

Every era of
technological
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which



Every day we are traveling to a new era of technological developments, one of which and at the same time the most exciting innovation is nanotechnology.

Despite other benefits that come with this new area of science the most important is in terms of medical treatments. This essay will state the advantages and disadvantages of medical nanotechnology nowadays.

Nanotechnology behaves very diverse regarding medical treatments, because it has a wide range of advantages and uses. To begin with, nanotechnology can be used to transport medicine or drugs into different parts of human body in a less harmful way, through tiny instruments called nanoparticles. Some kinds of nanoparticles called the "gold-nanoparticles" have resulted effective in the treatment of cancer because of their ability to assimilate radiation. Once they enter inside the tumor cells they assimilate the energy and heat up until the cancer cell is killed.

In addition, important implementation of nanomedicine is in terms of surgery. Extremely small surgical instruments and even robots are used today to perform microsurgeries with high preciseness, because they have nanocameras within which allows the doctor to have a close up look of the whole process. Furthermore, the visual dream of a world free of viruses has finally come to a real thing with nanorobots which are used as artificial white cells. They "hit and kill" a dangerous pathogen via a microscopic laser device mounted on it. But the most incredible invention 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 and a prolonged lifetime. Until now there has been generated a human heart from stem cells, but this technology promises even more in the future. On <https://assignbuster.com/every-era-of-technological-developments-one-of-which/>

the other hand even though there are so many benefits from this new field of technology people still seem to be skeptical because of the potential risks it might have.

When speaking of risk every new invention has its other side of the coin. Firstly, nanoparticles can be plugged in our body through skin, breathing routes and digestion or injected intentionally enough easier than most particles. If they can't be broken down and digested or degraded, there is a danger they will gather up and damage organs. Secondly, we don't know exactly how nanotechnology co-operates with biological systems. They could learn to reproduce themselves and act in the same way as viruses and bacteria. Thirdly, there is a risk of neuronal translocation. If these nanoparticles intersect with the brain, they can cause translocation of inhaled particulates to the brain. Moreover, the plutonium artificial heart made of these nanoparticles may be risky for the health and environment if not transplanted in the proper way.

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