

Nanotechnology in elevation of the worldwide impact of obesity and obesity-related diseases: potential roles in human health and disease. ^[1]

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Abstract

Current worldwide data show epidemics of obesity and type 2 diabetes with no real solutions and continuous calls to changing lifestyle and food habits. Despite [health](#) [33] messages that are communicated by [health](#) [33] authorities, the epidemic is growing. More people are affected with consequences that are usually frightening as more resources are wasted, especially in areas where [health](#) [33] care and resources are lacking. Nanotechnology applications in food industry present approaches that help produce more tasty food with little calories, functional foods, and nutritional supplements and alter the fats and sugar contents of our foods with potential for many more applications. Consequently, this opens more windows to better control of many nutritional deficiencies associated with obesity and type 2 diabetes, especially among children and young adults who are addicted to fast food. With such potential, food producers, policy makers, [health](#) [33] authorities, food scientists, and governments need to collaborate and make all possible efforts to fund and support research in these areas of food produced using nanotechnology. So far, consumers are not prepared to accept food produced using nanotechnology, mainly because information on the safety of such products is not available enough. This issue needs to be addressed and researched well using suitable risk assessment methodologies. Consumers need to be assured, and involved as well, to avoid the "refusal state" that exists against many safe products such as genetically modified organisms and irradiated food. It is the possibility that consumers could perceive that they will bear the potential risks posed by nanotechnology applications while the benefits will accrue mainly to others, such as food producers and farmers.

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