

CPRGlove

Brian Schaeffer- Biomedical
Engineering- University of Rhode
Island

CPR or Cardiopulmonary Resuscitation is a medical procedure performed on a victim of cardiac arrest. It is performed in the hospital, but it is one of few techniques taught to individuals so it can be performed in public in an emergency situation. This is because CPR is only helpful if performed within about 406 minutes before permanent damage begins after arrest. It is not very often that an ambulance can arrive on a scene in this short time span. Therefore the need for training individuals in this procedure becomes more and more important.

Currently, training and testing is done under the supervision of a teacher who is certified to teach others. However, compressions are sometimes performed inaccurately because certain individuals chests must be compressed different than others. Another problem with current training is, studies show that after 6 months of certification, about 40% of people who got certified now perform CPR incorrectly.



Students at McMaster University have invented a product to solve all of these problems. The CPRGlove is a glove containing sensors to measure compressions done by laypersons, or people training to perform CPR. The glove has a screen, which displays instructions to ensure the procedure is done properly. The screen displays, pictures, written instructions, and will display real time feedback on compressions including compression rate, depth, force and angle. The glove can also measure heart rate if it returns, and the positioning of the hands.



The glove could be also be used for training and testing. It can be hooked up to a computer screen to display instructions and feedback, ensuring students learn the correct technique. Also, the glove could be used for testing for certification, after actual measurements are used for results, the testing is more uniform, and will increase rates of proper practice in emergency situations.

<http://www.cprglove.com/>

http://www.time.com/time/specials/2007/article/0,28804,1677329_1678169_1678150,00.html

<http://en.wikipedia.org/wiki/Cpr>