



Common Myths & Misconceptions About Diabetic Eye Disease

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Type 1 diabetic since 1968

I was recently asked by an interviewer to discuss common myths patients have about their eyes and vision, and it got me thinking. Over the years, I have compiled a mental list of patient (and physician) misunderstandings about diabetes and its effects on the eyes, and thought I might share at least some of them with you.

1. ***Good visual acuity on a chart means that a patient with diabetes has healthy eyes.*** Many serious eye diseases do not affect central vision until late in their genesis. I have examined many patients with severe proliferative diabetic retinopathy, diabetic macular edema and glaucoma who have had 20/20 or better visual acuity. Good eyesight definitely does not mean there is no diabetic eye disease.
2. ***Patients with diabetic retinopathy should not engage in vigorous physical activity.*** Although there is merit in being cautious, it is important for patients to understand that such restrictions concerning exercise and retinopathy apply to neither the majority of diabetics, nor even to the majority of patients with diabetic retinopathy. In fact, the only group of patients at risk for retinal bleeding associated with exercise are those with untreated, recently treated or actively bleeding proliferative diabetic retinopathy, as these patients have abnormal blood vessels that *can* be broken quite easily. There is absolutely no ophthalmic reason that people with non-proliferative retinopathy or those with successfully treated proliferative retinopathy cannot participate in vigorous physical activity, including moderate resistance (weight) training, as fragile new blood vessels (neovascularization) either do not exist or have regressed following laser therapy.
3. ***Poor visual acuity means that diabetes has damaged my eyes.*** The main reason most people with diabetes do not see well on an eye chart test is the same reason other people don't see well on the eye chart – uncorrected refractive error. Poorly controlled diabetics are notorious for refractive fluctuations, but the vast majority of them (including many of those with vision threatening diabetic eye disease) are capable of seeing clearly. Such patients need to be educated that the quality of their lens prescription depends, ultimately, on how well they are able to control their blood sugars, as well as the quality and consistency of eye examinations.
4. ***All patients with diabetes need to see an ophthalmologist, not an optometrist.*** My aim here is not to augment what has often been a contentious relationship between these professions, but to state the facts. Optometrists are trained and licensed to *diagnose and treat disorders and diseases of the eyes and visual system through non-surgical means*, including the use of prescription eye drops (and oral medications in most states), as well as to detect the ocular manifestations of systemic disease and

refer patients to other health care specialists for eye surgery and/or further medical evaluation. Optometrists perform the majority of routine eye examinations in the United States.

Becoming an optometrist requires four years of pre-medical undergraduate education and then an additional four years of optometry school. Optometry school education consists of courses in geometric, physical and physiological optics, ocular anatomy and physiology, general anatomy and physiology, general and ocular pathology, general and ocular pharmacology, ocular manifestations of systemic disease, binocular vision, pediatric vision, geriatric vision, refraction, cosmetic and medical contact lens applications.

The final two of four years is spent seeing patients in eye clinics and hospitals, including externships with eye surgeons and sub-specialists, and conducting original ophthalmic research. Three sets of national board examinations and individual state board examinations are required for licensure, with mandatory continuing education requirements every one to two years. Some doctors of optometry complete an additional one-year residency, and a few complete multi-year specialty fellowships.

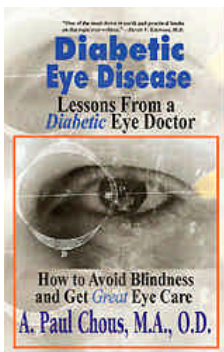
In my own practice, I routinely uncover previously undiagnosed diabetes in the course of my ocular examination. I work closely with retinal, glaucoma, corneal and neuro-ophthalmic sub-specialists, and non-ophthalmic specialists who treat patients with diabetes, and I receive referrals back from them because they know of my commitment to diabetes care and education. I talk to dozens of colleagues who are doing the same. I attend optometric educational conferences where diabetes care routinely commands major attention.

The truth is, most optometrists do a fine job of detecting and appropriately managing eye complications related to diabetes. They counsel their patients diligently, and refer them to ophthalmologists when indicated. As with any profession, some doctors, both optometrists and ophthalmologists, will have more knowledge, experience, and compassion than others will. No matter which type of eye doctor a diabetic patient sees, the most important consideration is finding someone knowledgeable about and experienced with diabetic eye disease.

5. ***Patients with diabetic retinopathy should not take aspirin.*** *The Early Treatment of Diabetic Retinopathy Study (ETDRS)* clearly demonstrated that aspirin therapy does not worsen pre-existing diabetic retinopathy. If a patient is experiencing actively bleeding proliferative retinopathy with vitreous hemorrhage, it may be prudent to delay aspirin usage for a time, depending on her macrovascular status. The bottom line: retinopathy is not a contraindication to ASA therapy.
6. ***The Amsler Grid test is an effective screening tool for diabetic maculopathy.*** This subjective test relies on the patient's ability to perceive omission (scotoma), distortion (metamorphopsia), waviness or color change of a uniform grid of perpendicularly oriented lines. In a patient with clinically significant diabetic macular edema or

proliferative retinopathy, the two most significant causes of serious vision loss in diabetes, by the time such irregularities are perceived a great deal of retinal damage has already occurred, and the prognosis is much poorer. Dilated, stereoscopic examination of the macula is the only reliable way to detect these conditions in their earliest, most treatable stages. Amsler grid testing is an important tool, however, for self-detection of subretinal neovascularization (as in exudative macular degeneration, pathological myopia and ocular histoplasmosis).

7. ***A measurement of intraocular pressure determines whether or not I have glaucoma.*** Elevated intraocular pressure (IOP) is now recognized as a risk factor for glaucoma, not as a necessary or sufficient cause. Fifty percent of all patients with definitive glaucoma will have normal IOP at some point of the day. In addition, at least 10% of all patients with glaucoma will never have an IOP reading above 20mm Hg (“normal tension glaucoma” or NTG). Diabetics are more likely to develop NTG, possibly due to microvasculopathy of the optic nerve and glycation of supportive collagen.
8. ***Type 2 patients rarely lose vision to diabetes.*** Although it is true that a higher percentage of Type 1 patients experience microvascular diabetes complications, including retinopathy, more Type 2 patients suffer significant vision loss than do Type 1 patients in terms of absolute numbers. Part of the reason, of course, is because Type 2 patients outnumber Type 1 patients by a factor of nine. In addition, Type 2 patients are more likely to develop diabetic eye diseases other than retinopathy (e.g. cataract, glaucoma and ischemic optic neuropathy in particular) as a function of both age and glycemic status.



Lessons from a Diabetic Eye Doctor: How to Avoid Blindness and Get Great Eye [More Info:](#)

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Dr. Paul Chous received his undergraduate education at *Brown University* and the *University of California at Irvine*, where he was elected to *Phi Beta Kappa* in 1985. He received his Masters Degree in 1986 and his Doctorate of Optometry in 1991, both with highest honors from the *University of California at Berkeley*. Dr. Chous was selected as the *Outstanding Graduating Optometrist* in 1991. He has practiced in Renton, Kent, Auburn and Tacoma, Washington for the last 12 years, emphasizing diabetic eye disease and diabetes education. Dr. Chous has been a Type 1 diabetic since 1968. He lives in Maple Valley, Washington with his wife and son.