

Carol J. Adams DNP MSN RN
Clinical Program Manager

DIABETES

Table of Contents:

1. [Introduction](#)
2. [Diabetes Facts](#)
3. [Types of Diabetes](#)
4. [Symptoms of Diabetes](#)
5. [Risk Factors and Impact](#)
6. [Diabetes Screening](#)
7. [Prevention](#)
8. [Managing Diabetes](#)
9. [PHW Diabetes Program](#)
10. [Diabetes Management Resources](#)

INTRODUCTION

Diabetes is a chronic (long-lasting) disease which affects how the body turns food into energy.

There are four (4) types of Diabetes:

- Prediabetes
- Type 1
- Type 2
- Gestational Diabetes (Diabetes while pregnant)

DIABETES FACTS

In Pennsylvania:

- **76,535** people are diagnosed with diabetes every year.
- **1,162,598 (11.3%)** people have a diagnosis of diabetes.
- An estimated **303,000** people have diabetes but don't know it.
- **3,484,000** adult people (**34.1%**) have prediabetes.
- In PA, estimated costs for diabetes is \$12.9 billion per year.



Nationally:

DIABETES

- A total of **38.4** million people (all ages) have diabetes (**11.6%** of the US population).
- Undiagnosed: an estimated **8.7** million people do not know they have diabetes (**22.8%** of all US adults with diabetes).
- Diagnosed: an estimated **29.7** million people in the US have diabetes (Including **29.4** million adults).

PREDIABETES

- A total of **97.6** million people aged 18 or older have prediabetes (**38%** of the adults US population).
- **48.8%** people, aged 65 or older, have prediabetes (**27.2** million).

TYPES OF DIABETES

Prediabetes

- People with prediabetes have higher blood sugar than normal, but not high enough yet for a diabetes diagnosis.
- You can have prediabetes for years without symptoms.
- Prediabetes is a 'fork in the road'. If you ignore it, your risk of developing Type 2 Diabetes goes up.
- Talk to your doctor about getting your blood sugar tested if:
 - You are overweight.
 - You are over 45 years old.
 - You have a parent, brother, or sister with Type 2 Diabetes.
 - You are physically active less than 3 times a week.
 - You have had gestational diabetes (diabetes during pregnancy).
 - You gave birth to a baby who weighed over 9 pounds. (CDC, 2024)
- **Prediabetes can be reversed with lifestyle changes, weight loss and medications.**

TYPES OF DIABETES

Type 1

- Thought to be caused by an autoimmune reaction (the body attacking itself by mistake).
- Can be diagnosed at any age, and symptoms develop quickly.
- Requires insulin every day to survive.
- Approximately 5-10% people have type 1 diabetes.

Type 2

- The body does not use insulin well and can't keep blood sugars at a normal range.
- It usually develops over many years and symptoms may not be noticed.
- Usually starts when you're an adult, though more and more children and teens are developing it.

Gestational Diabetes (Diabetes while pregnant)

- Usually goes away after you give birth but increases the risk of developing type 2 diabetes later in life.

Complications associated with diabetes include heart disease, stroke, amputation, end-stage kidney disease, blindness—and death.

SYMPTOMS OF DIABETES

Symptoms of Prediabetes may include:

- You're a lot thirstier than usual.
- You pee a lot.
- Your vision is blurry.
- You're a lot more tired than usual.
- You have areas of darker skin in your armpit or on your neck.
- You have small skin growths in the same areas.
- **Prediabetes symptoms in women may include:**
 - Yeast and urinary tract infections
 - Longer and heavier periods
 - Reduced interest in sex
 - Vaginal dryness that can make having sex uncomfortable
 - Trouble getting pregnant

Symptoms of Diabetes may include:

- Urinating (peeing) a lot, often at night
- Being very thirsty
- Losing weight without trying
- Being very hungry
- Having blurry vision
- Having numb or tingling hands or feet
- Feeling very tired
- Having very dry skin
- Having sores that heal slowly
- Having more infections than usual

SYMPTOMS OF DIABETES

Symptoms of *Type 1 Diabetes* (additional):

- Nausea, vomiting, or stomach pains

Symptoms of *Type 2 Diabetes*(additional):

- May not be noticeable
- Can take several years to develop
 - *Know the risk factors and visit your doctor if you have any of them.*

Symptoms of *Gestational Diabetes*:

- Usually doesn't have any symptoms
- If you are pregnant, you should be tested for gestational diabetes between 24 and 28 weeks of pregnancy.

SYMPTOMS OF DIABETES

Symptoms of Diabetes



feel very tired



very thirsty



very hungry



lose weight



high blood sugar



dizziness



blurred vision



urinate a lot ,often at night



have sores that heal slowly



have numb or tingling hands or feet

DIABETES RISK FACTORS AND IMPACT

Prediabetes

- You are overweight or obese.
- You are more than 45 years old.
- You have a parent or sibling with type 2 diabetes.
- You are physically active less than 3 times a week.
- You had gestational diabetes or gave birth to a baby larger than 9 pounds.
- You have a non-alcoholic fatty liver disease.
- African American, Hispanic or Latino, American Indian or Alaska Natives are at higher risk.

Type 1 Diabetes

- You have a family member (parent, brother, or sister) with type 1 diabetes.
- Your age: usually occurs in children, teens, or young adults.



DIABETES RISK FACTORS AND IMPACT

Type 2 Diabetes

- You have prediabetes.
- You are overweight.
- You are 45 years or older.
- You have a family member (parent, brother, or sister) with type 2 diabetes.
- You are not physically active.
- You had gestational diabetes or gave birth to a baby larger than 9 pounds.
- You have a non-alcoholic fatty liver disease.
- You are African American, Hispanic or Latino, American Indian or Alaska Native are at higher risk.

Gestational Diabetes

- You had gestational diabetes during a previous pregnancy.
- You have given birth to a baby who weighed over 9 pounds.
- You are overweight.
- You are more than 25 years old.
- You have a family history of type 2 diabetes.
- You have a hormone disorder called polycystic ovary syndrome (PCOS).
- African American, Hispanic or Latino, American Indian or Alaska Natives are at higher risk.

Diabetes may impact many parts of the body including the heart, kidneys, eyes, feet, and legs.

DIABETES SCREENING

Diabetes Screenings Per Your Doctor's Recommendations:

A1C: A blood test that measures your average blood glucose level over 2-3 months.

- **A1C less than 5.7% is normal.**
- **A1C greater than 5.7% combined with a fasting blood sugar between 100-120 is prediabetes.**
- **A1C of 6.5% or higher indicates diabetes.**
- The target number for adults who have diabetes is less than 7 %.
 - A high A1C is a sign of frequent high blood glucose, which puts you at risk for complications such as nerve damage, kidney disease and vision impairment.

PREVENTION

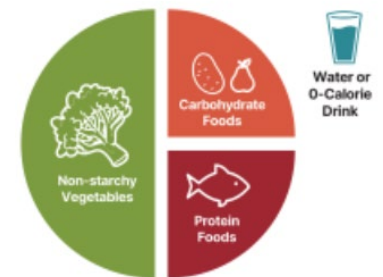
Tips for Taking Control:

- Lose extra weight (7% weight loss can reduce the risk of developing Diabetes)
- Being physically active can help you:
 - Lose weight, lower blood sugar, and boost insulin sensitivity.
 - Include exercises like:
 - Aerobic exercise 30 minutes or more (brisk walking, swimming, biking, or running).
 - Aim for at least 150 minutes a week.
 - Resistance exercise at least 2 -3 times/ week (weight-lifting, yoga, calisthenics).
 - Limit inactivity
 - Break up periods of sitting by taking a few minutes to stand, walk around or do some light activity every 30 minutes.

PREVENTION

Tips for Taking Control (cont.):

- Eat healthy plant foods. Eat a variety of healthy, fiber-rich foods including:
 - Fruits (tomatoes, peppers, and fruit from trees)
 - Non-starchy vegetables (leafy greens, broccoli, and cauliflower)
 - Legumes (beans, chickpeas, and lentils)
 - Whole grains (whole-wheat pasta / bread, whole-grain rice, whole oats, and quinoa)
- Eat healthy fats. Unsaturated fats (monounsaturated and polyunsaturated) promote healthy cholesterol and good heart/vascular health:
 - Olive, sunflower, safflower, cottonseed, and canola oils
 - Nuts and seeds, such as almonds, peanuts, flaxseed, and pumpkin seeds
 - Fatty fish, such as salmon, mackerel, sardines, tuna, and cod
- Skip fad diets and make healthier choices. For good food choices and smart portion sizes, divide your plate into three parts:
 - One-half: fruit and non-starchy vegetables
 - One-quarter: whole grains
 - One-quarter: protein rich foods, such as legumes, fish, or lean meats (Mayo Clinic, 2023)



MANAGING DIABETES

Building healthy habits is key to living well, aging well, and managing long-term health conditions.

There are three steps to succeed:

- **Step 1: Make a plan**
 - Define why
 - Decide a long-term goal
 - Choose an action that is **SMART**:
 - S-specific
 - M-measurable
 - A-achievable
 - R-relevant
 - T-time bound

MANAGING DIABETES

Three steps to succeed (Cont.):

- **Step 2: Be accountable**

- Track your progress to figure out what is working and not working.
- Social support to stay on track (walking partner, gym buddy, etc.).
- Become part of support programs:
 - PHW Diabetes Disease Management
 - Diabetes self-management education and support (DSMES)
 - National Diabetes Prevention Program (National DPP)

- **Step 3: Recognize your success**

- Find rewards to celebrate success and support your health goals.
- Know it is okay if things don't go as planned.

Sometimes the biggest success to celebrate is picking yourself up and not giving up.

MANAGING DIABETES

Partner with Your Healthcare Provider:

- Routine screening for diabetes for:
 - All adults ages 45 or older
 - People younger than 45 who are overweight/obese with 1 or more risk factors
 - People who have had gestational diabetes
 - People who have been diagnosed with prediabetes
 - Children who are overweight/obese with a family history of type 2 diabetes or other risk factors
- Regular visits to a physician for monitoring/management of diabetes, including:
 - Blood tests: Glycated hemoglobin (A1C) test shows the average blood sugar level for the past 2-3 months. **Goal is a A1C less than 7.0% (American Diabetes Association, 2024)**

MANAGING DIABETES

Partner with Your Healthcare Provider:

- Ongoing monitoring of the heart, kidneys, eyes, feet, and legs by:
 - **Heart:**
 - Blood pressure (BP) is controlled (less than 140/90 mmHg)
 - High cholesterol management through diet and if needed, a Statin medication
 - Quitting smoking helps to reduce your heart rate and risk of stroke
 - **Kidney:**
 - Yearly screening for kidney disease through blood and urine tests such as: Estimated glomerular filtration rate (eGFR) and Urine albumin-to-creatinine ratio (UACR)
 - **Eyes:**
 - See an eye doctor each year for a retinal eye exam.
 - **Legs/Feet:**
 - Diabetes increases the risk of developing infections or ulcers of the feet. Inspect your feet for any sores or wounds to prevent ulcers.

(American Diabetes Association, 2024)

PHW WELLNESS MANAGEMENT

PHW Diabetes Disease Management provides telephonic outreach, education, and support services to optimize:

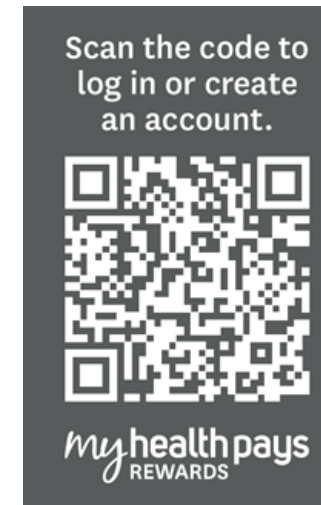
- Blood glucose
- Blood pressure
- Lipid (cholesterol) control
- Nutrition
- Self-management skills

Earn rewards for healthy choices through the My Health Pays® Rewards Program:

Recommended Screening	Reward
• Breast Cancer Screening	\$25
• Colon Cancer Screening	\$25
• Cervical Cancer Screening	\$25
• Diabetes Eye Exam	\$30
• Diabetes HbA1c Test	\$30

To learn more about My Health Pays® Rewards program or make a referral to disease management:

- Visit PAHealthWellness.com
- Call Participant Services: 1-844-626-6813 (TTY:711)
- Email:
phwcasemanagement@pahealthwellness.com
- QR Code:



DIABETES MANAGEMENT RESOURCES

- **American Diabetes Association:**

- Website: <https://diabetes.org>
- Phone: **1-800-DIABETES (800-342-2383)**
- Email: askada@diabetes.org

- **Center for Disease Control (CDC), Diabetes:**

- Weblink: <https://www.cdc.gov/diabetes/index.html>
- Risk Factors Link: <https://www.cdc.gov/diabetes/basics/risk-factors.html>
- Learn More About Diabetes Link: <https://www.cdc.gov/diabetes/basics/diabetes.html>
- Programs:
 - *Diabetes Self-Management Education and Support (DSMES)*
 - ❖ Weblink: <https://www.cdc.gov/diabetes/education-support-programs/index.html>
 - *National Diabetes Prevention Program*
 - ❖ Weblink: <https://www.cdc.gov/diabetes/prevention/index.html>

DIABETES MANAGEMENT RESOURCES

- **National Institute of Diabetes and Digestive and Kidney Diseases:**
 - Weblink: <https://www.niddk.nih.gov>
- **National Kidney Foundation:**
 - Weblink: <https://www.kidney.org>
 - Phone: 855-NKF-CARES (855-653-2273)
- **Pennsylvania Department of Health, Diabetes:**
 - Weblink: <https://www.health.pa.gov>
 - Diabetes programs hyperlinks:
 - CDC's Diabetes Prevention Program
 - ❖ Weblink: <https://www.cdc.gov>
 - Find a Diabetes Prevention Program in PA, go to:
 - ❖ Weblink: <https://dprp.cdc.gov/Registry>
 - Then search by county

REFERENCES

- American Diabetes Associations. (2023). The Burden of Diabetes in Pennsylvania. Weblink: https://diabetes.org/sites/default/files/2023-09/ADV_2023_State_Fact_sheets_all_rev_Pennsylvania.pdf
- American Diabetes Associations. (2024). Diabetes Prevention. Weblink: <https://diabetes.org/about-diabetes/diabetes-prevention>
- Centers for Disease Control and Prevention (CDC). (2024). Diabetes Basics. Weblink: https://www.cdc.gov/diabetes/about/?CDC_AAref_Val=https://www.cdc.gov/diabetes/basics/index.html
- Centers for Disease Control and Prevention (CDC). (2024). About Diabetes Self-Management Education and Support (DSMES). Weblink: https://www.cdc.gov/diabetes/education-support-programs/?CDC_AAref_Val=https://www.cdc.gov/diabetes/managing/education.html
- Centers for Disease Control and Prevention (CDC). (2024). Diabetes Self-Management Education and Support (DSMES) Toolkit. Weblink: https://www.cdc.gov/diabetes-toolkit/php/?CDC_AAref_Val=https://www.cdc.gov/diabetes/dsmes-toolkit/index.html
- Centers for Disease Control and Prevention (CDC). (2024). Diabetes Infographics, Social Media Graphics, and Other Resources. Weblink: https://www.cdc.gov/diabetes/communication-resources/?CDC_AAref_Val=https://www.cdc.gov/diabetes/library/factsheets.html

REFERENCES

- Centers for Disease Control and Prevention (CDC). (2024). Clinical Guidance for Diabetes. Weblink: <https://www.cdc.gov/diabetes/hcp/clinical-guidance/index.html>
- Centers for Disease Control and Prevention (CDC). (2024). Living with Diabetes. Weblink: https://www.cdc.gov/diabetes/living-with/?CDC_AAref_Val=https://www.cdc.gov/diabetes/managing/index.html
- Centers for Disease Control and Prevention (CDC). (2024). State, Local, and National Partner Diabetes Programs. Weblink: https://www.cdc.gov/diabetes-state-local/php/?CDC_AAref_Val=https://www.cdc.gov/diabetes/programs/stateandlocal/index.html
- Centers for Disease Control and Prevention (CDC). (2024). National Diabetes Statistics Report. Weblink: https://www.cdc.gov/diabetes/php/data-research/?CDC_AAref_Val=https://www.cdc.gov/diabetes/data/statistics-report/index.html
- Centers for Disease Control and Prevention (CDC). (2024). Symptoms of Diabetes. Weblink: <https://www.cdc.gov/diabetes/signs-symptoms/index.html>

REFERENCES

- Centers for Disease Control and Prevention (CDC). (2024). The Surprising Truth About Prediabetes. Weblink: <https://www.cdc.gov/diabetes/prevention-type-2/truth-about-prediabetes.html>
- Healthline. (2024). The Effects of Diabetes on Your Body. Weblink: <https://www.healthline.com/health/diabetes/effects-on-body>
- Mayo Clinic. (2024). Diabetes prevention: 5 tips for taking control. Weblink: <https://www.mayoclinic.org/diseases-conditions/type-2-diabetes/in-depth/diabetes-prevention/art-20047639>
- Mayo Clinic. (2024). Type 2 diabetes. Weblink: <https://www.mayoclinic.org/diseases-conditions/type-2-diabetes/diagnosis-treatment/drc-20351199>
- National Institute of Health (NIH). (2023) National Institute of Diabetes and Digestive and Kidney Diseases, Support your Patients with Resources and Referrals. Weblink: <https://www.niddk.nih.gov/health-information/professionals/clinical-tools-patient-management/diabetes/game-plan-preventing-type-2-diabetes/help-patients-make-lifestyle-changes-after-prediabetes-diagnosis/support-your-patients-with-resources-referrals>
- Pennsylvania Department of Health. (2024). Diabetes. Weblink: <https://www.health.pa.gov/topics/disease/Pages/Diabetes.aspx>
- WebMd. (2024) Weblink: <https://www.webmd.com/diabetes/what-is-prediabetes>



pa health
& wellness™