

# Tampa Bay Times

## Eye implant offers hope to seniors with vision loss due to AMD



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CLEARWATER — Seventeen years after she had first been diagnosed with age-related macular degeneration, Winnie Betteley's vision had become so poor she no longer could watch TV, solve crossword puzzles, play cards — or even recognize her friends' faces.

But Betteley, a widow whose children all live out of state, insisted on her independence. After she was declared legally blind in 2007, she went to school to learn the skills she needed to remain in her Clearwater condo.

Still, she hated having to wait until close friends and neighbors spoke so she could recognize them. Magnifying devices and special high-powered lamps helped for a time, but otherwise doctors had nothing to offer her.

Until last year.

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Age-related macular degeneration (AMD) is the leading cause of vision loss and legal blindness in Americans over 50. It affects central vision and the ability to see faces, read, write, drive or do close work such as sewing and cooking. According to the National Eye Institute, about 15 million people have some form of AMD; nearly 2 million of them have significant vision loss.

There are two types of AMD: wet and dry. The wet form is caused by leaky blood vessels that grow under the retina. It can be treated with lasers and injectable medications. The dry form, which Betteley has, is more common and helped only by magnifying devices.

In both types, the macula, the center portion of the retina, becomes damaged, causing a central blind spot. Where someone with normal vision would see a face, an AMD patient would see a blurred or blacked-out area.

Betteley, 87, could see well enough to navigate familiar places like her immediate neighborhood. Otherwise, said



son-in-law, Merle Hanna, "She was lost."

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Today, that's slowly changing as Betteley adjusts to a tiny telescope that has been implanted in her right eye, a fairly new product offered through the CentraSight program. The device magnifies images one normally would perceive through the retina and projects them to the healthy part of the eye.

Betteley received her implant last June at the Sarasota Memorial Cape Surgery Center. If you look closely, you can see it in the center of her right eye. Smaller than a pea, she says she can't feel it — but she can see its effects.

"It is radically different from anything we've ever put in the eye," said Dr. Marc Levy, a neuro-ophthalmologist at the Sarasota Retina Institute. He was involved in the early testing of the device and has implanted 11 of them so far, including Betteley's.

The cost is about \$19,000, including doctor and surgery facility fees, and is covered by Medicare. Candidates must have the dry form of AMD, be at least 75 years old, have severe vision impairment in both eyes and meet other requirements.

They also must be willing to put in the work required.

After the hourlong procedure, patients spend weeks learning how to see again. The implanted eye becomes the source of central vision and the untreated eye is used for peripheral vision.

Results are mixed. Some patients eventually regain the ability to read with magnification, though that hasn't been the case for Betteley. Levy says vision continues to improve for about nine months after surgery.

"At first vision is blurry, then the images come into focus and they are brighter and larger," he said, "It takes patience and hard work for (the implant) to work for you. Depth perception is off. So you have to relearn how to see and do things, like pour a cup of coffee."

Though approved by the FDA in 2010, the device, manufactured by VisionCare Ophthalmic Technologies Inc. of Saratoga, Calif., is gradually becoming available locally.

Dr. Brian Madow, an assistant professor in the College of Medicine at USF Health, hopes to offer it in Tampa soon.

"It's not perfect, but it gives patients enough vision improvement that their quality of life improves, they regain some independence and it gives them more hope," he said.

The patient-selection process is rigorous and can take months. It takes a specially trained, multidisciplinary medical team to evaluate, treat and rehabilitate patients. Efforts are under way to loosen the age requirement, as some people with AMD lose their vision in their 50s and 60s.

Betteley says she notices improvement every day, though she still can't read, play cards or drive — state law forbids anyone from driving with the aid of a telescope.

But with her increased ability to get around, and enjoy her friends and her life, she's not disappointed. "I'm delighted and amazed that I can see the TV," she said. "It used to be just a black spot."

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## More about AMD

Though the cause of age-related macular degeneration is unknown, age is a major risk factor. So is smoking, which doubles your risk. The condition is more common among whites, especially those with a family history of AMD.

According to the National Institutes of Health, you may reduce your risk of AMD or slow its progression if you:

- Avoid smoking
- Exercise regularly
- Maintain normal blood pressure and cholesterol levels
- Eat a healthy diet rich in green, leafy vegetables and fish

To find out more about CentraSight and whether you might be eligible for it, visit [centrasight.com](http://centrasight.com) or call toll-free 1-877-997-4448.

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