‘Activated’ gold nanoparticles may fight obesity

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Scientists have found that when gold nanoparticles are injected into fat tissue and jolted with ultrasound, gentle heat from the particles helps convert energy-storing white fat into energy-burning brown fat. The particles also released nitric oxide gas, which reduced harmful inflammation and acted like enzymes to clean up damaging molecules and reduce stress in fat cells**.**

About Nanoparticles:

Nanoparticles are extremely small particles that are sized between 1 and 100 nanometers.

Size: A nanometer is one billionth of a metre. The small size allows nanoparticles to have unique properties compared to larger particles.

Properties: Nanoparticles have unique optical, electrical, magnetic, chemical, mechanical, thermal, and quantum properties compared to bulk materials. Their high surface area-to-volume ratio also results in enhanced reactivity, solubility, and heat transfer.

Application of Nanoparticles: Medicine & Healthcare - Drug delivery, bioimaging, diagnostics, dental care, sunscreens, antimicrobial coatings; **Electronics** - Nanoelectronics, sensors, data storage devices, quantum dot displays; **Energy** - Solar cells, lithium-ion batteries, fuel additives, hydrogen generation and storage; **Environment** - Pollutant degradation, water treatment, nano-filtration, catalytic converters;**Agriculture** - Pesticides, fertilizers, pathogen detection, encapsulated agrochemicals; Food & Packaging - Antimicrobial films, improved barrier properties, moisture control, and thermal stability; etc

Gold Nanoparticles: Gold Nanoparticles are tiny particles of gold, typically in the size range of 1–100 nanometers. At this nanoscale, gold exhibits unique physical, chemical, and optical properties that are very different from bulk gold.