



*Dr. Wilbur Franks, centre, with two assistants, fitting a Franks Flying Suit. Franks is lacing the suit up to fit the individual wearer and thereby to obtain the maximum protection from*  
*thecanadianencyclopedia.com*

During WWII the Canadian Dr. Wilbur Franks also developed the water-filled anti-gravity suit which was used to deter blackouts for pilots flying at high altitudes. Whenever

Frank tested his suit with a centrifugal unit in Toronto the Eglinton streetcar line was affected; it was on the same power grid. Frank's flying suit later became the prototype for space-suits.

Thus, as well as changing individuals forever, war also changed medicine. Nowhere was this more prevalent than in the development of artificial limbs. Many of the casualties of improvised explosive devices, or IEDs used in Sarajevo, Iraq and Afghanistan, who would formerly have died of their wounds, were stabilized by better trained and equipped medics, triage and forward medical units—in which rapid blood transfusion played a great part. The men and women rescued by medical intervention required state of the art artificial limbs and as a result the military establishment sunk millions into their development.

The innovation in reconstructive surgery and development of cutting edge prostheses, pioneered by the military, have been of immense benefit to the civilian population as well. Olympian Oscar Pistorius of South Africa who was born without fibulae, qualified for the 400m at the 2012 Olympics. Called "Blade Runner", Pistorius sported the latest in prostheses.

Veterans and civilians are currently testing artificial limbs whose movements they control through their own thoughts. The command nerves that previously served a limb now severed are redirected to another part of the body and thus used to activate the artificial limb. It takes training for the mind to connect its com-

mands from the new nerve centre to the limb, but already test subjects have mastered controlling their new artificial limbs through their mind alone. The test subjects get the limbs to function with great similarity to the actions that their former limb performed. Most of the research for these “bionic” limbs came initially out of the military establishment.

Thus although war takes much away, it also gives something back in return.