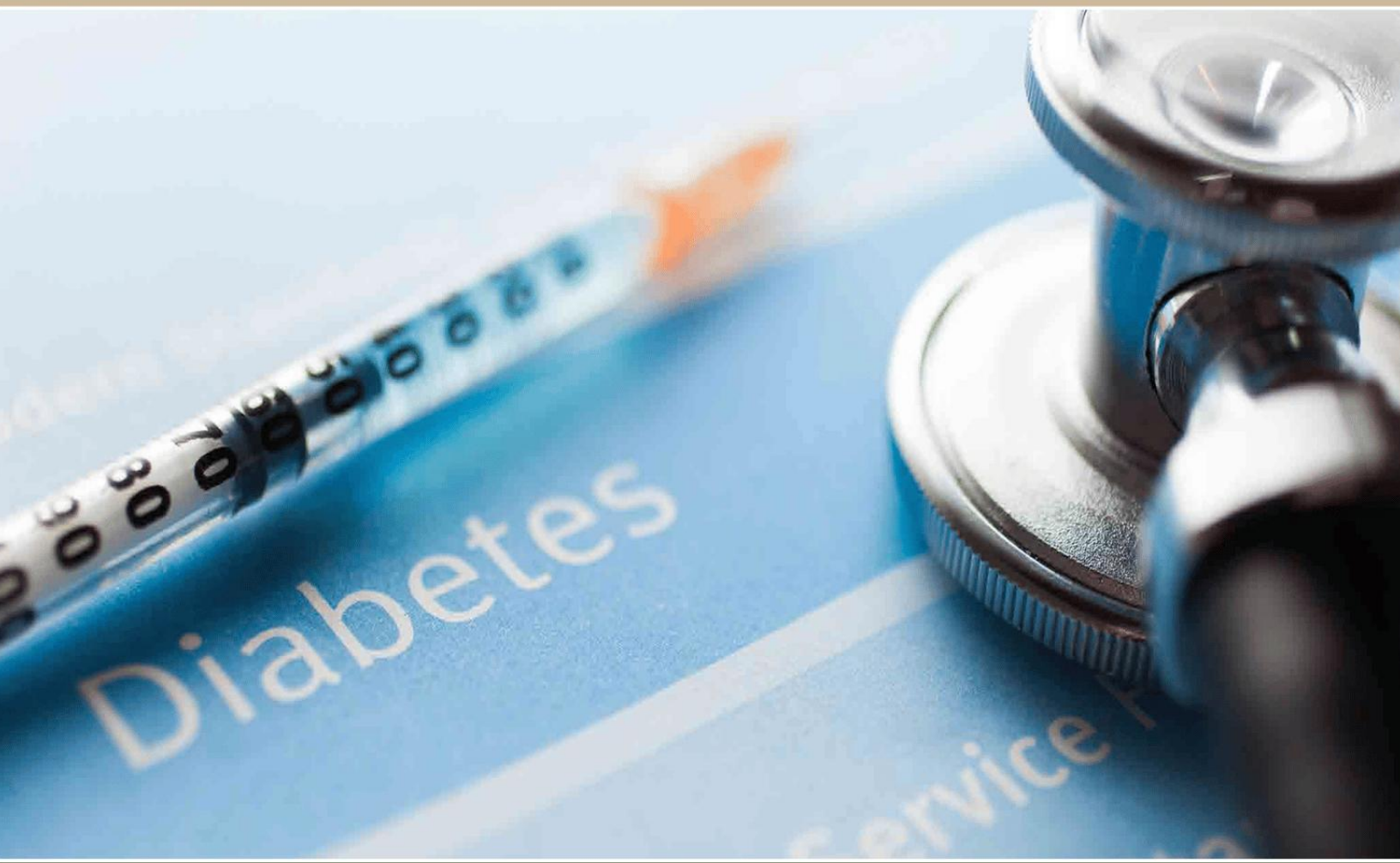
Updated: September 2026



Diabetes Self-Management Education and Support

REDUCING RISK

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AI-enabled tools were used to assist in the development of select content within this presentation. All outputs were reviewed, validated and approved by the authors prior to use/dissemination.



Welcome to the DHA Diabetes Self-Management Education and Support (DSMES) Program

This program is a core of 8 modules that focus on Type 2 Diabetes with additional modules available for Type 1 and Gestational Diabetes. These are available in-person, virtually and recorded so they are available at your convenience at: warfighterwellness.org/diabetes

- Diabetes Demystified
- Healthy Coping
- Healthy Eating
- Being Active
- Taking Medications
- Monitoring
- Reducing Risk
- Tools & Solutions

All handbooks contain:

- Reading materials.
- Notetaking pages.
- Glossary.
- Additional resources.

In This Module You Will:

- List common long-term concerns (complications) associated with diabetes.
- Identify early warning signs of potential complications to discuss with clinician.
- State ways to reduce risk or delay the development of complications.
- Recognize the importance of regular routine health care appointments, laboratory tests, vaccines and other exams.



Glossary

Cardiovascular: Made up of your heart (the pump) and your blood vessels (the pipes).

Cholesterol: A waxy, fat-like substance that your body actually needs to build healthy cells and make important hormones.

Complications: Extra health problems that can happen if diabetes is not managed well over a long time.

Comprehensive: Means "complete" or "covering everything." When something is comprehensive, it does not leave anything out and looks at the whole picture.

Peripheral: Means "on the edge" or "away from the center." It refers to parts of your body that are far away from your heart and brain, like your hands, arms, legs and feet.

Triglycerides: Triglycerides are the most common type of fat found in your body. When you eat, your body takes any extra energy it doesn't need right away and turns it into these fats to store for later. Can increase the risk of heart trouble.

Vitrectomy: Eye surgery where a doctor removes a clear gel from inside the eyeball. This gel is called vitreous, and sometimes it gets cloudy, filled with blood from diabetes or pulls on the back of your eye.

Health Literacy

Learning how to recognize possible complication signs and symptoms can set you up to recognize and request treatment early. Potentially preventing further complications.

Language Matters

Don’t treat complications as an unavoidable punishment. There are daily steps that keep the body safe and help you manage your future.

Long Term Complications

When there is too much glucose in the blood, it can slowly damage different parts of the body, like the eyes, heart, kidneys and feet. You can think of these complications as unwanted side effects or long-term damage that doctors try to prevent by keeping blood sugar in a safe range.

Diabetes affects small blood vessels (microvascular), large blood vessels (macrovascular) and nerves found in:

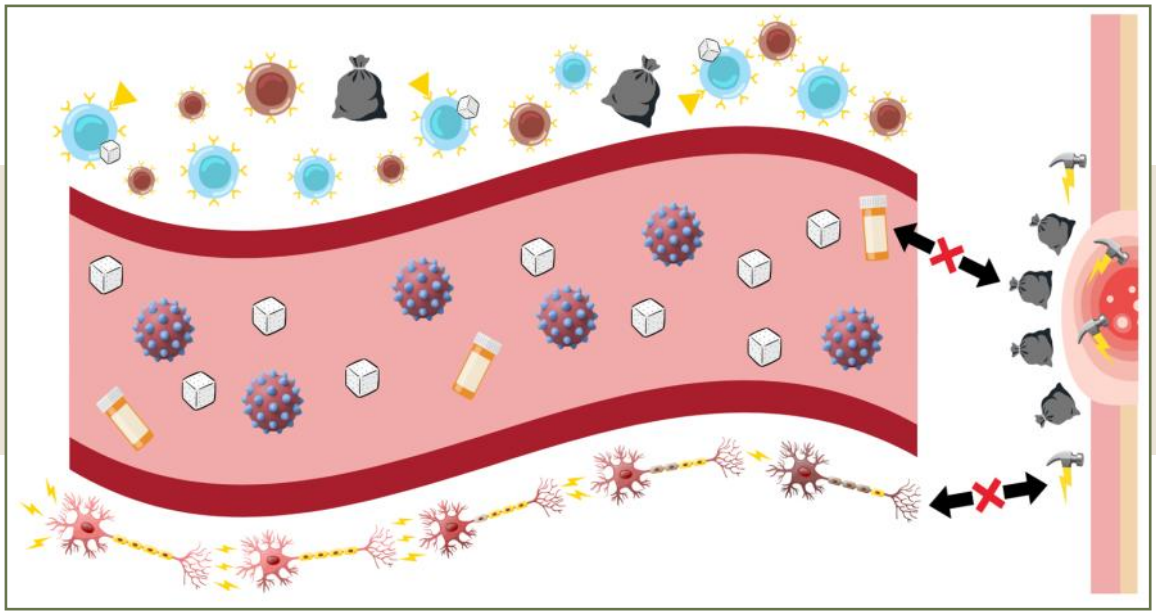
- Heart.
- Brain.
- Ears.
- Eyes.
- Mouth.
- Stomach.
- Liver.
- Kidneys.
- Sexual organs.
- Feet.
- Bones.



What complications are you concerned about?

Snapshot: Possible Effects of High Blood Glucose

High blood glucose is like having syrup flowing through the blood instead of water. This sticky blood travels slowly, making it hard for oxygen and nutrients to reach the organs. Over time, this extra glucose irritates and damages the walls of your blood vessels and nerves, leading to different health problems.



The blood vessels and nerves work to provide a pathway of nutrition and communication, but this can get disrupted with high blood glucose.

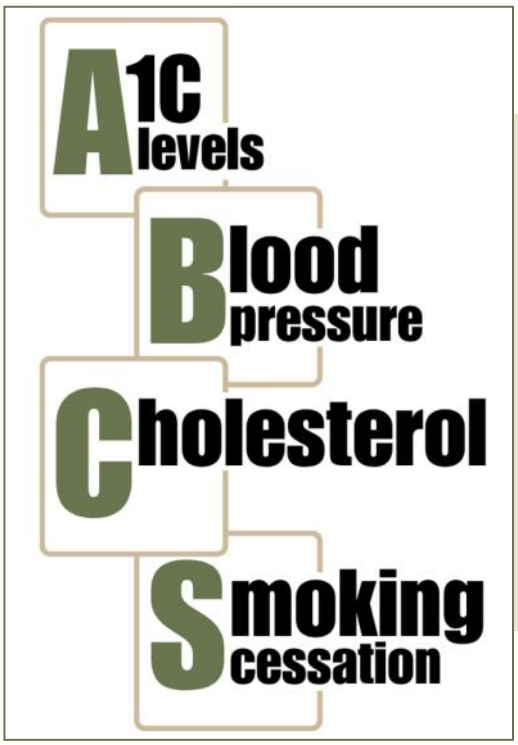
- **TISSUES & CELLS (top):** Healthy cells (blue) use insulin (yellow triangles) and act like a key to unlock the door so glucose (cubes) can enter for energy. When this system breaks down, cells starve (red), and waste products (trash bags) begin piling up because the body cannot clean them out.

- **BLOOD VESSEL (middle):** The bloodstream becomes packed with glucose. The red blood cells get sticky with glucose and cannot carry enough oxygen. Nutrients and medications (pill bottle) can reach the tissue, but is not used properly. The waste removal is decreased and slows healing.

- **NERVES (bottom):** Healthy nerves (on the left) send electrical messages smoothly. Over time, high blood glucose damages these wires. When signals stop getting through, the brain cannot guide normal movement, and the body loses its early-warning alarm for pain and injury (the hammer).

Diabetes ABC's

- **Managing A1C, blood pressure and cholesterol reduces risk for:**
  - Diabetes complications.
  - Stroke.
  - Heart attack.
  - And more!
- **Smoking Cessation**
  - Avoiding or quitting tobacco is the single most impactful lifestyle change that can immediately reduce the risk of heart attack or stroke.
  - No amount of cannabis is considered safe in any form for patients with diabetes.



BP Category	Systolic mm HG		Diastolic mm Hg
Normal	<120	&	<80
Elevated	120-129	&	<80
Stage 1 HBP	130-139	Or	80-89
Stage 2 HBP	≥140	&/or	≥90
Severe HBP (no symptoms)	>180	&/or	>120
Hypertensive Emergency (with symptoms)	>180	&/or	>120

Blood Pressure (BP)

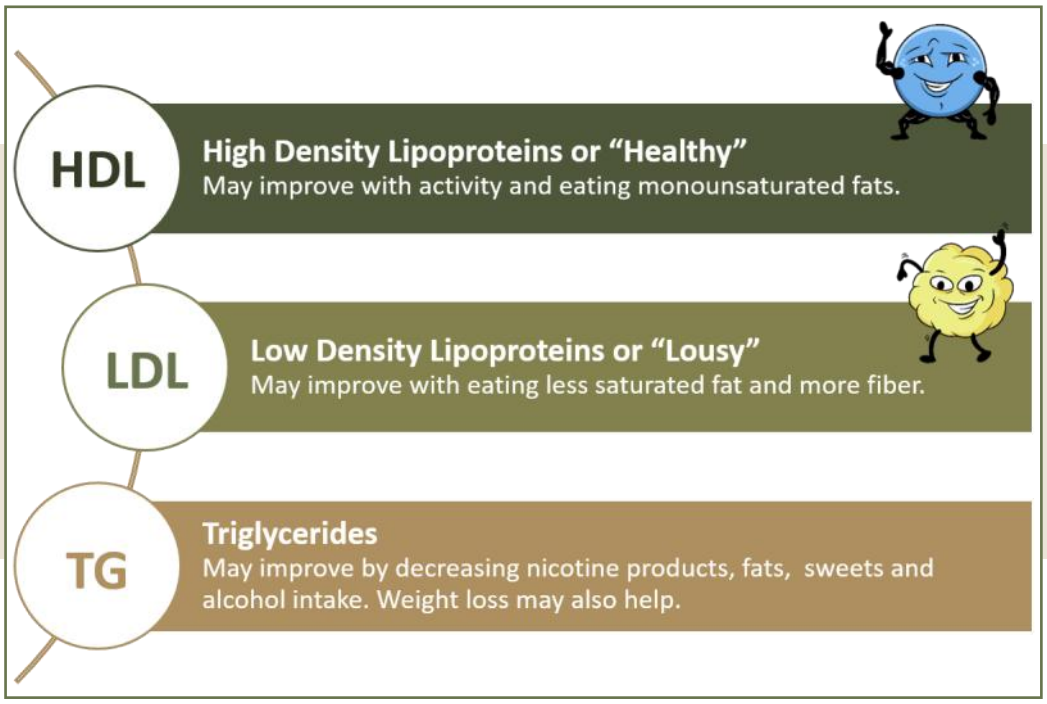
- Systolic pressure is the top number and represents when the heart pumps the blood away from the heart.
- Diastolic pressure is the bottom number and represents when the heart relaxes and blood flows into the heart.
- High blood pressure (HBP) is also called hypertension.
- Healthy lifestyle changes benefit diabetes, BP and cholesterol levels.

Symptoms may include chest pain, shortness of breath, back pain, numbness, weakness, vision change or difficulty speaking.

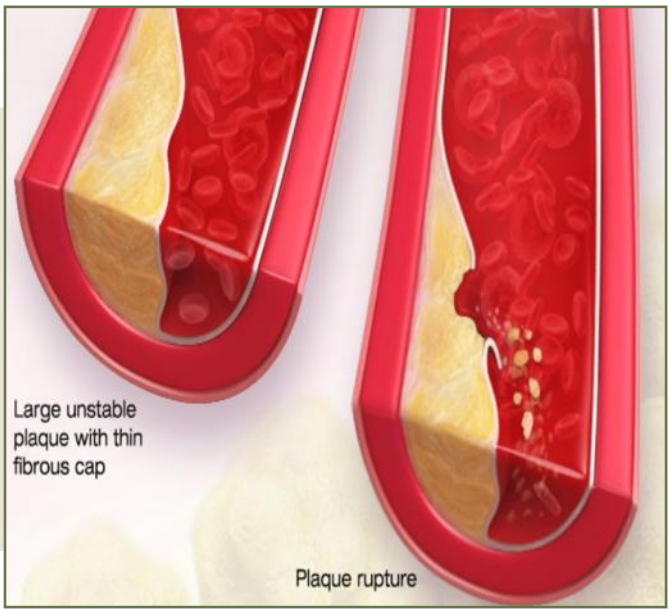
Cholesterol

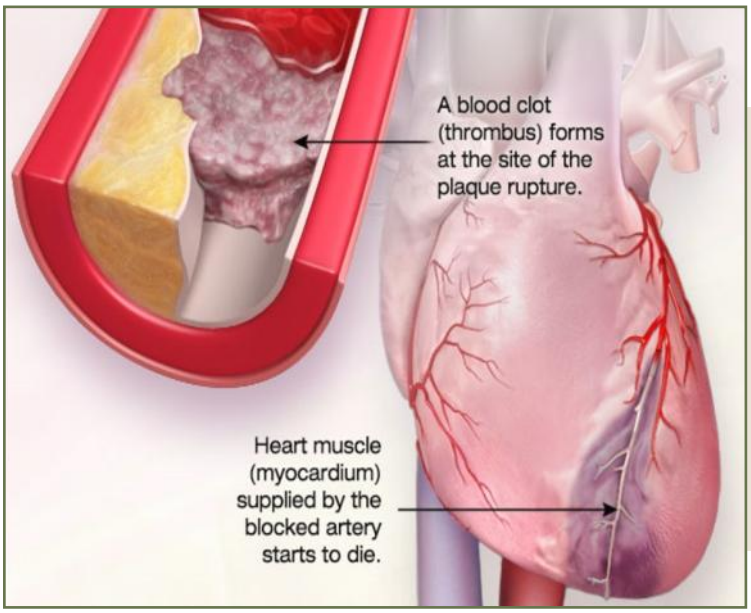
This is also referred to as “lipids”.

- Your clinician will help find your specific targets.
- Cholesterol should be checked yearly or more often if needed.



High Cholesterol Effects





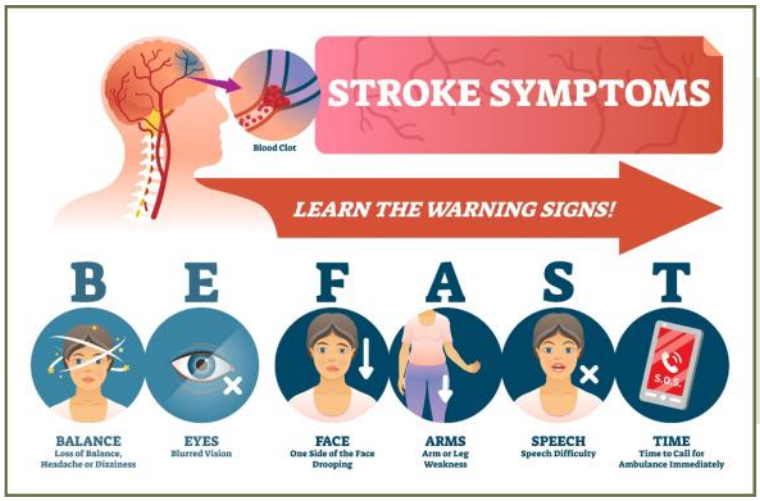
Cardiovascular Health



- Diabetes is a major macrovascular (blood vessel) threat.
- Over time, high glucose can damage blood vessels and nerves that control the heart.
- Cholesterol can build up in the coronary and/or peripheral arteries.

Stroke

When someone has a bleed or decrease in blood flow to the brain, the nerves in the body appear to stop working. Acting fast to help yourself or others can prevent further damage.



Prevention

- Manage blood pressure.
- Statin therapy.
- A1C management.
- Lifestyle changes.

Are you at risk? What is your prevention plan?

Peripheral Vascular Disease

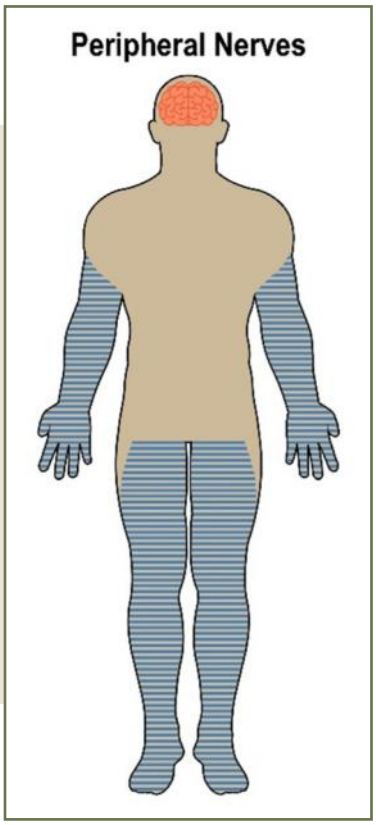
This happens when blood flow to your arms, hands, legs and feet is not working well.

Symptoms:

- Reduced blood flow in arms or legs.
- Cool to touch.
- Discoloration.
- Swelling.
- Hair loss/shiny skin on legs or feet.
- Pain or cramping with activity—gets better with rest.
- Slow or non-healing wounds.
- Cellulitis.



May lead to amputation if not addressed promptly.



Peripheral Neuropathy

Result of nerve fiber damage in hands, feet, legs and arms.

- Caused by prolonged/elevated glucose.
- Decreased sensation in extremities may increase risk of injury, possibly leading to infection/amputation.

Signs/Symptoms: (Up to 50% have none).

- Numbness, burning and/or tingling.
- Unexpected sensitivity or pain (e.g. bedsheet on feet).
- Balance issues.
- Loss of sensation.
- Non-healing ulcers.

Comprehensive Foot Exam

Visual Inspection

- Sores, color, hair loss, corns, calluses, bunions and fungus.
- Toenail health.
- Bone structure.



Physical Assessment

- Temperature.
- Pulses.
- Sensation with a monofilament.
- Vibratory feel with tuning fork or small.
- Hammer to check reflexes.

Daily Personal Foot Care Tips

Inspect: Examine entire foot. Use a mirror on floor to see the bottom. Look for redness, swelling, cracks, peeling skin, sores, blisters or ingrown toenails.

Wash: Test water temperature first with elbow or inner wrist, not foot, to be sure it is not too hot. Use lukewarm water and mild soap.

Dry: Pay extra attention to between toes to avoid fungal growth.

Moisturize: Apply a thin layer of lotion to tops bottom and heals, but not between the toes.

Protect:

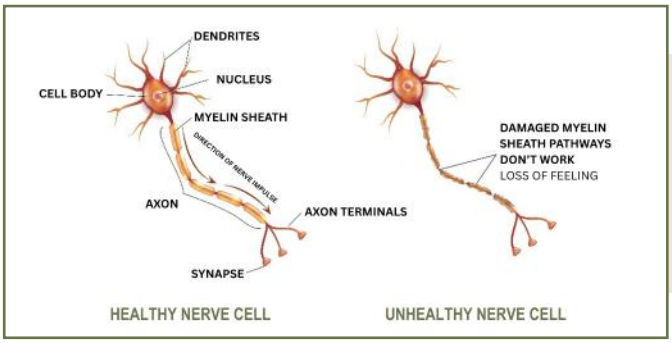
- Do not cut or use over-the-counter medications to treat corns or calluses.
- Trim toenails straight across, rounding out sharp edges with an emery board.
- Wear supportive shoes that fit well, both indoors and outdoors. Avoid going barefoot. Use light colored socks to catch injuries early.
- Protect your feet from extreme hot and cold temperatures.

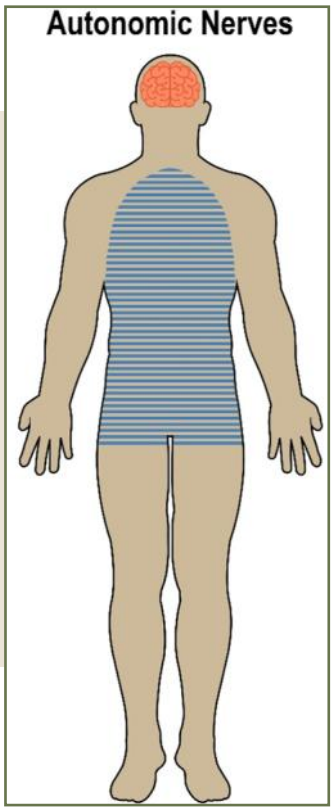


Keep Active: Blood flowing to your feet by being active and moving your feet even when seated.

Nerve Damage (Neuropathy)

This happens when the fat and fluid filled myelin sheath of the nerve cells becomes damaged and doesn't allow impulses to travel the body.





Autonomic Neuropathy

- Damage to "automatic" nerves that control the body's involuntary functions.
  - Caused by prolonged/elevated glucose.
  - Nerve damage can affect all organs in this area.

Talk to your clinician if you notice any changes or have other questions.

Autonomic Neuropathy Affects

May not show symptoms of low glucose.

Cardiovascular System:

- Sudden drop in BP when standing up.
- Resting elevated heart rate.

Sweat Glands: Abnormal sweating.

Eyes: Not responding correctly to light. Not to be confused with diabetic retinopathy.

Bladder:

- Nerves fail to signal when bladder is full, leading to urinary retention.
- Increases risk of urinary tract infections and overflow incontinence.

Digestive System:

- Hard to swallow.
- Can slow or speed up affecting glucose levels.
- Constipation, diarrhea, not absorbing nutrients, bloating, incontinence, etc.

Sexual dysfunction.

Sexual Dysfunction

This can lead to reduced desire and increased relationship anxiety. A healthy lifestyle may make a big difference.

52.5% of men with diabetes report erectile dysfunction (ED).

Symptoms in males:

- Prevents penis from getting firm.
- Difficulty achieving orgasm.
- Lowered testosterone.

Options:

- Penile Rings.
- Vacuum devices.
- Pills.
- Injections.
- Implants.

33% of women with diabetes report female sexual dysfunction (FSD).

Symptoms in females:

- Lack of vaginal lubrication.
- Difficulty in achieving orgasm.
- Decreased arousal.
- Pain with intercourse.

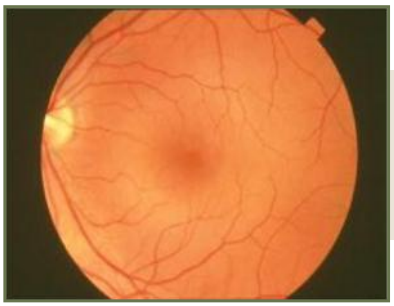
Options:

- Creams.
- Pills.
- Lubricants.
- Suppositories.

Diabetes Retinopathy

Elevated glucose damages blood vessels in the retina with or without symptoms.

Symptoms: Vision changes, blurry vision, flashes of light, blind spots, "floaters" or night blindness.

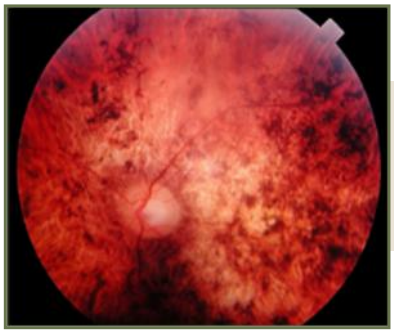


Healthy Eye

Annual dilated retinal exam is important for early detection.

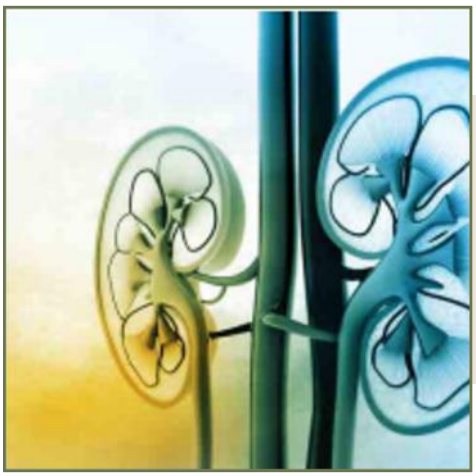
Treatment options may include:

- Laser therapy.
- Vitrectomy (may restore vision).
- Injections.



Retinopathy

Kidney Disease—Nephropathy



- Affects about 1 in 3 adults living with diabetes.
- The main job of the kidneys is to filter waste and extra water out of the blood.
- Symptoms may not develop until damage has occurred.
- An early sign of kidney damage is protein (albumin) in the urine.
- Kidney function can be monitored with routine lab tests.



Kidney Labs

Microalbuminuria:

- Urine test.
- Measures protein.

eGFR:

- Blood test.
- Measures kidney function.
- If not on target, may be improved with medications and healthy lifestyle.
- Both tests should be done yearly or more often if needed.

Notes:

Brain Dysfunction

- 91% higher risk for vascular dementia.
- 43% higher risk for Alzheimer dementia.

Symptoms:

- Decreased memory.
- Unable to problem solve.
- Difficult carrying out daily tasks.
- Problems with decision making.



May be related to:

- Insulin resistance.
- Frequent hypoglycemia.
- Prolonged high blood pressure.
- Higher A1C.
- Longer duration of diabetes.

What are your thoughts on the listed potential complications?

What is your prevention plan?

Restful Sleep

- Reduces insulin resistance.
- Lowers fasting glucose.
- Reduces hunger and desire to eat.
- Often lowers blood pressure and may reduce the risk of having a heart attack.
- Improves the immune system's ability to fight infections.
- May reduce risk of depression or anxiety.
- May help to maintain testosterone levels.
- Early to bed and early to rise may exhibit better health outcomes.

Sleep Tips



- Develop consistent sleep patterns.
- Keep the bedroom dark, quiet and cool.
- Remove electronic devices from the bedroom.
- Mentally unwind and relax before bedtime.
- Have a bedtime routine (taking a shower, reading, writing or meditating).
- Get into bed only when sleepy.
- Speak to clinician if you are having difficulty falling or staying asleep, snoring or having excessive daytime fatigue. You may have sleep apnea, which is treatable.

Do you feel good about your sleep habits? Any you want to improve?

Oral Health

- Gum disease is more common and severe for those with diabetes.
  - Higher risk for cavities and gingivitis.
  - Decreased oral healing.



- Poor oral health may increase cardiac risks.
- Dental health includes:
  - Brushing teeth twice daily.
  - Flossing once daily.
  - Getting dental exams twice a year.
  - Alerting dentist of any diabetes diagnosis.

Cancer Screening

- May increase risk of certain cancers likely due to common risk factors between diabetes and cancer:
  - Age, gender, race.
  - Obesity.
  - Tobacco and alcohol.
  - Physical inactivity.
- Be sure to receive recommended age and sex-appropriate screenings.
- Reduce modifiable risk factors with healthy lifestyles.

Most Common Cancers and Basic Screening Recommendations:

- **Liver:** Get screened for Hepatitis B and Hepatitis C at least once.
- **Pancreas:** Get screened only if at high risk with strong family history.
- **Breast:** Get a mammogram every 2 years once you reach 40 years old.
- **Uterus:** None, but after menopause, report any vaginal bleeding, spotting or discharge to their medical team. PAP does not check for this.
- **Colon:** Get colonoscopies every 10 years once you reach 45 years old. Others available.
- **Bladder:** No recommended routine screening.

Self-Care Strategies



- Eat healthy.
- Less fat and salt.
- More vegetables, whole grains and fruits.
- Drink plenty of water.
- Be active.
- Quit tobacco and limit alcohol.
- Prioritize rest and relaxation.
- Take medications and schedule appointments.
- Keep up to date on vaccinations.
- Establish daily routine.
- Maintain a good plan and update SMART goals.

Routine Care Recommended

Exam/Test	General Guidelines
A1C	2-4 times a year.
Blood Pressure	Check at every healthcare visit or daily at home.
Dental Exam	Preventive care twice a year.
Eye Exam	At diagnosis and every 1-2 years.
Foot Exam	You check daily, comprehensive annually.
Immunizations	Stay up to date: flu, COVID, pneumonia.
Kidney Function	At least annually.
Lipid Panel	At least annually.

Questions for Medical Team

Write down any questions that came up during this session. Is there anything you may want your team to check out? If so, what?

Key Points

- Optimizing diabetes ABC's can reduce complication risk.
- Recognizing early signs of potential complications can lead to early prevention and treatment.
- Attending routine health care appointments and getting recommended laboratory tests and other exams increases opportunity of early detection.
- Getting recommended vaccines may prevent diseases that can make your diabetes worse.
- Maintain good self-care strategies.

Resources



Core DSMES Sessions:

These core sessions contain vital information toward understanding how diabetes effects the body and all the recommended health behaviors to support self-management.

Link to recorded classes:
warfighterwellness.org/diabetes

Online:

American Diabetes Association Diabetes Complications:
https://diabetes.org/about-diabetes/complications

Center for Disease Control and Prevention Diabetes Complications:
https://www.cdc.gov/diabetes/complications/index.html

U.S. Preventive Services Task Force (USPSTF):
https://www.uspreventiveservicestaskforce.org/uspstf/home

Notes:

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The American Diabetes Association Recognizes this education service as meeting the National Standards for Diabetes Self-Management Education and Support.

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