

LiveScience (1/15, Moskowitz) reports that, according to a paper detailed in the January issue of the journal Nature Nanotechnology, some medical professionals "hope to treat diseases without using chemicals or hormones" by "injecting tiny magnets into" the body.

The "bead shaped," nano-sized magnets "bind with receptor molecules on cell walls," and "[w]hen a magnetic field is applied, the beads are attracted to each other and pull together, dragging the receptors with them." After clustering, the receptors then "release biochemical signals that trigger cell functions."

Thus far, a team of researchers, led by biologist Don Ingber of Children's Hospital Boston, have "used the magnets to stimulate an influx of calcium into immune system cells." Ingber suggests that, in the future, the technique could also be used "to create a pacemaker that could be controlled externally or to treat diabetes without the need for injections of insulin."