

MidWeek

How To Prevent Vision Loss

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By: Dr. Michael Bennett Founder and president of Retina Institute of Hawaii

Interviewed By Melissa Moniz

Where did you receive your schooling and training?

Born and raised in Miami, I went to undergraduate at the University of Virginia, medical school in New York City and finally did my retina training at Emory University.

How long have you been practicing?

Here in Hawaii, I've been practicing for more than 10 years now.

The Retina Institute of Hawaii was founded in 2001. Can you talk about its services and its foundation?

When we first got to Hawaii, we realized people were losing vision as a result of diabetes and macular degeneration, and there were just too many young people losing vision. So we founded the Retina Institute of Hawaii to help people who were not only losing vision from a research and therapeutic standpoint, but also from a prevention standpoint. Can we get them in earlier? Can we diagnose earlier and, if so, can we save more vision? So the underlying philosophy was not to put out the fire, but to prevent it.

You mentioned prevention. Can you talk about what people can do to prevent vision loss?

The most important part about preventing eye diseases is seeing your eye doctor regularly and getting evaluated. Normally, pain causes people to go to the doctor, but inside the retina there are no pain fibers, so people lose their vision gradually without really realizing it and don't get to a doctor until it's too late. So

really, it's getting in to get your eyes examined, especially if you have diabetes or if you are over the age of 65. If you catch eye conditions in the early stages, you can prevent vision loss.

What are the most common eye conditions treated here?

The leading cause of vision loss in people under the age of 65 is diabetes.

Diabetes can cause leaking and problems in the retina, so if you can diagnose those patients early, there are things that can be done to minimize vision loss, such as modifying one's diet and medications or using lasers.

For patients 65 and older, the leading cause of vision loss is macular degeneration. Typically, patients start to notice wavy vision and crooked vision, which left unchecked can lead to permanent vision loss. There are surgeries and medications and a whole host of things that can be done to reverse the damage from macular degeneration. The first step is coming in to be evaluated.

How much of eye conditions are genetic?

A lot of these things do run in families and in various cultures and races. After identifying someone who is losing vision, we evaluate why they lost it by looking for a family link, genetic component or an outside source. Once we figure out what's going on, we can develop a treatment plan that best fits the individual.

What type of environmental or outside sources factor in?

Here in Hawaii we really need to worry about sun damage. That's a big one for macular degeneration, as is smoking, since it increases your risk of blindness by seven times. And since smoking causes vascular damage, it's really harmful for someone with diabetes as well. As we start to look at environmental factors, a lot of attention needs to be focused also on our dietary habits. Do we eat enough green, leafy vegetables and food with antioxidants? Are we moving to more of a fast-food culture? That isn't good for our diabetic population. So really, as far as environmental issues, it's also a societal issue as well.

What have been the biggest advancements that have really helped you in providing the best care for your patients?

It's interesting because our Hawaii patients are very good as far as seeking technology and wanting the best care. And we've become one of the largest centers in the country for new therapeutic studies and new research grants, whether for medications or surgeries. Science is progressing just as fast as technology. It's about staying on that leading edge that has been our drive and push.

In regard to technology, what state-of-the art equipment is used here?

Some of our computers and cameras are only available at a few centers around the world. They can do ultra structural examinations and can combine all kinds of different tests. And we can get pictures down to almost single-cell levels inside their retina. So, much like how the MRI scan was once the breakthrough technology for the body, we can do this all the way down to the center of your vision. We can now pick up things that we once could only guess at. Basically, these computers can pick up tiny changes before they lead to real vision loss.

How much of your time is spent in surgery?

About 20 to 25 percent. One day a week is usually concentrated and devoted purely just to surgery.

Can you talk about Project VISION?

Project VISION is a 35-foot van, which we've equipped with cameras so we can perform retina screenings onboard. Our doctors, staff and volunteers go out to various events and locations statewide and screen people for conditions like diabetes, high blood pressure, glaucoma, etc. It goes back to wanting to prevent the fire, as opposed to always putting it out.

The idea for Project VISION stems from a beautiful young lady who had just finished college and walked into our office blind in both eyes. She had diabetes and never went in for an eye exam until she couldn't see. If we had just had the chance to see her one or two years earlier, then we could have prevented her vision loss. So Project VISION was developed to get us into the community and

offer free screenings to help people with their vision. It's been almost two years since we started, and we've already screened thousands of people and sent them to their primary care doctors. As soon as we identify a problem, we send them to the appropriate doctor and, for many, it's about getting them into the healthcare system.

So once your vision is lost, there's no way of getting it back?

Yes, once you lose all vision it is impossible to get it back. Once the eye can no longer see light, you will never get light vision back again.

Do you think, with the continued advancement in science and technology, that it will one day be possible to reverse vision loss?

I think it will. It's going to take some work, because the brain is a very complex structure and the retina is a very small portion. The retina is something as small as a postage stamp and as thin as a piece of wet tissue paper on the inside of your eyeball, and it is responsible for everything you see in the world.

So will we be able to transplant something like that?

Well, there are 1.5 million neurons in there, and you would have to get them all lined up and working. But we're getting there.