
“Good Things Come in Small Packets” - Nanotechnology A Boon in the Treatment of Cardiovascular Diseases

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Cardiovascular diseases (CVD) are the major cause of mortality and morbidity in both developing and developed countries. It represents 31% of global deaths, that constitutes a sizeable chunk of overall mortality. Conventional treatment of CVDs can only cure the symptoms but cannot repair the damaged or ischemic tissues; hence new therapeutic approaches are desperately warranted.

Nanotechnology represents one such approach. It involves the use of materials on an atomic, molecular, and supra molecular level (on the scale of 10-150 nanometers), for the purpose of not only diagnosing and treating cardiovascular diseases but also repairing damaged tissues in biological systems. It is a novel method that has shown great promise in dealing with cardiovascular complications.

Nanoparticles (NP) have an access to both intra- and extra-vascular compartments in human body, that makes them ideal for targeted therapeutics and imaging agents. This justifies their role in diagnosing atherosclerosis and acute coronary syndromes, and aiding clinicians in revascularization procedures and development of biomaterials. Antimicrobial NPs directed against microbial biofilms plus targeted drug delivery is now becoming increasingly attractive in identifying and treating endocarditis.

Nanotechnology is a new type of science that has a bright prospect. Hence, it needs more researchers and researches in the different fields of medicine and more funds to help those studies.