Group 3

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Medical technology has helped many people and there are many types. Today you will become more knowledgeable in those four areas of medical study. The main topics are endowrist technology, physical therapy, emergency technology, and life support in hospitals. There are many other topics to explore but these are some of the main ones.

Endowrist technology is surgery performed by robots. It mimicks the same movements as a surgeons hand, wrist, and fingers and can make them longer which effects the operation by allowing the surgeon to have more exact stitching, exact dissection, and exact tissue manipulation. The InSite vision system has a 3 chip digital camera that lets you see the inner parts of the patient that is having the surgery. It gives high depth and the image is in the master controls that provides hand eye coordination that is used in open surgery. The surgeon operates by using the Surgeon Console which has the video monitor showing in 3D by the image.

Robotic technology lets you do more exact surgery with less needles, do more types of less needle using procedures, raise healing, and make your well being higher.

Robotic surgery has the benefits of lowering pain and trauma. It can also have less complications, less blood loss which will reduce the need to have blood transfusions. The patient doesn't feel as much pain after this type of operation. Other benefits include a smaller risk of getting an infection, not as long of a stay at the hospital, a quicker recovery, and less scarring after the operation.

Robotic surgery is the DaVinci Surgical System. Its a computer raised surgical action. It is made up of three parts: endoscope (an instrument used to view the inside of a body), instrument tips (the materials used for the surgery), and the viewer (an instrument used for viewing).

The DaVinci Surgical System is used in the new operating room facilities at Strong Memorial Hospital. The patients are in a regular surgery room with medical equipment around them except the surgeon is a farther away.

The surgeon is not physically with the patient and the DaVinci Control Console lets the surgeon see the patient with a 3D image that is taken by a special camera. The surgeon and the robot mimic each others hands using master controls, that allows him to see everything during the operation.
The robotic arms and one extra arm does what the surgeon wants. With the help of the supporting surgical team members, it uses the correct instruments and each instrument does the needed job such as clamping, suturing, and tissue shaping. This machine has provided many engineers to work as doctors and has helped others tremendously.

Physical therapy plays a big role in helping people. Physical therapists help injured people regain a normal state of function, as in walking or using your arm again. The therapy also works with all your muscles, and helps with broken bones. It also helps surgery patients and to improve your mobility.

Physical therapists can be found anywhere. They are now at public schools, hospitals, and at their own facilities. Physical therapy is becoming more and more advanced every year. The old things we still use today in physical therapy are the parallel bars, exercise balls, and even massage therapy.

The parallel bars help the person regain strength, balance, and to get their independence back. It also helps the person walk again. Massage therapy helps the person relieve aches, tension, and spasms. Massage therapy is becoming a very popular treatment because not only does it relieve pains, but it also helps your blood flow easier which delivers oxygen and nutrients, and it's a key to helping your muscles eliminate waste products.

One of the newer things we use now that has made a big impact on the physical therapy field is the Nintendo Wii. The Nintendo Wii can do multiple things at once, and helps your therapist know what else he/she can do for you to help you recover better and faster. The Wii improves your balance, your coordination, and strengthens all of your muscles. It is a fun and easy way to go through therapy, and best of all it's cheaper than all of the regular equipment. Physical therapy is a wonderful program for helping others.

Life support is a device or therapy that has been made to help someone survive until their body can take over. There are many different types of life support including tube feeding, parental nutrition, machine breathing and a heart or lung machine. For a person to need life support they have to have one or more of an essential system fail.

A person's respiratory system may fail causing them to need extra oxygen. Asthma and emphysema patients may need extra oxygen to overcome their disease. Sometimes machine breathing will also be used to help the patient. If a person needs a tracheotomy(trachea tube) they will be placed on a ventilator. Some tubes are placed through the mouth or nose while others are placed through a slit in the neck. These tubes are used to help patients breathe. A ventilator is a machine that pushes warm humid air through a patient's lungs. Some people need medication while on a ventilator; special ventilators are needed for children.
When someone’s cardiovascular system fails they are normally put on medication, but the heart can also be assisted by a machine if the medicine doesn't help. If the heart stops all together, it can be shocked back into rythym with a defibrillator.

If the kidneys fail, a person could have a kidney transplant or be given a artificial machine system. It can be used forever or just until the patient can have a transplant. Hemodialysis is used for kidney support. It is normally used three times a week to clean the blood of built up toxins. The machine removes, cleans, and replaces the blood of a patient through the use of a shunt.

If for some reason a patient cannot get enough food their intestines might shut down. The doctors will feed the patient through parental nutrition. The patient may or may not have full parental nutrition.

Rarely the nervous system will shut down, if this happens the patient's other systems will be kept functioning until the nervous system heals and can function again. Sometimes when a patient is dying the doctors keep up the futile treatment until the patient is brain dead. When a patient is brain dead they will probably be kept alive until they can donate organs.

Life support is not only for the comatose or really sick, it can be used at home too. Life support is an amazing thing that has saved many lives, maybe even yours.

Emergency Medical Technology saves many lives, becuase of how quick and safe it is. An ambulance takes a big part in emergency medical technology. An ambulance has many emergency machines and tools. Usually it responds to emergencies quickly. It also has the job of transporting the sick or injured to a hospital. There are many situations in where an ambulance is needed for example car accidents, heart attacks, slips and falls, child birth, or gunshot injuries. Many technology tools and machines are located in an ambulance. The one tool I thought was important was the defibrillator. It is used to start the heart again after it has stopped. It's an electric shock machine that sends electrodes to the electric impulses in the heart to get the heart beating again. Another machine located in an ambulance is the manual resuscitator. The manual resuscitator is like a manual ventilator most likely used during emergencies like respiratory arrest or cardiac arrest. One other tool that is less important, but still is in an ambulance is the electrical powered suction unit. It works as a vaccum in the process of sucking things out from the mouth such as saliva or vomit.

Emergency Medical Technicians are an important factor in Emergency Medical Technology. The Emergency Medical Technicians are the first to arrive in an emergency situation. They provide the patients with basic life support skills known as air way management, controlling bleeding, getting a heart started again, or providing oxygen. The technicians use safe and fast transportations. There are two kinds of technicians Emergency Medical Technician Basic and Emergency Medical Technician Paramedic. They are both able to deal with various medical technology devices.
The emergency room is another big thing that fits in with both ambulances and emergency medical technicians. An emergency room is a health care facility that provides fast treatment to severely ill and injured people. One of the most advanced emergency technology in an ER is the Siemens Sensation 16-slice CT Scanner. The scanner helps doctors diagnose and treat ill patients. It also helps them treat patients suffering heart attacks, or strokes. The scanner also can show images of bones, soft tissues, and blood vessels. One other emergency technology machine is an Electronic Medication Administration Record. It's a faster more easier electronic way to write a prescription for a patient and to see all the medications the patient is on.

Emergency medical technology helps doctors, patients, and you if you are seriously injured. This type of technology has saved many lives.

Medical technology has greatly improved our society and those to come. Some notable types are endowrist technology, physical therapy, life support in hospitals, and emergency medical technology. Many lives have been saved with these technologies.

Works Cited


