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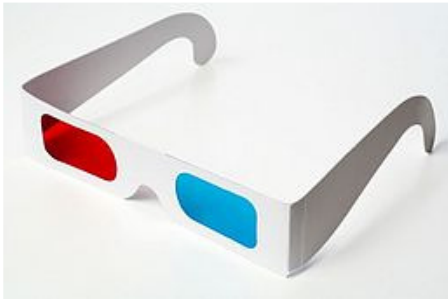


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Brain Surgery, Via the Nostril



When you're navigating around something as delicate as the brain — not to mention cutting things out of it — depth perception helps a lot.

That's part of the reason so much brain-surgery is still done the old-fashioned way: by cutting open the skull. [Endoscopes](#) are great for many types of minimally invasive surgery, but the kind that give a 3-D view are generally too bulky for brain surgery. That's beginning to change.

Laurence Perkins, a 44-year-old New York police detective, was reluctant to let doctors cut into his skull to get at a tumor growing at the base of his brain, particularly once he started talking to people who'd had the procedure he needed. "I said, boy, I really don't want to have surgery — this is my head we're talking about," he told the Health Blog.

So when he heard about a doctor willing to go in through his nose, he did his homework and decided to take the plunge.

Surgeons are becoming more adept at operating through [natural orifices](#), and that includes some brain surgeons who go in through the nose. In many ways, the method is appealing: Instead of literally pulling the brain away to get at tumors at the base of the skull, doctors can snake tools in on the end of tubes.

But a 2-D picture can be very limiting. So surgeons are experimenting with ways to get a 3-D picture, and on June 12, Perkins became the first person to have intranasal brain surgery entirely in 3-D, thanks to [Theodore Schwartz](#), an associate professor of neurosurgery and director of brain-tumor surgery at [New York Presbyterian Hospital/Weill Cornell](#).

Schwartz used a gizmo that sends images to a monitor, much like any endoscope; Schwartz wore special glasses that let him see the image in three dimensions. "You suddenly feel like you're sitting right inside his head," Schwartz says. The device was made by a company called [Visionsense](#); Schwartz says he has no financial ties to the company.

[Franco DeMonte](#), a professor of neurosurgery at [MD Anderson](#), tells the Health Blog that the device sounds promising, but it's still early days. "Can you put a scope up the nose and get to the base of the skull, see well enough and get the tumors out? I think the answer is yes," says DeMonte, who has been working with other researchers to develop 3-D visualization for robotic brain surgery.

"Is that the best way to do it? I think the jury's still out on that."

For one thing, doctors know a lot about open-skull surgery; intranasal surgery, whether or not in 3-D, is much newer territory. If something goes wrong, it's harder to regroup and fix it. And the skull is tough; it does a good job keeping pathogens from getting to the brain, even after it's been cut open and replaced. The nose and sinuses are "a dirty space," likely to harbor potentially dangerous germs, DeMonte says. "It's not the same as going through an antibioticly cleaned scalp."

Perkins is happy. He says his vision — which had deteriorated as the tumor pressed on his optic nerve — has already improved "somewhat." And although his nose was still packed and swollen nearly two weeks after the surgery, he says he had no pain from the procedure beyond the occasional headache, for which he took over-the-counter painkillers. "Every day gets a little better," he says.

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