



*World Renowned Retina  
Specialist at the Center of*  
**Cutting-Edge  
Retinal Care**

PAID PROMOTIONAL FEATURE



Dr. Shalesh Kaushal

**D**r. Shalesh Kaushal is an internationally renowned retina specialist, biochemist and molecular geneticist. His clinic in the Villages, Comprehensive Retina Consultants, is THE first of its kind in the world that incorporates state-of-the-art eye and retina care with his long standing passion in nutritionally biochemistry and genomics. He combined his passion for taking care of patients with intensive basic and clinical study of retinal diseases to develop a practice where patients receive both treatment and education. “The opportunity to help someone with a vision problem is an honor and blessing,” he says. Dr. Kaushal goes on, “Beyond the technology, testing and treatments, to be really effective in helping patients, it’s important to develop a partnership and friendship with them. I really enjoy that because it’s a one-to-one connection with another person.”

His practice is ideal for treating patients with various retinal disorders like macular degeneration, diabetic retinopathy, inflammatory conditions of the eye and retina, inherited retinal disorders, glaucoma, MS, and chronic infectious diseases of the retina like Lyme. Dr. Kaushal also treats surgical problems of the retina including retinal detachments, macular holes, epiretinal membranes, and bleeding in the eye.

But there are other components to his practice that add another dimension to the understanding of retina diseases and care for his

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patients. Indeed, patients come from across the country to seek his evaluation and treatment.

## THE **FIRST** COMPONENT

This involves cutting-edge diagnostics and new instrumentation. As Dr. Kaushal explains, “All physicians essentially do two things, namely measure structure and function. As a retina specialist, there are novel, clinically impactful diagnostic devices that give us important quantitative insight into the structure and function of the retina. These new approaches and tools are a perfect match for the academic in Dr. Kaushal, whose background includes a B.S. in molecular biophysics and biochemistry from Yale University, an M.D. from Johns Hopkins and finally a Ph.D. in biochemistry from MIT with a Nobel Laureate. “Science and medicine are really about carefully measuring a person’s biochemistry and physiology in a reliable and reproducible way with results. The new tools and techniques we are using at our clinic help me do just that,” he says.

“As an ophthalmologist and retina specialist we all use the eye chart to determine a person’s acuity. But that is really a very limited measure of a person’s vision.”

In reality the eye chart measures only one of the eight visual pathways from the eye to the brain. There are other tests that more robustly measure vision. He goes on to explain, “for instance, we can quantitatively measure the sensitivity to light of the visual cells in the macula, the area of central good vision. We can map out which regions are more or less

sensitive to light, which in turn helps us monitor the progression of disease and correspondingly, the effects of our treatments.”

Another instrument allows Dr. Kaushal to quantitatively measure the contrast sensitivity of the macula. How good is it at separating the black letters on an eye chart from the light background they’re printed on? This is a fundamental function of the retina. Still another tool, much like an EKG for the heart, gives a direct measure of the electrical responses of the retina and optic nerve.

These types of cutting-edge diagnostic tools are certainly exciting and impactful. When combined with the latest drugs for retina care—Dr. Kaushal introduced four of the newest drugs to the field of retina health in his clinic—the implications for eye patients are significant... And that is only one component of his practice.

## THE **SECOND** COMPONENT

Dr. Kaushal has a special passion for the second stage in his treatment protocol. “The retina has the largest blood supply per unit volume in the body and is extremely metabolically active. Changes that occur in the body can be transmitted to the retina through the systemic circulation. Indeed, nearly all diseases of the body manifest themselves in the retina,” he says.

Part of the doctor’s strategy for developing a treatment for a patient with a retina problem is assessing the patient’s overall health, first. Is there something going on outside the eye that may be causing problems? Is there a deficiency? A chronic disease? A genetic influence



**The Compass** is a state of the art Visual Field Analyzer.



**Diagnosis Electrophysiology System**

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**MAIA - Macular Integrity Assessment**

MAIA represents the latest advance in confocal microperimetry. This technique allows us to measure light sensitivity of the macula.



**Dr. Shalesh Kaushal**  
performing an exam  
on a patient.

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**Heidelberg - Spectralis  
Multi-Modal System**

This instrument can determine the structure as well as measure the blood flow in the retina and quantitatively determine the debris that collects underneath the retina.

at work? Dr. Kaushal often reviews the patient's blood work and recommends additional blood testing himself.

As he explains, "We know that at their core, chronic diseases in general and those of the retina are caused by 5-6 important cellular pathways. Our treatment of patients recognizes this. It has evolved into using a combination of pharmaceutical agents along with the thoughtful, evidence-based use of nutraceuticals and supplements. Dr. Kaushal goes on to explain, "The drugs are to rapidly treat the immediate symptoms of the retinal disease while the nutraceuticals and supplements treat the root biochemical causes of the disorder. In this way, we can relieve the acute symptoms rapidly while simultaneously improving the overall health and function of the retina. Such an approach is novel but has produced wonderful results for our patients."

Indeed, Dr. Kaushal was invited both nationally and internationally to share his approach and results for treating retina patients with his peers.

**THE THIRD COMPONENT**

Clinical trials, perhaps the one stage that appeals most to the scientist in Dr. Kaushal, is the third way he is pushing the leading edge further.

"We are involved in a set of novel, first-in-the-world clinical trials," he says.

For instance, Dr. Kaushal measures blood vessel health to predict, stop, and potentially reverse retinal disorders. What can we learn from dysfunctional blood vessels? The lining cells of blood vessels communicates with the wall of vessel to determine elasticity and how well they dilate. In many chronic diseases these important cells no longer work optimally. Using a non-invasive device, we can measure how well blood vessels dilate at the tip of the finger where there are tiny blood vessels like those in the retina.

Separately, we're doing clinical studies to accurately determine the amount of debris (lipofuscin) in the nourishing cells of the retina. This debris material affects vision, especially in patients with macular degeneration. We are separately testing treatments to reduce and eliminate this debris," he says.

Genomic testing is another area being actively pursued. We examine DNA variations in critical genes associated with retinal diseases and how genetic weaknesses can be overcome with targeted, custom treatment protocols. The test itself is easy to do. The challenge is organizing and analyzing the vast amount of data we get from those studies," he adds.

**THE FOURTH COMPONENT**

In addition to all his clinical/surgical practice and research interests, Dr. Kaushal has started a yearly meeting entitled, "Can Chronic Diseases be Reversed?"

"It's something that my wife and I both feel passionately about. Diseases like Alzheimer's, glaucoma, macular degeneration, hypertension, coronary artery disease, diabetes, obesity, osteoarthritis, and others are rising exponentially in the U.S. and worldwide. This meeting is dedicated to creating understanding and awareness of treatments that can help mitigate these disorders and in some instances reverse them. The Kaushals invite world-renowned clinicians and scientists from the premier medical and research institutes including places like Harvard, Yale, Cornell, Duke, NIH, UCLA, Cleveland Clinic to name a few.



For more information on the event "Can Chronic Diseases be Reversed?", visit [reversalchronicdiseases.com](http://reversalchronicdiseases.com)

*"BRILLIANT CLINICIANS AND SCIENTISTS WILL COME TOGETHER TO DISCUSS THE LATEST RESEARCH AND TREATMENTS FOR CHRONIC DISEASES."*

— DR. SHALESH KAUSHAL

"February 14-15, 2020, will be our fourth one at Innisbrook Golf Resort. We again have outstanding clinicians and scientists in different areas of medicine and basic research. We want both health-care professionals and the curious lay person to learn from these talented people. The previous attendees have really enjoyed listening and interacting with the speakers. We purposely keep the registration fee to a minimum so that's not a barrier for people to participate," he says.



Artwork from Dr. Kaushal's foreign travels adorns multiple locations.

Why does he do it? What keeps Dr. Shalesh Kaushal in the clinic, treating patients, and designing new tests and dividing his time between so many worthy projects?

"I have been blessed to receive so much in my life and I want to give back to my patients and society," he says. It is something I learned from my parents and my mentors. The goal is to make as large and positive dent in the universe by helping as many people as possible!"



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