

# [Every era of technological developments, one of which](https://assignbuster.com/every-era-of-technological-developments-one-of-which/)

Every day we are traveling to a new era oftechnological developments, one of which and at the same time the most exiting innovationis nanotechnology. Despite other benefits that come with this new area ofscience the most important is in terms of medical treatments. This essay willstate the advantages and disadvantages of medical nanotechnology nowadays. Nanotechnology behaves very diverse regardingmedical treatments, because it has a wide range of advantages and uses. Tobegin with, nanotechnology can be used to transport medicine or drugs intodifferent parts of human body in a less harmful way, through tiny instrumentscalled nanoparticles. Some kinds of nanoparticles called the” gold-nanoparticles” have resulted effective in the treatment of cancer becauseof their ability to assimilate radiation. Once they enter inside the tumorcells they assimilate theenergy and heat up until the cancer cell is killed.

In addition, importantimplementation of nanomedicine is in terms of surgery. Extremely small surgical instruments and even robots are used today toperform microsurgeries with high preciseness, because they have nanocameraswithin which allows the doctor to have a close up look of the whole process. Furthermore, the visual dream of aworld free of viruses has finally come to a real thing with nanorobots whichare used as artificial white cells. They “ hit and kill” a dangerouspathogen via a microscopic laser device mounted on it. But the most incredibleinvention on this field is undoubtedly the creation of artificial organs for implants.

They promise an increase in the quality of human life with less infections anda prolonged lifetime. Until now there has been generated a human heart from steamcells, but this technology promises even more in the future. On the other hand even though thereare so many benefits from this new field of technology people still seem to beskeptical because of the potential risks it might have.

When speaking of risksevery new invention has its other side of the coin. Firstly, nanoparticles canbe plugged in our body through skin, breathing routes and digestion or injectedintentionally enough easier than most particles. If they can’t be broken downand digested or degraded, there is a danger they will gather up and damageorgans. Secondly, we don’t know exactly how nanotechnology co-operates withbiological systems. They could learn to reproduce themselves and act in thesame way as viruses and bacteria. Thirdly, there is a risk ofneuronal translocation. If these nanoparticles intersect with the brain, theycan cause translocation of inhaled particulates to the brain. Moreover, theplutonium artificial heart made of these nanoparticles may be risky for thehealth and environment if not transplanted in the proper way.

Plutonium is atoxic material and it should be treated very carefully during surgeries or itwill be lethal for the person. In conclusion, nanotechnology is a very tangible topic all over theworld today. It has a lot of advantages from medical treatments to artificialorgans implants as well as minor drawbacks which need to be solved. But in myopinion the future years will be a blast of this innovation not only in themedical field but in all activities related to human life.