

## MODULE 2.0

### Diabetes Introduction

**D**iabetes is a chronic disease that needs consistent management. Currently, there is no cure, but a number of treatments have been effective in maintaining patient quality of life. In this Module you will learn about:

- Diabetes Epidemiology
- Prediabetes
- Metabolic Syndrome
- Diabetes Risk Factors
- Diabetes Complications

#### Introduction

Diabetes occurs when the pancreas fails to produce adequate levels of insulin or is unable to use the insulin properly. This results in a high level of blood glucose (blood sugar) that needs to be managed to prevent other serious conditions, such as vascular complications, organ failure, or premature death.<sup>1</sup>

#### Type 1

In type 1 diabetes, the pancreas does not produce insulin,<sup>2</sup> so people with this condition receive insulin from an

injection or a pump.<sup>1</sup> Type 1 diabetes can occur at any age though it is usually diagnosed in children and young adults. Patients with type 1 make up 5% of all diabetes cases,<sup>1</sup> but 98% of this group will develop some form of retinopathy after at least 15 years.<sup>3</sup>

#### Type 2

In type 2 diabetes, the body either does not produce enough insulin<sup>1</sup> or it does not use it effectively,<sup>2</sup> so glucose builds up in the blood instead of being allocated to the cells.<sup>2</sup> Chronically high levels of blood glucose can lead to a range of health complications over time,<sup>3</sup> such as blindness caused by diabetic eye disease. 78% of patients with type 2 diabetes will develop some form of retinopathy after at least 15 years.<sup>3</sup>

#### References

1. Centers for Disease Control and Prevention. *Diabetes Report Card 2012*. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2012. <http://www.cdc.gov/diabetes/pubs/pdf/DiabetesReportCard.pdf>. Accessed October 12, 2015.
2. American Diabetes Association. Living with diabetes: insulin basics. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/insulin/insulin-basics.html>. Last edited July 16, 2015. Accessed October 12, 2015.
3. Stewart, MR. Critical appraisal of ranibizumab in the treatment of diabetic macular edema. *Clin Ophthalmol*. 2013;7:1257-1267.