

## Reducing Complications Associated with Diabetes

### From Head to Toe

#### Eye Care

Uncontrolled diabetes can damage the blood vessels in the eye. In fact, diabetes is the main cause of blindness and vision impairment among working-age individuals. Retinopathy (the weakening and leaking of blood vessels in the back of the eye) has no symptoms and can only be diagnosed by a dilated eye exam. Cataracts or “clouding” of the lens makes vision blurry and glaucoma or pressure in the eye can cause vision loss and blindness. Monitor any vision changes and report them to your eye doctor. **Get a dilated eye exam ONCE A YEAR.**

#### Oral Care

High blood sugar encourages bacterial growth and infection which can lead to gum disease and tooth problems. **Be sure to get a dental exam at least once, if not twice, a year.** Ask your dentist how to check for signs of gum disease at home and, if necessary, how to treat dry mouth. At home, care for your teeth by:

- Brushing with a soft-bristled toothbrush at least twice a day using toothpaste with fluoride
- Floss once a day
- Limit food and drinks that are high in sugar
- Check for signs of gum disease, which include red swollen or bleeding gums, gums pulling away from teeth, sores on the gums, loose teeth or change in tooth or bite position, bad breath

#### Heart Care

High blood pressure can cause damage to blood vessels, plaque buildup in the arteries and increases the risk for heart disease. Every 1% drop in A1c decreases your chances of having a heart attack by 14%. Achieving target cholesterol goals and blood pressure goals (aim for a blood pressure <140/90) will help decrease your risk for heart disease. **Cholesterol levels should be checked when you are first diagnosed and at least annually thereafter.** Cholesterol targets and blood pressure measurements are as follows:

Lab Order	Normal Value	Stage	Blood Pressure Reading
<b>Total Cholesterol</b>	<200 mg/dl	Normal Blood Pressure	=< 120/80 mm Hg
<b>HDL Cholesterol</b>		Prehypertension	120-139 / 80-89 mm Hg
<b>LDL Cholesterol</b>	<100 mg/dl	Hypertension Stage 1	140-159 / 90-99 mm Hg
<b>Triglycerides</b>	<150 mg/dl	Hypertension State 2	>= 160/100 mm Hg
<b>VLDL</b>	<40 mg/dl	Hypertension Stage 3	>= 180/110 mm Hg

Even if your cholesterol levels are at goal, your doctor may still prescribe a statin depending on how many heart disease risk factors you have.

A Mediterranean style diet including whole grains, beans, legumes and lentils, lean protein (poultry without the skin, fish), fruits and vegetables, low-fat dairy and healthy fats (olive oil, canola oil, nuts, seeds, nut butters, avocados) is an evidence-based eating plan for decreasing heart disease risk.

## Kidney Care

Kidneys are responsible for removing waste and toxins from the blood, regulating fluid and electrolyte levels, regulating blood pressure, making red blood cells and maintaining healthy bones. Uncontrolled diabetes damages the kidney and can lead to chronic kidney disease (CKD). **Your doctor should perform the following tests at diagnosis (or 5 years after diagnosis of type 1 diabetes) and annually thereafter:**

- Urine albumin to creatinine (UACR)
- Creatinine level
- Estimated Glomerular Filtration Rate (eGFR)

The best ways to keep your kidneys healthy are to:

- Keep your blood pressure below 140/90, or ask your doctor what the best target is for you
- Stay in your target cholesterol ranges
- Eat foods lower in salt (sodium)
- Stay active
- Take medications as directed
- Quit smoking

## Foot care

Poor blood sugar control increases the risk for skin and foot infection. High blood sugar can cause nerve damage, reducing feeling in your feet. Because of this, you may not know if you have a wound on your foot, or foreign object in your shoes. Decreased blood flow may cause slow-healing wounds that may become severely infected if not treated properly. Call your doctor if you have concerns about any wound. Take the following precautions to protect your feet:

- Wash feet and skin daily in lukewarm, never hot, water and pat dry
- Use lotion on feet and skin, but not between toes
- Inspect feet daily, looking for red spots, dry skin, calluses, flaking skin, cuts, ingrown nails
- Never go barefoot
- Shop for shoes late in the afternoon when your feet are larger
- Wear comfortable shoes made from leather with cotton socks
- Rarely wear high heels
- Shake out your shoes before putting them on to remove any objects
- Cut toenails straight across and file rough edges
- Have a doctor treat corns, calluses and ingrown toenails
- Wear wool or cotton socks to keep feet warm and dry
- Take off shoes and socks when you see the doctor – they should examine your feet at every visit

## Vaccines

Diabetes can make it difficult for your immune system to fight infection. Immunization provides the best protection against vaccine-preventable diseases. Vaccine side-effects are usually mild and go away on their own. Doctor's offices, pharmacies, workplaces, health departments and community health clinics offer vaccines, and most health insurance plans cover the recommended vaccines.

Which vaccines do you need?

- Flu vaccine every year
- Pneumococcal vaccine
- Hepatitis B series (ask your doctor if you are over 60 years old)
- Tdap vaccine
- Zoster