

Nanonutrients' Promise: Vast Gains In Human Health

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Cover of the March issue of Food Technology magazine, published for 60 years by the non-profit Institute of Food Technologists.

The emerging discipline of nanotechnology holds the promise of improving functional foods and the capability of delivering healthful food compounds to the body where it can utilize them best. This is according to the latest issue of *Food Technology* magazine.

Remarkable achievements in nanotechnology—the science, engineering and technology of controlling matter one-billionth a meter in size—show great potential for positively influencing human health, the article states. By enhancing solubility, improving bioavailability, and facilitating the controlled release and protecting the stability of micronutrients in food products, nanotechnology could be a successful method to design smart

food systems able to target specific systems within the body and their functions.

The report cites current applications that allow nanoscale food components to be encapsulated and mixed with other foods in novel combinations. In some instances it means now being able to dissolve in water compounds like vitamins, antioxidants and healthy oils that usually are not water-soluble. In some instances, nanoscale particles are so small that they're clear, expanding their potential for use in a wide variety of products.

The article notes that nanoparticles are excellent for rapidly delivering high concentrations of healthy, active ingredients directly to cell membranes. On the other hand, the article highlights that nanoscale adhesive properties may be used to bind to harmful matter and remove potentially harmful compounds from the digestive tract.

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