

Experimental new medicines are rescuing people on the brink of blindness, enabling them to read, drive and sometimes even regain perfect vision

Health  
Nation  
7.7.02

# Restoring vision in elderly

**T**o doctors' amazement, experimental new medicines are rescuing people on the brink of blindness, enabling them to read, drive and sometimes even regain perfect vision. These lucky few are the first beneficiaries of an entirely new category of drugs that many hope will revolutionize the care of common eye diseases.

Several competing medicines are in development, all based on similar principles. They are designed to stop the two top causes of adult blindness — the "wet" form of macular degeneration, which affects the elderly, and diabetic retinopathy, the biggest source of blindness in working-age people.

Vision loss seems halted for most if they take the drugs soon after their symptoms begin. Some experience stunning reversals of what would have been inevitable blindness. "I'm telling you, it's miraculous," says Eileen Russell. Russell, 76, of Worcester, lost vision in her right eye four years ago. In May, her left eye went bad, too, and she was declared legally blind. But after four injections of one of the drugs her left eye is 20-25. She drives and reads and is thinking about returning to work as a nurse. "Yesterday, I had to write a check," she says. "It looked beautiful, right on the line, with a regular pen. I can do all the little things again."

Around the country, about 70 patients with wet macular degeneration have been treated with the same drug as Russell, Genentech's rhuFab. About half were treated by Dr. Jeffrey Heier of Ophthalmic Consultants of Boston, who says, "I can honestly say I have never seen anything as exciting as this." Experts caution that most of the results from the studies on this and similar drugs will not be known for at least a year or two. And for now, the treatments are available only to study volunteers. None of the drugs are intended for the more common but less aggressive "dry" kind of macular degeneration, nor will they work after eyesight has been gone for months.

Guessing the drugs' ultimate effectiveness based on early testing is risky. Still, doctors estimate that roughly one-quarter to one-third of people with newly diagnosed wet macular degeneration have had significant improvement in their eyesight. In most of the rest, loss of sight is stopped, at least temporarily. Among others helped by rhuFab is

Ernest Hayeck, a retired judge in Worcester, 40 miles west of Boston. One day last September, he discovered he was quickly going blind in his right eye. Doorways looked wavy, and everything was dim. Doctors said they could do nothing for him. With wet macular degeneration, vision in that eye would cloud to little or nothing within a few months at best.

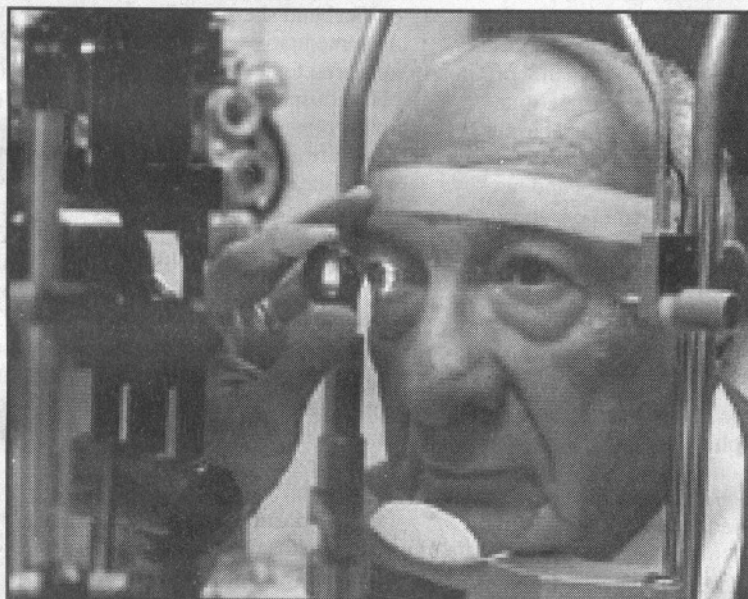
Hayeck was an active retiree, nine years off the state Superior Court but busy on the faculty of the National Judicial College and the board of Wendy's International. "I was resigned to it," he remembers. "I told myself I had had 77 good years." But

actually been able to restore vision in patients who otherwise would never be able to get back their central vision," he says. "It is a spectacular advance."

His macular degeneration patients include the actor Dabney Coleman, who in a week on rhuFab went from 20-400 to 20-40 in his left eye and returned to playing tennis.

An estimated 200,000 new cases of wet macular degeneration are diagnosed in the United States annually. About 4 million US diabetics have some degree of retinopathy, and 24,000 go blind each year.

Both diseases result from mis-



when told of Heier's rhuFab study, he seized the chance, even though it meant getting shots in his bad eye. In October, the judge got his first, which he said was painless. By then his sight had failed to 20-100. "I have achieved what I consider to be a miraculous result," says Hayeck. "My eyesight came back with a vengeance. By the time I had the fourth treatment, I was 20-20 with my glasses on."

Another of Heier's patients, Edward Nowak, 81, an outdoor writer and photographer in suburban Needham, found vision in his left eye improved from 20-400 last November to 20-50 now. "The results have been miraculous," he says. "You would think the good Lord himself did this."

Dr. Steven Schwartz, chief of the retina division at UCLA's Jules Stein Eye Institute, has worked with several of the new drugs. "For the first time in my career, I have

guided growth of blood vessels in the eyes. Since the new drugs attack this underlying problem, doctors hope they will work for both diseases.

The need for new treatments is especially dire in wet macular degeneration, because nothing can be done for most victims. Blindness often follows within months or even weeks of the first symptoms.

It occurs when leaky blood vessels sprout behind the retina, probably in a mistaken attempt to fix the slow breakdown of light-sensitive cells that occurs with age. These vessels ooze fluid and damage the fragile tissue that controls straight-ahead vision.

The new drugs vary, although most of them, like rhuFab, zero in on a growth-promoting protein called vascular epidermal growth factor, or VEGF. It appears to be an especially important trigger of damaging blood vessels in both forms of blindness. ■

# Reading in the dark

Health  
Dawn  
7-7-02

By Zofeen T. Ebrahim

**A**RE habits, specially bad ones, genetic? I believe so. Isn't it uncanny and irritatingly strange that you admonish and reprimand almost the same things in your children that you were admonished and reprimanded for by your parents? Among so many other memories, the one that is as vivid as ever is reading in the dark after my parents ordered me to bed. Now my 10-year-old is doing just the same.

The latest that came in the *British Medical Journal* is that reading under dim light or holding a book too close can damage the eyes of the young. US eye experts believe the way we use our eyes when young can affect the way the eyes develop. Douglas Frederick, associate clinical professor of ophthalmology at University of California, San Francisco, wrote that short-sightedness, or myopia, is on the rise. When short-sighted, the eyeball is too long or the lens too curved to focus an image on a retina. It usually first becomes apparent in older children and teenagers.

He said the patterns of short-sightedness were not just linked to childhood habits. "People whose professions entail much reading during either training or performance of the occupation have higher degrees of myopia, and that it may progress not just in people's teenage years, but throughout their 20s and 30s."

He also dispelled the myth that those suffering from short-sightedness were highly intelligent. It could just be that they may have studied hard and therefore achieved academic success, and possibly myopia. Since short-sightedness can run in families, therefore, suggests the professor, the condition can worsen if bad reading habits like holding the book too close goes unchecked.

## Supplementing omega

**W**hy are more and more children being diagnosed with learning difficulties or learning differences? In fact one recent study reveals that in the last two decades there has been a five-time increase in the number of children diagnosed with learning problems. According to the study it is more to do with a child's metabolism than his/her neurological condition. The research is based on the belief that the problem could well be due to a deficiency of fatty acids, specially since there has been a significant change in eating habits.

To put this theory to test a total of 120 children in 13 primary schools across County Durham, UK, with learning problems such as dyslexia, dyspraxia, attention deficiency hyper-activity (ADHA) disorder and autistic spectrum disorder will be observed to see if fish and plant extracts

make a difference. Supplements of omega three, which is found in fish, and omega six, found in plants and fish extracts will be given to the pupils at specific stages over the six-month trial period.

## Pop goes the fizz

**A**ccording to a recent news item reported in *Dawn*, the sale of fizzy drinks has been banned in schools of southern Indian city of Hyderabad. The reason being that colas are not good for health. Of course the kids must not have taken this very well, but I'm sure most parents are more than relieved. However, when the state education department says it would rather the students drink fresh juices, one hopes that unlike our juice *walas*, those in schools in Hyderabad use hygienic means of doing business. But this quest for making healthier food choices available is going on elsewhere too.

Like in a boarding school in West Sussex, UK. The Seaford College has stopped its tuck shop from selling sweets and fizzy drinks because it believes they over-stimulate children. They suspect that break-time snacks high in artificial flavourings and additives were affecting the pupils' concentration. Some scientists have linked additives — particularly tartrazine or E102 — to hyperactivity and other problems in kids.

And all this pressure to bring about this change came from the teachers. The latter felt that when the children came back from their break, it took them quite sometime to settle back. While there is no evidence that the behaviour of pupils had improved since the tuck shop started stocking on cereal bars, sparkling fruit drinks and fresh rolls, the parents for one are happy.

Then starting September, any junk food with 50 per cent or more of its calories coming from fat will be removed from all Montgomery County schools in the US. These directives will be imposed as school nutritionists have urged administrators they want to help youngsters make healthy choices. A recent US surgeon general's report found that 13 per cent of all children are overweight or obese, triple the number 20 years ago. Many lead sedentary lives and are at greater risk for developing what was once considered adult-onset diabetes.

The US department of agriculture has set certain requirements since last year making it mandatory for school lunches to include an average of one-third of the recommended daily allowance of protein, vitamins A and C, iron, calcium and calories, and these foods must not have more than 30 per cent of their calories from fat.

One only hopes, our education department begins to worry about this and wakes up from its stupor before it's too late. ■