



Home → Health Topics → Diabetes

URL of this page: <https://medlineplus.gov/diabetes.html>

## Diabetes

Also called: Diabetes mellitus, DM

### What is diabetes?

Diabetes, also known as diabetes mellitus, is a disease in which your blood glucose

[<https://medlineplus.gov/bloodglucose.html>] , or blood sugar, levels are too high. Glucose is your body's main source of energy. Your body can make glucose, but it also comes from the food you eat. Insulin is a hormone

[<https://medlineplus.gov/hormones.html>] made by your pancreas. Insulin helps move glucose from your bloodstream into your cells, where it can be used for energy.

If you have diabetes, your body can't make insulin, can't use insulin as well as it should, or both. Too much glucose stays in your blood and doesn't reach your cells. This can cause glucose levels to get too high. Over time, high blood glucose levels can lead to serious health conditions [<https://medlineplus.gov/diabetescomplications.html>] . But you can take steps to manage your diabetes and try to prevent these health problems.

### What are the types of diabetes?

There are different types of diabetes:

- Type 1 diabetes [<https://medlineplus.gov/diabetestype1.html>] . If you have type 1 diabetes, your body makes little or no insulin. It happens when your immune system [<https://medlineplus.gov/immunesystemanddisorders.html>] attacks and destroys the cells that produce insulin.
- Type 2 diabetes [<https://medlineplus.gov/diabetestype2.html>] . This is the most common form of diabetes. If you have type 2 diabetes, your body may still be able to make insulin, but your cells don't respond well to insulin. They can't easily take up enough glucose from your blood.
- Gestational diabetes [<https://medlineplus.gov/diabetesandpregnancy.html>] . This is a form of diabetes that develops during pregnancy. It happens when your body can't make the extra insulin it needs during pregnancy.

### What causes diabetes?

The different types of diabetes have different causes:

- Researchers think **type 1 diabetes** is caused by genes [<https://medlineplus.gov/genetics/condition/type-1-diabetes/>] and factors in the environment that might trigger the disease.
- **Type 2 diabetes** is caused by several factors, including lifestyle factors and genes [<https://medlineplus.gov/genetics/condition/type-2-diabetes>] . The lifestyle factors include not being physically active [<https://medlineplus.gov/healthrisksofaninactiveifestyle.html>] and being overweight or having obesity [<https://medlineplus.gov/obesity.html>] .
- Researchers think **gestational diabetes** is caused by the hormonal changes of pregnancy along with genetic [<https://medlineplus.gov/genetics/condition/gestational-diabetes/>] and lifestyle factors.

### Who is more likely to develop diabetes?

The different types of diabetes have different risk factors:

- You can develop **type 1 diabetes** at any age, but it most often starts in childhood. Having a parent or sibling with type 1 diabetes may increase your chance of developing it.

- You are at higher risk of developing **type 2 diabetes** if you:
  - Are overweight or have obesity.
  - Are over age 35. Children, teenagers, [<https://medlineplus.gov/diabetesinchildrenandteens.html>] and younger adults can get diabetes, but it is more common in middle-aged and older adults.
  - Have a family history of diabetes.
  - Have prediabetes [<https://medlineplus.gov/prediabetes.html>] . This means that your blood glucose is higher than normal, but it's not high enough to be called diabetes.
  - Had gestational diabetes.
  - Have given birth to a baby weighing 9 pounds or more.
  - Are African American, American Indian, Asian American, Hispanic/Latino, or Pacific Islander.
  - Are not physically active.
  - Have certain other health conditions, such as high blood pressure [<https://medlineplus.gov/highbloodpressure.html>] or polycystic ovary syndrome [<https://medlineplus.gov/polycysticovarysyndrome.html>] (PCOS).
- You are at higher risk of developing **gestational diabetes** if you:
  - Are overweight or have obesity.
  - Have a family history of diabetes.
  - Had gestational diabetes in a previous pregnancy.
  - Have given birth to a baby weighing 9 pounds or more.
  - Have polycystic ovary syndrome (PCOS).
  - Are African American, Hispanic/Latino, American Indian, Alaska Native, Native Hawaiian, or Pacific Islander.

## What are the symptoms of diabetes?

The symptoms of diabetes may include:

- Feeling very thirsty
- Feeling very hungry
- Urinating (peeing) more often, including at night
- Fatigue [<https://medlineplus.gov/fatigue.html>]
- Blurry vision
- Numbness or tingling in the feet or hands
- Sores that do not heal
- Losing weight without trying

But it's important to know that your symptoms may vary, depending on which type you have:

- The symptoms of **type 1 diabetes** usually come on quickly and can be severe.
- With **type 2 diabetes**, the symptoms often develop slowly, over several years. The symptoms can be so mild that you might not even notice them.
- **Gestational diabetes** often has no symptoms. If you do have symptoms, they may be mild. If you are pregnant, you will usually be screened for this condition between 24 and 28 weeks of pregnancy.

## How is diabetes diagnosed?

To find out if you have diabetes, your health care provider will use one or more glucose blood tests [<https://medlineplus.gov/lab-tests/blood-glucose-test/>] . There are several types, including the A1C test [<https://medlineplus.gov/a1c.html>] .

## What are the treatments for diabetes?

Treatment for diabetes involves managing your blood glucose levels:

- If you have **type 1 diabetes**, you will need to take daily doses of insulin, either by injection or through a special pump. Some people also need to take another type of diabetes medicine [<https://medlineplus.gov/diabetesmedicines.html>] that works with insulin.

- If you have **type 2 diabetes**, you may be able to manage or even reverse it by making lifestyle changes [<https://medlineplus.gov/howtopreventdiabetes.html>] . These include eating a healthy diet [<https://medlineplus.gov/diabeticdiet.html>] , staying at healthy weight [<https://medlineplus.gov/weightcontrol.html>] , and getting regular physical activity [<https://medlineplus.gov/howmuchexercisedoneed.html>] . Some people also need to take diabetes medicines to manage their diabetes.
- If you have **gestational diabetes**, you may be able to lower your glucose levels by eating a healthy diet and getting regular exercise. But be sure to talk to your provider about your treatment options. Gestational diabetes usually goes away after you give birth. But you will have a higher risk of developing type 2 diabetes later.

Checking your blood glucose levels is also an important part of managing your diabetes. Ask your provider about the best way to check your blood glucose level and how often you should check it.

## Can diabetes be prevented?

**Type 1 diabetes** can't be prevented.

You may be able to delay or prevent **type 2 diabetes** through the same lifestyle changes that are used to manage diabetes (eating a healthy diet, staying at a healthy weight, and getting regular physical activity). These lifestyle changes may also help prevent **gestational diabetes**.

*NIH: National Institute of Diabetes and Digestive and Kidney Diseases*

## Start Here

- Managing Diabetes [<https://www.niddk.nih.gov/health-information/diabetes/overview/managing-diabetes>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/diabetes/informacion-general/manejo?dkrd=/health-information/informacion-de-la-salud/diabetes/informacion-general/control>]
- What is Diabetes? [<https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/diabetes/informacion-general/que-es>]

## Diagnosis and Tests

- A1C: MedlinePlus Health Topic [<https://medlineplus.gov/a1c.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/a1c.html>]
- At-Home Medical Tests [<https://medlineplus.gov/lab-tests/at-home-medical-tests/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/pruebas-medicas-en-el-hogar/>]
- Blood Glucose Test [<https://medlineplus.gov/lab-tests/blood-glucose-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-glucosa-en-la-sangre/>]
- Diabetes Tests and Diagnosis [<https://www.niddk.nih.gov/health-information/diabetes/overview/tests-diagnosis>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/diabetes/informacion-general/pruebas-diagnostico>]
- Glucagon Blood Test [<https://medlineplus.gov/lab-tests/glucagon-blood-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/analisis-de-sangre-de-glucagon/>]
- Glucose in Urine Test [<https://medlineplus.gov/lab-tests/glucose-in-urine-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-glucosa-en-la-orina/>]
- Ketones in Blood [<https://medlineplus.gov/lab-tests/ketones-in-blood/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-cetonas-en-sangre/>]
- Ketones in Urine [<https://medlineplus.gov/lab-tests/ketones-in-urine/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-cetonas-en-la-orina/>]

## Prevention and Risk Factors

- Community Health Worker Multicultural Resources [<https://www.nhlbi.nih.gov/education/heart-truth/CHW/multicultural-resources>] (National Heart, Lung, and Blood Institute) - **PDF**
- How to Prevent Diabetes: MedlinePlus Health Topic [<https://medlineplus.gov/howtopreventdiabetes.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/howtopreventdiabetes.html>]
- Surprising Truth about Prediabetes [<https://www.cdc.gov/diabetes/prevention-type-2/truth-about-prediabetes.html>] (Centers for Disease Control and Prevention)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/prevention-type-2/la-sorprendente-verdad-sobre-la-prediabetes.html>]

## Treatments and Therapies

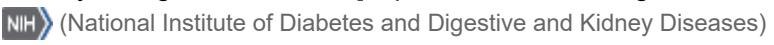
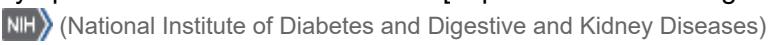
- Diabetes Medicines: MedlinePlus Health Topic [<https://medlineplus.gov/diabetesmedicines.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/diabetesmedicines.html>]

## Living With

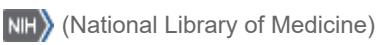
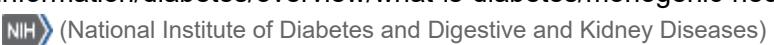
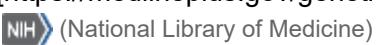
- Changing Your Habits for Better Health [<https://www.niddk.nih.gov/health-information/diet-nutrition/changing-habits-better-health>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/alimentacion-nutricion/como-cambiar-sus-habitos-para-tener-una-mejor-salud>]
- Diabetes and Digestion [<https://www.heart.org/en/health-topics/diabetes/about-diabetes/prediabetes-and-digestion>] (American Heart Association)
- Diabetes and DKA (Ketoacidosis) [<https://diabetes.org/about-diabetes/complications/ketoacidosis-dka/dka-ketoacidosis-ketones>] (American Diabetes Association)
- Diabetes and Mental Health [<https://www.cdc.gov/diabetes/living-with/mental-health.html>] (Centers for Disease Control and Prevention)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/living-with/la-diabetes-y-la-salud-mental.html>]
- Diabetic Diet: MedlinePlus Health Topic [<https://medlineplus.gov/diabeticdiet.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/diabeticdiet.html>]
- Healthy Weight [<https://www.cdc.gov/diabetes/living-with/healthy-weight.html>] (Centers for Disease Control and Prevention)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/living-with/peso-saludable.html>]
- Managing Diabetes in the Heat [<https://www.cdc.gov/diabetes/articles/managing-diabetes-in-the-heat.html>] (Centers for Disease Control and Prevention)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/articles/manejar-la-diabetes-cuando-hace-calor.html>]
- Take Diabetes to Heart [<https://www.nhlbi.nih.gov/resources/take-diabetes-heart-fact-sheet>]  **Easy-to-Read** (National Heart, Lung, and Blood Institute) - **PDF**
- Tips for Traveling with Diabetes [<https://www.cdc.gov/diabetes/about/tips-for-traveling-with-diabetes.html>] (Centers for Disease Control and Prevention)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/about/consejos-para-viajar-con-diabetes.html>]
- Your Diabetes Care Team [<https://www.cdc.gov/diabetes/treatment/diabetes-doctors.html>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.cdc.gov/diabetes/es/treatment/su-equipo-de-cuidados.html>]

## Related Issues

- A1C Test and Race/Ethnicity [<https://www.niddk.nih.gov/health-information/diagnostic-tests/a1c-test-race-ethnicity>]  (National Institute of Diabetes and Digestive and Kidney Diseases)
- Health Consequences of Early Exposure to Sugar [<https://newsinhealth.nih.gov/2025/01/health-consequences-early-exposure-sugar>]

- Healthy Living with Diabetes [<https://www.niddk.nih.gov/health-information/diabetes/overview/healthy-living-with-diabetes>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/diabetes/informacion-general/como-llevar-vida-saludable-si-tiene-diabetes>]
- People at Higher Risk of Flu Complications [<https://www.cdc.gov/flu/highrisk/>] (Centers for Disease Control and Prevention)
- Prediabetes: MedlinePlus Health Topic [<https://medlineplus.gov/prediabetes.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/prediabetes.html>]
- Speak Up -- Diabetes: Five Ways to Be Active in Your Care at the Hospital [<https://digitalassets.jointcommission.org/api/public/content/a939d3a23f6d4e8d87a0e4bf3410abfe?v=1b7969fe>] (Joint Commission) - **PDF**
- Symptoms and Causes of Diabetes [<https://www.niddk.nih.gov/health-information/diabetes/overview/symptoms-causes>]  (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/diabetes/informacion-general/sintomas-causas>]
- Vaccinations for Adults with Diabetes [<https://www.immunize.org/wp-content/uploads/catg.d/p4043.pdf>] (Immunization Action Coalition) - **PDF**

## Genetics

- 17q12 deletion syndrome: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/17q12-deletion-syndrome>] 
- 6q24-related transient neonatal diabetes mellitus: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/6q24-related-transient-neonatal-diabetes-mellitus>] 
- Congenital generalized lipodystrophy: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/congenital-generalized-lipodystrophy>] 
- Familial partial lipodystrophy: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/familial-partial-lipodystrophy>] 
- Genetics of Diabetes [<https://diabetes.org/about-diabetes/genetics-diabetes>] (American Diabetes Association)
- Maternally inherited diabetes and deafness: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/maternally-inherited-diabetes-and-deafness>] 
- Maturity-onset diabetes of the young: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/maturity-onset-diabetes-of-the-young>] 
- Monogenic Diabetes (MODY & Neonatal Diabetes Mellitus) [<https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes/monogenic-neonatal-mellitus-mody>] 
- Thiamine-responsive megaloblastic anemia syndrome: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/thiamine-responsive-megaloblastic-anemia-syndrome>] 
- Type A insulin resistance syndrome: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/type-a-insulin-resistance-syndrome>] 
- Wolfram syndrome: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/wolfram-syndrome>] 

## Test Your Knowledge

- Type 2 Diabetes Facts Quiz [[https://medlineplus.gov/ency/quiz/001214\\_3.htm](https://medlineplus.gov/ency/quiz/001214_3.htm)] (Medical Encyclopedia)  
Also in Spanish [[https://medlineplus.gov/spanish/ency/quiz/001214\\_63.htm](https://medlineplus.gov/spanish/ency/quiz/001214_63.htm)]

## Statistics and Research

- Diabetes in America, 3rd Edition [<https://www.niddk.nih.gov/about-niddk/strategic-plans-reports/diabetes-in-america-3rd-edition>]  (National Institute of Diabetes and Digestive and Kidney Diseases)

- Diabetes Interactive Atlas [<https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>] (Centers for Disease Control and Prevention)
- FastStats: Diabetes [<https://www.cdc.gov/nchs/fastats/diabetes.htm>] (National Center for Health Statistics)
- National Diabetes Statistics Report [<https://www.cdc.gov/diabetes/php/data-research/>] (Centers for Disease Control and Prevention)

## Clinical Trials

- ClinicalTrials.gov: Diabetes Mellitus [<https://clinicaltrials.gov/search?cond=%22Diabetes+Mellitus%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

## Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: The Impact of an Adaptive mHealth Intervention on Improving Patient-Provider Health... [<https://www.ncbi.nlm.nih.gov/pubmed/40674692>]
- Article: Exploring pentoxifylline as an alternative treatment for dexamethasone in diabetic patients... [<https://www.ncbi.nlm.nih.gov/pubmed/40598604>]
- Article: Effect of pharmacist led intervention on health related quality of life... [<https://www.ncbi.nlm.nih.gov/pubmed/40593995>]
- Diabetes -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Diabetes+Mellitus%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bdat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

## Reference Desk

- Common Terms [<https://diabetes.org/about-diabetes/common-terms>] (American Diabetes Association)

## Find an Expert

- American Diabetes Association [<https://diabetes.org/>]
- National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>] 
- NIDDK Information Clearinghouses and Health Information Center [<https://www.niddk.nih.gov/health-information/community-health-outreach/information-clearinghouses>]  (National Institute of Diabetes and Digestive and Kidney Diseases)
- Search Diabetes Educator Directory [<https://nf01.diabeteseducator.org/eweb/DynamicPage.aspx?Site=AADE&WebCode=AADEDiaEduDirectory>] (Association of Diabetes Care and Education Specialists)

## Women

- Diabetes [<https://womenshealth.gov/a-z-topics/diabetes>] (Department of Health and Human Services, Office on Women's Health)  
Also in Spanish [<https://espanol.womenshealth.gov/a-z-topics/diabetes>]

## Older Adults

- Diabetes [<https://www.healthinaging.org/a-z-topic/diabetes>] (AGS Health in Aging Foundation)
- Diabetes in Older People [<https://www.nia.nih.gov/health/diabetes/diabetes-older-people>]  (National Institute on Aging)  
Also in Spanish [<https://www.nia.nih.gov/espanol/diabetes/diabetes-personas-mayores>]

## Patient Handouts

- A1C test [<https://medlineplus.gov/ency/article/003640.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003640.htm>]

- Blood sugar test [<https://medlineplus.gov/ency/article/003482.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003482.htm>]
- Diabetes [<https://medlineplus.gov/ency/article/001214.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001214.htm>]
- Diabetes - keeping active [<https://medlineplus.gov/ency/patientinstructions/000084.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000084.htm>]
- Diabetes - when you are sick [<https://medlineplus.gov/ency/patientinstructions/000079.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000079.htm>]
- Diabetes and exercise [<https://medlineplus.gov/ency/patientinstructions/000083.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000083.htm>]
- Diabetes myths and facts [<https://medlineplus.gov/ency/patientinstructions/000964.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000964.htm>]
- Diabetes tests and checkups [<https://medlineplus.gov/ency/patientinstructions/000082.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000082.htm>]
- Giving an insulin injection [<https://medlineplus.gov/ency/patientinstructions/000660.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000660.htm>]
- High blood sugar - self-care [<https://medlineplus.gov/ency/patientinstructions/000332.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000332.htm>]
- Low blood sugar - self-care [<https://medlineplus.gov/ency/patientinstructions/000085.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000085.htm>]



## MEDICAL ENCYCLOPEDIA

A1C test [<https://medlineplus.gov/ency/article/003640.htm>]

ACE blood test [<https://medlineplus.gov/ency/article/003567.htm>]

Anti-insulin antibody test [<https://medlineplus.gov/ency/article/003375.htm>]

Blood sugar test [<https://medlineplus.gov/ency/article/003482.htm>]

Diabetes [<https://medlineplus.gov/ency/article/001214.htm>]

Diabetes - keeping active [<https://medlineplus.gov/ency/patientinstructions/000084.htm>]

Diabetes - when you are sick [<https://medlineplus.gov/ency/patientinstructions/000079.htm>]

Diabetes and exercise [<https://medlineplus.gov/ency/patientinstructions/000083.htm>]

Diabetes myths and facts [<https://medlineplus.gov/ency/patientinstructions/000964.htm>]

Diabetes tests and checkups [<https://medlineplus.gov/ency/patientinstructions/000082.htm>]

Giving an insulin injection [<https://medlineplus.gov/ency/patientinstructions/000660.htm>]

Glucose tolerance test - non-pregnant [<https://medlineplus.gov/ency/article/003466.htm>]

Glucose urine test [<https://medlineplus.gov/ency/article/003581.htm>]

High blood sugar - self-care [<https://medlineplus.gov/ency/patientinstructions/000332.htm>]

Immunizations for people with diabetes [<https://medlineplus.gov/ency/patientinstructions/000331.htm>]

Insulin C-peptide test [<https://medlineplus.gov/ency/article/003701.htm>]

Ketones blood test [<https://medlineplus.gov/ency/article/003498.htm>]

Ketones urine test [<https://medlineplus.gov/ency/article/003585.htm>]

Lactic acidosis [<https://medlineplus.gov/ency/article/000391.htm>]

Low blood sugar - self-care [<https://medlineplus.gov/ency/patientinstructions/000085.htm>]

Preparing for surgery when you have diabetes [<https://medlineplus.gov/ency/patientinstructions/000702.htm>]

## Related Health Topics

A1C [<https://medlineplus.gov/a1c.html>]

Blood Glucose [<https://medlineplus.gov/bloodglucose.html>]

Diabetes and Pregnancy [<https://medlineplus.gov/diabetesandpregnancy.html>]

Diabetes Complications [<https://medlineplus.gov/diabetescomplications.html>]

Diabetes in Children and Teens [<https://medlineplus.gov/diabetesinchildrenandteens.html>]

Diabetes Medicines [<https://medlineplus.gov/diabetesmedicines.html>]

Diabetes Type 1 [<https://medlineplus.gov/diabetestype1.html>]

Diabetes Type 2 [<https://medlineplus.gov/diabetestype2.html>]

Diabetic Diet [<https://medlineplus.gov/diabeticdiet.html>]

Diabetic Eye Problems [<https://medlineplus.gov/diabeticeyeproblems.html>]

Diabetic Foot [<https://medlineplus.gov/diabeticfoot.html>]

Diabetic Heart Disease [<https://medlineplus.gov/diabeticheartdisease.html>]

Diabetic Kidney Problems [<https://medlineplus.gov/diabetickidneyproblems.html>]

Diabetic Nerve Problems [<https://medlineplus.gov/diabeticnerveproblems.html>]

Hyperglycemia [<https://medlineplus.gov/hyperglycemia.html>]

Hypoglycemia [<https://medlineplus.gov/hypoglycemia.html>]

Islet Cell Transplantation [<https://medlineplus.gov/isletcelltransplantation.html>]

Pancreas Transplantation [<https://medlineplus.gov/pancreastransplantation.html>]

Prediabetes [<https://medlineplus.gov/prediabetes.html>]

## National Institutes of Health

The primary NIH organization for research on *Diabetes* is the National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>]

## Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/diabetes.html>] on *Diabetes*

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Last updated February 3, 2025