

REGENERON

FACT SHEET ABOUT DIABETIC MACULAR EDEMA (DME)

WHAT IS DME?

Diabetic Macular Edema (DME) or "swelling of the macula" is a common complication in the eyes of patients with diabetes. It is a frequent cause of vision loss in patients with diabetes, and can eventually lead to blindness.^{1,2} The macula is the part of the retina responsible for central or fine vision.

In DME, blood vessels in the retina are damaged by chronic high blood sugar levels. A breakdown in the blood-retinal barrier and increased vascular permeability allows fluid from blood vessels to leak into the retina, causing macular swelling.² Fluid in the macula can cause severe vision loss or blindness.²

Vascular endothelial growth factor (VEGF), a naturally occurring family of growth factors in the body, appears to play a critical role in the development of DME.³ Increased VEGF production contributes to the vascular disruptions and leakage that characterize DME, as well as the formation of new blood vessels (a process known as angiogenesis) seen in more advanced forms of diabetic retinopathy (DR).²

DME STATISTICS

- According to the Centers for Disease Control and Prevention, approximately 29.1 million adults are living with diabetes (types I & II) in the U.S. ⁴
- Of those, approximately 1.5 million people are diagnosed with DME.⁵
 - The prevalence of DME is especially high among racial and ethnic minorities, particularly in African Americans.⁶
- DME is the leading cause of blindness in young adults in developed countries.⁷

The increasing number of individuals with diabetes worldwide suggests that DME will continue to be a major contributor to vision loss and associated functional impairment.

RISK FACTORS AND THE IMPORTANCE OF REGULAR EYE EXAMS

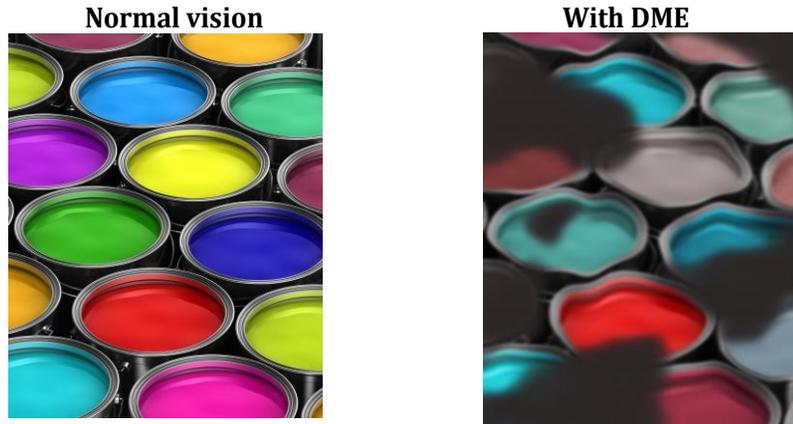
Anyone who has diabetes is at risk for diabetic macular edema⁸, and the longer a person has diabetes, the greater the chance of developing DME.³

In addition, DME can develop without symptoms. Early detection and timely treatment can prevent vision loss.⁸ The American Diabetes Association recommends, in general, that people with diabetes have a yearly comprehensive dilated eye exam.⁹ During the exam, the pupil is temporarily enlarged with eye drops to allow the eye care specialist to more easily see the back of the eye.

Studies have shown that controlling diabetes is important in protecting vision. Managing blood glucose, cholesterol, and blood pressure can slow the onset and progression of eye complications like DME.⁸

HOW DOES DME IMPACT VISION?

In the early stages of DME, there may be no symptoms. When the macula swells from leaking fluid, vision may be blurred. In more advanced stages of DME, new blood vessels can grow on the surface of the retina and bleed, blocking vision or appear as floating spots.⁹ Below is an example of how a person with DME might see.



REFERENCES

1. Ho A, Scott I, Kim S, et al. Anti-vascular endothelial growth factor pharmacotherapy for diabetic macular edema: a report by the American Academy of Ophthalmology. *Ophthalmology*. 2012; 119(10): 2179-2188.
2. Ciulla T, Amador A, Zinman B. Diabetic retinopathy and diabetic macular edema: pathophysiology, screening, and novel therapies. *Diabetes Care*. 2003; 26(9): 2653-2664.
3. Boyer DS, Hopkins JJ, Sorof J, et al. Anti-vascular endothelial growth factor therapy for diabetic macular edema. *Ther Adv Endocrinol Metab*. 2013; 4(6): 151- 169.
4. Centers for Disease Control and Prevention. National diabetes statistics report, 2014. Available at: <http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>. Accessed June 25, 2014.
5. Decision Resources, Treatment Trends™: Diabetic Retinopathy, Diabetic Macular Edema (US), 2013. Fielded March 6-20, 2013, n=69 retina specialists, 31 general ophthalmologists; PatientBase, 2013.
6. Ding J, Wong TY. Current Epidemiology of diabetic retinopathy and diabetic macular edema. *Curr Diab Rep*. 2012; 12:346-354.
7. Romero-Aroca, P. Current status in diabetic macular edema treatments. *World J Diabetes*. 2013. October 15; 4(5): 165-169.
8. National Eye Institute. Facts About Diabetic Retinopathy. Available at <http://www.nei.nih.gov/health/diabetic/retinopathy.asp>. Accessed June 25, 2014.
9. American Diabetes Association. Eye care. Available at: <http://www.diabetes.org/living-with-diabetes/complications/eye-complications/eye-care.html>. Accessed June 25, 2014.