

## **Diabetes**

This metadata page provides a brief summary of this dataset. More detailed data and [metadata](#) are available from the Division of Diabetes Translation, US Centers for Disease Control and Prevention (CDC). US Diabetes Surveillance System. Please also refer to the contact information on the last page under 'Questions?'

### **Definition**

Diabetes is a disease in which blood glucose levels are above normal. When we eat, our bodies turn the food we eat into glucose, which is a type of sugar, for energy. The pancreas, an organ near the stomach, creates a hormone called insulin that is one factor that helps glucose get into cells where it can be used. When you have diabetes, your body either doesn't make enough insulin, doesn't use insulin as well as it should, or something disrupts this process, causing sugar to build up in the body. Problems with insulin signaling can have widespread and serious effects on other tissues and organs disrupting important systems and functions. There are three main types of diabetes: Type 1 diabetes, Type 2 diabetes and Gestational diabetes (Diabetes during pregnancy).

### **Data Sources**

- [LDH Division of Diabetes Translation, CDC. US Diabetes Surveillance System](#)

The Louisiana Department of Health (LDH) Environmental Public Health Tracking Program downloads these data from the CDC's Interactive Atlas (URL above), by Louisiana Parish (County). The data are processed and added to the Health Data Explorer as sample data which can be viewed next to other health, environmental hazard, exposure and population health (sociodemographic or US Census Bureau) data.

**Vintage:** The latest dataset available from LDH Tracking as of Mar 2023:

- Percent age-adjusted diabetes by Louisiana Parish (County): data years **2010-2019**

### **Explore Data**

The LDH Health Data Explorer (<http://ldh.la.gov/tracking>) is an online query tool which allows health, environmental hazard, exposure and population data to be explored and viewed side-by-side in tables, charts, and maps. These data can be viewed, printed and downloaded for further analysis.

To *Explore Data* on the query tool:

Step 1: Select Criteria

Category: Health Outcomes

Topic: **Diabetes**

## Diabetes and your Health

According to the Mayo Clinic, high blood sugar, also called hyperglycemia, can cause health problems that affect the eyes, kidneys, nerves and heart. If severe, conditions may require emergency care, such as a diabetic coma (2023). Hyperglycemia symptoms begin when blood sugar (glucose) levels are high — above 180 to 200 milligrams per deciliter (mg/dL) (Mayo Clinic, 2023). Insulin levels also affect carbohydrate, lipid, protein and mineral metabolism.

Diabetes if left untreated, carries an increased risk for heart attack, stroke, and complications related to poor circulation. Unmanaged diabetes can ultimately result in additional, very serious long-term health problems including nerve damage, kidney failure, blindness, and amputation. Genetics and lifestyle factors appear to play a role in the development of diabetes.

Checking in with your health care provider to test your A1C, increasing physical activity, and eating balanced nutritious meals with healthy foods, can help to better manage Type 2 diabetes. The A1C test—also known as the hemoglobin A1C— is a blood test that

measures your average blood sugar levels over the past 3 months (CDC 2023). Medications may also assist to control blood sugar without the need to inject insulin or test daily.

Approximately half a million adults in Louisiana --14.2% of the adult population-- have diagnosed diabetes

[\(American Diabetes Association, 2021\)](#)

## Diabetes and the Environment

LDH Tracking has included diabetes as a health outcomes measure in the Health Data Portal because scientists are studying the associations between diabetes, other health conditions and the environment. A 2018 study by the American Physiological Society (APS) reported that chronic exposure to arsenic, potentially through [arsenic-tainted water, interferes with insulin secretion in the pancreas](#), which may increase the risk of diabetes. Some scientists have noted with the increase of Type 2 diabetes, while typically attributed to genetics and lifestyle factors such as nutrition and exercise, there have also been increases in the population exposed to environmental pollutants and industrial chemicals([Leff et al, 2018](#)). Endocrine disrupting chemicals such as bisphenol A (BPA), a by-product of plastics manufacturing, and metals such as environmental lead, mercury and cadmium in addition to arsenic, “have been associated with the incidence of diabetes and related metabolic syndromes.”

## Data Methods, Limitations and Important Considerations

County estimates of Diagnosed Diabetes were calculated by the Division of Diabetes Translation. Learn more about the data and statistical methods. Additional data and statistical methods can be found here: <https://gis.cdc.gov/grasp/diabetes/diabetesatlas-surveillance.html>

## Data Re-release

This is a public dataset which can be freely shared with citation.

## Data Citations

Data Source: Centers for Disease Control and Prevention. Interactive Atlas of Heart Disease and Stroke. <http://nccd.cdc.gov/DHDSAtlas>. Accessed Jan 2023. Please also cite the US CDC, LDH Environmental Public Health Tracking Program Cooperative Agreement NUE1EH001490 when re-sharing or applying these data in analyses or publications.

## Disclaimer

Data are intended to spur further research and should be used only as a starting point to understanding how the environment and other contributing factors may be connected to disease. Datasets presented on the LDH Health Data Explorer site are intended to answer some basic questions, but should ultimately lead to further inquiry and more detailed study.

Data limitations should be noted if conducting exploratory ecological studies with these data. Limitations may include data gaps, reporting discrepancies (for example, a disruption of reporting or instrument recording) and insufficient data on all potentially confounding factors. There are numerous additional factors which may contribute to disease onset. These include genetics, access to health care, existing health conditions, medicines, other chemical substances we come into contact with or ingest, nutrition, route and duration of exposure, level of activity, level of stress, and others. Responsible use of this data therefore requires exercising caution when drawing conclusions based solely on views of the limited available data. Any perceived relationship, trend, or pattern apparent in the data should not be interpreted to imply causation; may in fact be unrelated; and should be regarded as preliminary, and potentially erroneous, until more in-depth study and if applicable, statistical evaluation, can be applied.

The LDH Bureau of Health Informatics and Environmental Public Health Tracking Program cannot guarantee the completeness of the information contained in these datasets and expressly disclaim liability for errors and omissions in their content.

## Additional Information

Please visit the following links for more information on Diabetes. See also the LDH Tracking [Glossary of Terms](#).

- [CDC - Diabetes](#)
- [CDC Division of Diabetes Translation](#)
- [American Diabetes Association](#)
- [International Diabetes Federation - Diabetes Atlas](#)
- [National Diabetes Education Program](#)
- [Robert Wood Johnson Foundation County Health Rankings & Roadmaps](#)

## Questions?

- Email: [healthdata@la.gov](mailto:healthdata@la.gov)
- Website: <http://ldh.la.gov/tracking>
- Toll free Phone: 1-888-293-7020