The hidden toll of diabetes on vital organs



The earlier we act, the better we can protect the heart, kidneys, eyes and overall quality of life.

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Diabetes can silently damage the heart, kidneys and eyes, often before patients notice any symptoms. Regular screening, early diagnosis and managing risk factors beyond blood sugar are essential to preventing serious complications, says Prof. Dr. Md. Feroz Amin Department of Endocrinology, BIRDEM Academy Vice-President, Bangladesh Endocrine Society (BES). In an interview with The Daily Star, he discusses how diabetes affects vital organs, the importance of routine health checks and the role of early medical intervention.

The Daily Star (TDS): How does diabetes affect multiple organs, particularly the heart, kidneys and eyes?

Prof. Dr. Md Feroz Amin (FA): Diabetes affects more than blood sugar levels. Persistently high blood glucose causes inflammation and damages blood vessel walls, reducing circulation throughout the body.

The small blood vessels in the eyes, kidneys and nerves are particularly vulnerable, potentially leading to vision problems, kidney disease and nerve damage. Diabetes also increases the risk of blockages in larger arteries, which can cause heart attacks, strokes and poor circulation in the legs.

TDS: How common are diabetes-related complications in Bangladesh, and which are often detected too late?

FA: Diabetes is a major health concern in Bangladesh. According to the International Diabetes Federation's 2025 Diabetes Atlas, approximately 13.9 million adults aged 20–79 were living with diabetes in Bangladesh in 2024. Alarmingly, 39.1% were unaware of their condition.

Many patients are diagnosed only after complications develop. Kidney and eye diseases often go undetected because they may not cause noticeable symptoms initially. Nerve damage in the feet is also frequently overlooked until wounds or infections appear. Heart disease can remain unnoticed because warning signs may be mild or unusual in people with diabetes.

TDS: Can serious complications develop without noticeable symptoms? What routine tests are necessary for early detection?

FA: Yes. Serious complications can develop even when a person feels completely healthy. Early kidney and eye damage often causes no symptoms, making regular screening essential.

People with diabetes should monitor their HbA1c every three to six months, depending on their blood glucose control and treatment changes. Blood pressure should be checked at every clinical visit, while lipid profiles should be assessed periodically, generally annually for patients requiring ongoing cardiovascular risk assessment.

Kidney screening should include the urine albumin-to-creatinine ratio (UACR) and serum creatinine with estimated glomerular filtration rate (eGFR). Comprehensive dilated eye examinations and foot assessments are also important, with at least annual checks for the feet. ECGs should be performed when clinically indicated rather than routinely in every asymptomatic patient.

- Diabetes silently damages affecting the heart, kidneys, eyes and nerves.
- Nearly 39.1% of people living with diabetes in Bangladesh were unaware of their condition in 2024.
- Managing blood pressure and cholesterol is just as important as controlling blood sugar in preventing diabetes-related complications.
- Organ damage may not always be reversible but early diagnosis and timely treatment can slow its progression.

TDS: How does diabetes increase the risk of heart attacks and strokes? What precautions should patients take?

FA: People with diabetes have approximately twice the risk of heart attacks and strokes. High blood sugar, high blood pressure, abnormal cholesterol levels and excess weight contribute to fatty deposits building up inside arteries, restricting blood flow to the heart and brain.

Diabetes can also damage nerves, making heart attack symptoms less noticeable. Some patients may experience breathlessness, sweating, unusual tiredness or upper abdominal discomfort instead of chest pain. These symptoms require immediate medical attention.

Patients should avoid tobacco, exercise regularly, maintain a healthy weight and take prescribed medicines consistently. Certain newer diabetes medicines also provide additional heart and kidney protection.

TDS: What are the early signs of diabetic kidney disease and retinopathy? How frequently should patients undergo screening?

FA: Early kidney disease and diabetic retinopathy, which damages the retina, often develop without warning signs. The earliest indication of kidney damage is usually a small amount of protein in the urine, detectable through laboratory tests. Later symptoms may include swelling of the feet or face, foamy urine and high blood pressure.

Early eye disease may also develop without affecting vision. Blurred vision, floating spots or dark patches may appear as the condition progresses.

People with type 2 diabetes should undergo kidney and eye examinations at diagnosis and at least annually afterwards. For type 1 diabetes, screening generally begins five years after diagnosis. More frequent checks may be necessary if complications develop.

TDS: Beyond blood glucose control, how important is managing blood pressure, cholesterol and other risk factors?

FA: Controlling blood pressure and cholesterol is just as important as managing blood sugar. Blood sugar control alone cannot fully prevent diabetes-related complications.

For many patients, a blood pressure target below 130/80 mmHg is recommended, depending on individual health conditions. Reducing harmful LDL cholesterol is equally important, particularly for those with heart disease.

Patients should avoid smoking, maintain a healthy weight, exercise for at least 150 minutes a week, get adequate sleep and follow a balanced diet with less salt, added sugar and refined carbohydrates. Managing these risk factors together significantly reduces the risks of heart attacks, strokes and kidney disease.

I always remind my patients to know three important numbers: blood sugar, blood pressure and cholesterol.

TDS: Once complications develop, how much can early medical intervention slow their progression?

FA: Early diagnosis and treatment can significantly slow the progression of diabetes-related complications. Kidney disease detected early can often be managed through proper blood sugar and blood pressure control, alongside medicines that protect kidney function.

Timely treatment of diabetic eye disease through laser therapy or intravitreal injections of anti-VEGF agents can prevent further vision loss. Even a small foot wound, if treated promptly, can prevent serious infections and possible amputation.

Patients should attend regular follow-up visits, take prescribed medicines and never stop treatment without consulting their doctor. Although existing organ damage may not always be reversed, early intervention can prevent further deterioration.