



*Diseases & Surgery of the
Retina and Vitreous*

Jeffrey D. Zheutlin, M.D.
Frank W. Garber, M.D.
Louis C. Glazer, M.D.
Renee L. Williams, O.D.

VRA Grand Rapids

2505 East Paris Ave.
Suite 100
Grand Rapids, MI 49546
Phone (616) 285-1200
Fax (616) 940-0864

VRA Kalamazoo

1080 North 10th Street
Suite 100
Kalamazoo, MI 49009
Phone (269) 353-9700
Fax (269) 353-8534

VRA Muskegon

3102 Glade Street
Muskegon, MI 49444
Phone (231) 830-1200
Fax (231) 737-9008

Clinical Trials

Allergan Posurdex Implant for DME
Alimera Iluvien Implant for DME
ThromboGenics Microplasmin
for Vitreo-Macular Traction
Lpath-iSONEP for ARMD
Regeneron VEGF-Trap for ARMD
Genentech Lucentis for CRVO
Genentech Lucentis for CRVO Ext.
Regeneron VEGF-Trap for CRVO
Novartis Aliskiren for DME
DRCR Lucentis for Diabetic VH
Regeneron VEGF-Trap for ARMD Ext.
Alimera Iluvien Implant for DME Ext.
GSK Oral Pazopanib for ARMD
GSK Topical Pazopanib for ARMD
Alcon ESBA 1008 for ARMD
Santen DE-109 for Posterior Uveitis
Allergan Ozurdex vs. Lucentis for DME
Regeneron VEGF-Trap for BRVO
Novartis LFG316 for Dry AMD
Van Andel Institute Vitreous Sample
DRCR Topical NSAID for DME
Wilmer iDEAL for DME
Saint Mary's Vitreous Sample

Vitreo-Retinal Associates, P.C.

How Diabetes Affects Your Eyes

Diabetes is a disease that affects the body's ability to produce and/or use insulin in amounts sufficient to control blood sugar levels. People with any type of diabetes can develop hyperglycemia, which is an excess of blood sugar, or serum glucose. Although glucose is a vital source of energy for the body's cells, a chronic elevation of serum glucose causes damage throughout the body, including the small blood vessels in the eyes.

As a result, if you have diabetes you run the risk of developing diabetic retinopathy, in which damage occurs to the delicate blood vessels inside the retina at the back of the eye. You are also at increased risk for developing cataracts (clouding of the normally clear lens in the eye), or glaucoma (a disease that results in damage to the optic nerve).

Diabetic retinopathy, the most common diabetic eye disease, is caused by changes in the blood vessels of the retina. Nonproliferative diabetic retinopathy (NPDR) is the earliest stage of diabetic retinopathy. With this condition, damaged blood vessels in the retina begin to leak extra fluid and small amounts of blood into the eye. Sometimes, deposits of cholesterol or other fats from the blood may leak into the retina.

Proliferative diabetic retinopathy (PDR) occurs when abnormal blood vessels begin to grow on the surface of the retina or optic nerve. The new blood vessels are abnormal and do not supply the retina with normal blood flow. The new vessels are also often accompanied by scar tissue that may cause the retina to wrinkle or detach.

VRA is West Michigan's most experienced ophthalmology practice for highly specialized eye care with convenient locations in Grand Rapids, Kalamazoo, and Muskegon.

Drs. Jeffrey Zheutlin, Frank Garber, and Louis Glazer, all board certified and renowned ophthalmologists, specialize in the diagnosis and treatment of conditions of the eye including macular degeneration, diabetic retinopathy, macular disease and retinal detachment.

As the area's leader in innovative eye research, we offer the latest advancements in diagnostic and surgical technologies.