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# NANOMATERIALS AND NANOTECHNOLOGY

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## Pros and cons of nanoparticles on health

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**N**anoparticles (NPs) are tiny particles. According to the International Organization for Standardization, the size range of NPs is in the nanometer range (1-100 nm). They exhibit unique properties and are used in various fields including medicine, environmental science, electronics, and textiles. However, there is growing concern about their potential adverse effects on human health. This poster provides a review of the literature on the pros and cons of NPs on human health. It discusses their interactions with biological systems and their beneficial uses in disease diagnosis, antimicrobial action, and cancer treatment. NPs can also act as catalytic converters to reduce pollution from the

environment. However, NPs can also have negative impacts on the human body such as being cytotoxic and genotoxic and affecting the reproductive system and sexual behavior. The poster also discusses routes of exposure and current regulations and guidelines for the safe use of NPs. It highlights the need for further research and the development of standardized toxicity testing methods to ensure safe use in various applications. Safe concentrations should also be considered in diagnosis and treatment. Overall, this poster aims to provide a comprehensive overview of the pros and cons of NPs on human health and to promote awareness and understanding of the potential risks and benefits associated with their use.

## Biography

Born with a passion for science, I pursued my Bachelor's degree with a major in Chemistry. As I delved deeper into the subject, I realized that my true interest lay in interdisciplinary fields. With this in mind, I decided to pursue a Masters in Biophysics, which I am currently working on and will complete in June 2023. During my project work, I worked on the synthesis, characterization, and application of NPs in the biological field. I am currently preparing a research paper related to NPs.

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