

Diabetes: Long Term Complications

Diabetes can affect many parts of the body. The areas especially at risk include eyes, kidneys, nerves and blood vessels. Keeping your diabetes under control (H_gA₁C of less than 7) reduces the chance of damage. Controlling blood sugar may reduce long-term problems. Making healthy choices in all areas (diet, exercise, blood pressure control, etc.) also helps manage long-term problems.

Eye Problems

You may not immediately notice changes in your vision. People with diabetes should have an annual eye exam by an ophthalmologist. Treating early changes may prevent vision loss or slow existing problems.

- Diabetic Retinopathy
 - Damage to the blood vessels of the retina (back of the eye) is called diabetic retinopathy. The retina is responsible for vision. Retina damage can lead to blindness.
- Cataracts
 - A cataract is a clouding of the lens in the eye. A healthy lens is clear and allows light to pass through to the retina. A cloudy lens interferes with clear vision. Any person can get cataracts. People with diabetes are more at risk. They may get cataracts earlier than others.
- Glaucoma
 - Glaucoma is an increase in the fluid pressure within the eye. People with diabetes are twice as likely to develop a type of glaucoma. Most people have no symptoms and no early warning signs. If glaucoma is not diagnosed and treated it can cause loss of vision. It usually responds well to medication, especially if caught early.

Controlling your diabetes helps prevent eye problems. Achieve and maintain acceptable H_gA₁C levels.

Kidney Disease

The kidneys filter and remove waste and excess fluid from the body. They help regulate blood pressure. The filtering parts of the kidneys may be damaged by large sugar molecules. Long term kidney damage leads to kidney failure. People with diabetes should get urine tests and blood tests annually to check kidney function. Identifying problems early and getting treatment minimizes damage.

Signs of kidney problems may include:

- Increased blood pressure
- Swelling
- Protein in the urine
- High levels of waste products (creatinine) in the blood

Controlling your diabetes helps prevent kidney damage. Achieve and maintain acceptable HgA1C levels.

Nerve Disease

Diabetes can cause neuropathy which is damage to nerves.

Peripheral Neuropathy

The nerves that are responsible for feeling temperature, pressure, pain, etc. are called peripheral nerves. Peripheral neuropathy in the feet can cause numbness, burning pain, shooting pain, and tingling.

Autonomic Neuropathy

The nerves that control automatic functions of the body (such as blood pressure regulation, bladder emptying, digestion, etc.) are called autonomic nerves. This table shows the common body systems affected by autonomic neuropathy.

| Affected Area | Problems / Causes | Symptoms / Effects |
|-----------------------------------|---|--|
| Heart | No pain with heart attack No increase in heart rate with activity Resting tachycardia (heart rate over 100) | “Silent heart attack” |
| Blood Pressure | Blood pressure falls when going from a lying to a standing position | Dizzy Faint Pass out |
| Bladder | Unable to empty bladder completely Unable to feel urge to urinate | Bladder infections Kidney infections |
| Stomach / Intestines | Slow digestion | Nausea and/or vomiting Diarrhea Constipation |
| Sexual functioning | Men: impotence Women: vaginal dryness | Sexual problems Impotence |
| Unaware of low blood sugar | No early warning symptoms of low blood sugar | Passing out |
| Skin | May not feel an injury Slow wound healing Increased dryness | Infections |

Controlling your diabetes helps prevent nerve damage. Achieve and maintain acceptable HgA1C levels.

Blood Vessel Problems

Diabetes can damage the blood vessels. Since blood vessels feed the body, damage to them can starve body cells. If the damaged vessel does not allow any blood flow, the body cells die. Other

risk factors include high blood pressure and high cholesterol. Talk to your doctor about ways to manage these problems.

Reduced blood flow to the heart leads to angina (heart pain). Total loss of blood flow to a section of the heart muscle, causes that part to die (heart attack).

Signs of a heart attack include:

- Chest pain or feeling of tightness
- Pain or discomfort in the arms, jaw, neck, or stomach
- Shortness of breath
- Clammy skin
- Sweating
- Nausea, indigestion
- Light-headedness
- Heavy feeling in chest area

Some people with diabetes may have a heart attack without feeling chest pain. They may not know they are having a heart attack. The lack of pain may be caused by nerve damage.

Reduced blood flow to the brain leads to transient ischemic attack (TIA). Total loss of blood flow to a section of the brain, causes that part to die (stroke).

Symptoms of a stroke include:

- Sudden weakness or numbness of the face, arm, or leg on one side of your body
- Sudden confusion, trouble talking, or trouble understanding
- Sudden dizziness, loss of balance, or trouble walking
- Sudden trouble seeing out of one or both eyes or sudden double vision
- Sudden severe headache

Peripheral vascular disease is a group of diseases of blood vessels outside the heart and brain.

Lifestyle changes to lower your risk include:

- Keep your blood sugar under control
- Follow your meal plans as directed
- Eat healthy food choices (low fat, low sugar and non-fried food)
- Take medicine as directed
- Quit smoking
- Control your blood pressure
- Keep physically active

Controlling your diabetes helps prevent blood vessel damage. Achieve and maintain acceptable HgA1C levels.