

Diabetic Macular Edema (DME)

Addressing the knowledge gap



About DME

DME affects

1 in 14 people



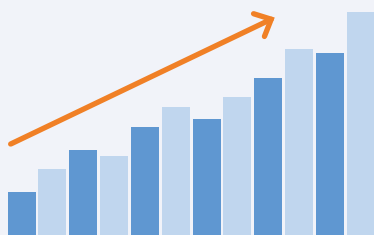
with diabetes and is the leading cause of visual loss and legal blindness in patients with diabetes.¹

More than

28 million

people are currently affected by DME worldwide.²

As the incidence of diabetes increases, the prevalence of DME will continue to rise.³



DME is caused by **disruption of the blood-retinal barrier** due to long-term hyperglycaemia, leading to **retinal thickening** around the fovea.²



Normal



Macular Edema

Symptoms of DME include **blurriness** in the centre of vision, **patches or streaks**, **seeing straight lines as wavy**, and **perceiving colours as dull or washed out**.^{4,5}



Underdiagnosis of DME

Early diagnosis of DME is important

to ensure faster access to treatment to **minimise damage to a patient's vision**.⁶



Very few people with diabetes are referred to ophthalmologists for DME testing but due to the risk factors in patients with diabetes, it is important they are referred to ophthalmologists for early testing, where appropriate.⁷

Undertreatment of DME

Posterior ocular diseases, like DME are challenging to treat due to their **complex physiology and the need for regular treatments**

Patients can struggle with treatment schedules.⁸



Treatments may include

Novel drugs based on mechanisms of action in diabetic macular edema, including **corticosteroids** which address the inflammation in DME, that **provide further treatment options for retina specialists** and ophthalmologists where anti-VEGFs are unsuitable.^{9,10,11,12}

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|---------------------|---------------------------------------|---------------------------------|
| Anti-VEGFs | Inhibitors of multiple growth factors | Ancillary NSAIDs |
| Integrin inhibitors | Anti-inflammatory agents | Cytokine / chemokine inhibitors |



Empowering diabetes health professionals to support people with DME

The IDF Clinical Practice Recommendations for Managing DME

aim to improve awareness and understanding around the risks of DME and the importance of early referral to retina specialists.

<https://idf.org/54-our-activities/562-diabetic-macular-edema-dme.html>



**International
Diabetes
Federation**



References

1. Mathew, C, Yunirakasiwi, A, Sanjay, S. Updates in the management of Diabetic Macular Edema. *Journal of Diabetes Research*. 2015;2015:1-8.
2. International Diabetes Federation. Diabetic Macular Edema (DME). Available from: <https://www.idf.org/our-activities/advocacy-awareness/campaigns/54-our-activities/562-diabetic-macular-edema-dme.html> Accessed March 2020
3. Shu Wei Ting, D, Chui Ming Cheung, G, Yin Wong, T. Diabetic retinopathy: global prevalence, major risk factors, screening practices and public health challenges: a review. *Clinical and Experimental Ophthalmology*, 2016; 44(4):260-277.
4. National Institute of Health. Facts About Macular Edema. Available from: https://nei.nih.gov/health/macular-edema/fact_sheet Accessed March 2020
5. Medical News Today. What to know about diabetic retinopathy. Available from: <https://www.medicalnewstoday.com/articles/183417> Accessed March 2020.
6. Zhang, X et al. Diabetic Macular Edema: New Concepts in Pathophysiology and Treatment. *Cells and Bioscience*. 2014; 4:27.
7. Jiménez-Báez, María V, et al. Early diagnosis of diabetic retinopathy in primary care. *Colombia Medica*, 2015; 46(1):14-8.
8. Sivaprasad S, Oyetunde S. Impact of injection therapy on retinal patients with diabetic macular edema or retinal vein occlusion. *Clinical Ophthalmology*, 2016; 10:939.
9. Chatziralli I, Theodossiadis P, et al. Dexamethasone Intravitreal Implant in Diabetic Macular Edema: Real-Life Data from a Prospective Study and Predictive Factors for Visual Outcome. *Diabetes Therapy*, 2017; 8(6):1393-404.
10. Miller, K and Fortun, J. Diabetic Macular Edema: Current Understanding, Pharmacologic Treatment Options, and Developing Therapies. *Asia-Pacific Journal of Ophthalmology*, 2018;7(1):28-35.
11. Russo A, Costagliola C, Delcassi L, et al. Topical nonsteroidal anti-inflammatory drugs for macular edema. *Mediators Inflamm*. 2013;2013:476525.
12. Urias EA, Urias GA, Monickaraj F, McGuire P, Das A. Novel therapeutic targets in diabetic macular edema: Beyond VEGF. *Vision Res*. 2017 Oct;139:221-227.