

The Complications of Diabetes

The following list describes the common complications of diabetes. These complications are avoided or in part managed with excellent control of blood sugar levels and good general health.

1. Diabetic Eye Disease

Diabetic complications refer to a group of sight-threatening eye conditions common to diabetes. They include:

- a. **Diabetic Retinopathy:** Persistent elevations in blood sugar cause damage to small blood vessel in the retina. This is the leading cause of blindness in people age 20-74 and is the most common of the diabetic eye diseases affecting two in five people with diabetes.
- b. **Cataract:** A cataract is when an opacity forms in the crystalline lens area of the eye, resulting in blurred vision. People with diabetes experience cataracts earlier in life on average, and two times as often as people without diabetes.
- c. **Glaucoma:** Increased fluid pressure in the eye can create progressive optic nerve damage. Diabetics are almost twice as likely to develop glaucoma as non-diabetic adults.

2. Diabetic Neuropathy

Elevations in blood sugar over time can damage nerve tissues by degrading or destroying the protective myelin sheath on nerves. This creates a loss or reduction in sensation in the outer extremities, especially the feet. Symptoms and problems usually begin very subtly at first which may mean that the condition can remain “sub-clinical” for prolonged time periods while it is developing. Gradually, pain and weakness develop as common manifestations of the progressing disease state. Sixty percent of diabetes have some form of neuropathy, a rate of three to four times the normal population.

The loss of sensation in the feet means a diabetic patient may be at risk for experiencing injuries or tissue breakdown in the feet and may remain unaware of the problem. For this reason, special care must be taken to protect the feet from cuts, abrasions, blisters, foreign objects becoming embedded, and toenail problems. Decreased blood circulation in the feet along with the impaired wound healing characteristic to the diabetic condition, means that skin ulcers, lesions, and other injuries will struggle to heal. Too often these ulcers can become infected and may not heal resulting in foot amputation.

Degeneration of nerves can also affect other tissues and internal organ systems including the digestive tract and bowel, the heart, sexual organs, etc. This can lead to secondary problems including indigestion, diarrhea or constipation, urinary tract problems and infections, and impotence.

3. Diabetic Nephropathy

Kidney disease secondary to diabetes is the leading cause of end-stage renal disease. It represents about 40% of all new cases. After having diabetes for fifteen years, approximately one-third of type 1 diabetics develop kidney disease, with 100% morbidity within ten years after complete failure occurs.

Kidneys are damaged when the small blood vessels of the kidney are impaired. This affects their ability to remove or filter impurities from the blood. Kidney dialysis or transplant then becomes necessary.

4. Cardiovascular Disease & Stroke

Heart disease and stroke are the most common diabetic complication accounting for death in two of three diabetics. Major blood vessel disease occurs with the development of atherosclerotic buildups in blood vessel walls in response to the damaging effects of inflammation and elevated cholesterol levels. Diabetes dramatically accelerates the effects of this damage. Heart attacks are also dramatically increased in diabetic populations, with survivors experiencing significant degrees of chronic congestive heart failure thereafter.

5. Peripheral Vascular Disease

Degradation in circulation throughout the “peripheral” body is a common finding in diabetes. Poor circulation increases the likelihood of experiencing non-healing foot ulcers resulting in amputation. Peripheral vascular disease is four times as common in diabetics as the normal population.

6. Gastrointestinal Diseases

Autonomic neuropathy is 20-40% more likely to develop in diabetics compared to non-diabetics. This complication includes dysphagia, abdominal pain, nausea and vomiting, malabsorption, fecal incontinence, diarrhea, constipation, and can range from mildly disabling to life threatening.

7. Oral Complications

Chronic low-grade infections around the teeth result in a condition known as periodontal disease. While common in the normal population, it is much more common and severe in diabetics. Because diabetics have problems generally with wound healing and in dealing with

infections, gum disease presents a worrisome threat with both local consequences in the mouth, and systemic affects throughout the body due to inflammatory cytokines produced from this infection.

Other oral complications include Xerostomia (dry mouth or salivary gland dysfunction) which can have a dramatic effect on dental decay and the disease state in the mouth. This results from poor glycemic control, and does not affect diabetics with good control of their blood sugars. Diabetics are also more prone to experience oral infections such as Candidiasis.

8. Psychosocial Problems

People with diabetes can also experience problems with major depression along with minor discouragement, eating disorders and stress. Family and social networking problems can be experienced due to lack of support.