

2. Journal name: *Am. J. Ophthalmology*. 2001; **132**(5):760-76

Systemic considerations in the management of diabetic retinopathy.

[Aiello LP](#), [Cahill MT](#), [Wong JS](#).

Beetham Eye Institute, Joslin Diabetes Center, 1 Joslin Place, Boston, MA 02215, USA.
LPAiello@joslin.harvard.edu

PURPOSE: To highlight the systemic factors which affect onset and/or progression of diabetic retinopathy (DR) and to emphasize the role and responsibilities of ophthalmologists and other eye care providers to ensure that appropriate systemic medical evaluation of the patient with diabetes is being pursued. **DESIGN:** Literature review of publications relevant to diabetic retinopathy, blood glucose control, diabetes mellitus type, hypertension, renal disease, elevated serum lipids, exercise, pregnancy, anticoagulation, thrombolysis, smoking, anemia and antioxidant ingestion. **FINDINGS:** Intensive blood glucose control and control of systemic hypertension reduce the risk of new onset DR and slow the progression of existing DR. Severe DR may be an indicator of renal disease while severe renal disease and its treatment can affect the progression of DR. Elevated serum lipids are associated with macular exudate and moderate visual loss. Certain types of excessive exercise in patients with advanced stages of retinopathy may aggravate vitreous hemorrhage. During pregnancy, DR should be monitored closely as transient progression of DR can occur. Therapeutic anticoagulation and thrombolysis are not contraindicated at any stage of DR. Anemia can result in progression of DR, smoking in general should be discouraged, and the role of antioxidant therapy requires further study. **CONCLUSIONS:** Blindness from diabetic retinopathy is now largely preventable with timely detection and appropriate interventional therapy. Routine, repetitive, lifelong, expert clinical retinal examination is essential for the fundamental ophthalmic care of the patient with diabetes. However, diabetes mellitus is a systemic disease and thus optimal ophthalmic care must include diligent evaluation and treatment of concomitant systemic disorders that influence the development, progression and ultimate outcome of diabetic retinopathy. Optimization of these systemic considerations through an intensive, multi-disciplinary, healthcare team-based approach will maximize the ophthalmic and general health of these patients. Ophthalmologists and other eye care providers are critical members of this team with unique responsibilities to ensure that appropriate systemic medical evaluation is being pursued.

PMID: 11704039 [PubMed - indexed for MEDLINE]