Sugar-Powered Fuel Cells Could Recharge Inside Your Body

The limited capabilities of batteries are the bane of all gadgets, but they're particularly problematic for devices designed to be implanted into humans where simply plugging in a charging cable is impractical. So MIT researchers have nearly perfected a new type of fuel cell that's powered by glucose instead.

The whole idea of a sugar-powered fuel cell actually dates back to the 1970s, but recent advancements in silicon technology have allowed the cells to be created from non-organic materials, which won't break down in the body. The cell uses a platinum catalyst, mounted on a microchip, to strip electrons from glucose harvested from the cerebrospinal fluid that surrounds the brain. The total energy yield is only about a few hundred microwatts, so it doesn't generate enough juice to power something like a pacemaker. But it's more than enough to keep neural implants running. These could potentially help people suffering from brain or spinal cord injuries regain some control of their bodies. [MIT News via Fareastgizmos]

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What they don’t tell you is that they are two feet across and only suitable for giants.