solution to many human health issues such as cancer, mental health, and physical health problems like heart problems or kidney problems. Science knowledge has contributed to this because of the increasing and rapid growth of research and of discovering new things everyday to solve problems. It takes a long time, but in the long term science will solve our global problems. Growth being beneficial can be shown through more concern and ways demonstrated through studies of how to hit and tackle problems such as depression and other mental health disabilities. Doctors and scientists working hard every day to find cures and vaccines to diseases such as the common cold and the coronavirus resulting in many deaths and leads such as new methods of dealing with it.

Some eligible requirements to be a recipient are things such as having a heart condition that will benefit from the donation so it will not be a waste and is extremely positive/worth it and that this is the best option compared with other treatment methods. That you are healthy enough to support yourself, survive and carry on strongly with the new transplant. Agree to quit or remove things from your life that caused your heart failure. Being able to follow the medical protocols and programs to your stable recovery. That you can emotionally handle the donor and that you are the recipient accepting the life changing donation and finally that you will and hopefully do have a supportive network of family and friends for your transplant, change and recovery. The success rate for procedures is usually also extremely high if you are fitted with a good and suitable doctor who takes care of you well. The success rate of the procedure also depends on you and the decision you made to get to the transplant and how you prepared to get to where you are and whether or not it was right or not and whether or not you will live and fight through it all. Statistically, the current survival rates in Australian hospitals following heart transplant are about 85% of people live one year after a heart transplant about 75% of people live five years after a heart transplant about 60% of people live 10 years after a heart transplant. How long you live after a heart transplant depends on many factors, including age, general health, and response to the transplant.

Developments in technology have contributed excessively in our modern day and age to find solutions to a contemporary issue such as organ transplantation, treatment for illnesses such as allergies, diabetes, heart and mental illnesses such as anxiety and depression. For example, for the case of allergies, Australian doctors have claimed that they have potentially found a life long cure for fatal allergies for nuts, shellfish and other foods. They predicted that the researchers said they had been able to "turn off" the allergic response in tests on mice using gene therapy to desensitise the body's immune system, and suggested this could also be used to treat asthma. They predicted human trials could begin in just five or six years. Commenting

on the study, a leading expert said scientists had managed to cure allergies in mice before without this leading to an effective human treatment. The researchers also stated that this could potentially lead to a way to cure asthma, a common problem and the organisation of Asthma UK stated that "it will be a very exciting step forward for the world of health." Problems such as mental illness are steadily improving in the 21st century as now there are new medicines to help people, and people are also now more open to talk and to discuss openly to find a solution.

However with this procedure comes with many risks such as the rejection of the donors' heart which could fatally kill you quickly as the body cannot respond or work together resulting in your body failing. Most people also die after a year or so after the procedure however it is better safe than sorry. Your immune system may see your new donor heart as a foreign object and try to reject it as it is not cooperative or not used to it, which can damage the heart. Every heart transplant recipient receives medications to prevent rejection (immunosuppressants), and as a result, the rate of rejection continues to decrease fortunately. Sometimes, a change in medications will halt rejection if it occurs. To help avoid rejection, it's critical that you always take your medications as prescribed and keep all your appointments with your doctor. Rejection often occurs without symptoms. To determine whether your body is rejecting the new heart, you'll have frequent heart biopsies during the first year after your transplant. After that, you won't need biopsies as often.

During the biopsy, a tube is inserted into a vein in your neck or groin and directed to your heart. A biopsy device is run through the tube to take a tiny sample of heart tissue, which is examined in a lab. Another big problem or risk of heart transplants is death within a few months as people with their new donor heart do not function for long term and barely survive for short term resulting in death. Further risks are creating problems for the rest of your body parts such as you other organs, arteries, kidney damage which will lead to death as your body will not be able to function. And finally, the last major risks of heart transplants is diseases like cancer and infections which we all know is to be fatal.

There can be many reasons why different groups of people reject this proposition of heart transplant and like I said before, people most likely have a emotional, spiritual, mental, physical and loving bond and sense of belonging to the person who will die. Because of this bond and belonging to be with them at all sides till their last breaths makes them reject this proposition as to them the transplant is just throwing away their loved ones like trash to a rubbish bin. If they want something to remember the person for, their body should that for their grave and this creates a sense of reality that the person sits till with them even if they are dead. And a hollow body without its parts does not resemble the body of that person let alone the person themselves. People could also want to keep the persons' body for religious reasons or the pure grit and desperation of not wanting to let go and that they can't take in all the emotional cracks they will receive such as isolation, or a sense of it and paranoia of this isolation. People are attached to their loved ones and simply do not want to let go like turning a new leaf of their life. They cannot deal with the grief and the action they must take as in the end they are the ones making a decision which is much more of an impact then being forced to give away the body such as the trolley question of not doing anything and then a train will kill 5 people and save one person, but doing something saving the 5 people but killing that one person. The problem is killing those 5 people but having nothing to do with the kill or the intent and action of deciding to kill that one person and committing it to save the 5 other people. So in the end they are left to grieve and they want to do that as they are not ready for the next stage. The next stage being acceptance, and the decision to let go of your loved one physically like it being emotionally and

mentally is like this next stage of acceptance. Something they are not ready for. And they have the right to choose to do it or not.

In conclusion, this is the main information of heart transplants and it is a very interesting topic. It is a topic that involves the full scope of science and the important topic of the human body. It is a time for enchantment. A time for discovery. A time for advancement. A time to learn something new and finally a time for the next chapter of science.

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