Institute for Health Metrics and Evaluation

GBD Results Tool User Guide

This document provides a basic guide for using the GBD Results tool. The tool allows retrieval of GBD 2019 results and includes the following:

- **Results**: All GBD causes, risks, impairments, etiologies, and injuries by nature
- **Measures**: deaths, years of life lost (YLLs), years lived with disability (YLDs), disability-adjusted life years (DALYs), prevalence, incidence, life expectancy, healthy life expectancy (HALE), maternal mortality ratio (MMR), and summary exposure value (SEV)
- **Metrics** (units): number, rate, percent, and years
- **Years**: 1990-2019; annual results for all measures
- **Ages**: All GBD age groups
- **Sexes**: males, females, both sexes
- **Locations**: GBD super regions, regions, countries, select subnational units, and custom regions (WHO regions, World Bank Income Levels, and more)

(The GBD Results tool's Codebook ZIP file contains much more detailed information on value coding, and includes values hierarchies, contexts by age, and metrics by measure definitions.)

The tool can return results as a web-based data table, a line chart, and a CSV file. The CSV file is downloadable from the tool's user interface.

The web-based data table displays rounded figures. For most queries, complete results with full statistical precision are only available via download.

Accessing the Tool

In Microsoft Edge, Internet Explorer 11, Google Chrome, Firefox, or Safari browsers, go to https://vizhub.healthdata.org/gbd-results/

A popup window briefly describes the tool's contents and includes a sign-in/registration link. You must register and sign in to download data and access other tool features.

Querying the Data

Specify your query parameters using controls in the tool's search panel. Results display to the right of the panel. The controls are primarily drop-down menus.

There are two ways to make selections in a drop-down menu:

1. **Click and Scroll**: Click on the down arrow button (or within the body of the menu), scroll, and check the box for a desired value.
2. **Autocomplete**: Click on the down arrow button (or within the body of the menu) and start typing the name of a specific value. When it appears, check the box beside it.

Figure 1. GBD Results tool drop-down menus.

Figure 2. Selecting values from drop-downs: click and scroll.

Figure 3. Selecting values from drop-downs: autocomplete.

Many drop-down menus contain a "Select all" option. Click this to select all items in the menu.

Figure 4. "Select all" option.

In drop-down menus with hierarchical information, there are "Select all" options at specific hierarchical levels. For example, if you click on "Select all" below the "United States of America," but above the states, all states from the U.S. will be selected.
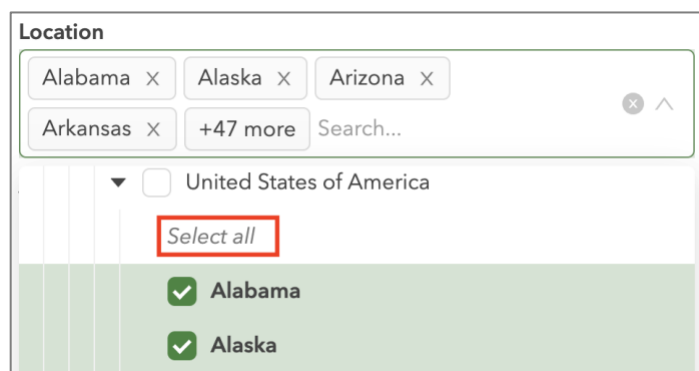

Figure 5. "Select all" option for the United States of America.

For causes and risks, you can select *all* causes or risks at a given hierarchical level.
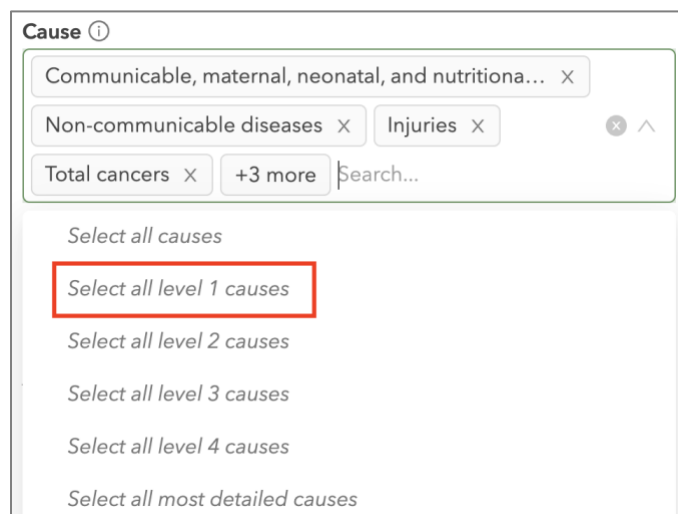

Figure 6. "Select all level 1 causes" in the Cause drop-down.

In drop-down menus with hierarchical information, the first three levels in the hierarchy are automatically expanded, but levels further down are collapsed. Click the black triangle icons to the left of names to open these. For example, the triangle beside "Occupational carcinogens" must be clicked to expose 13 specific carcinogens.
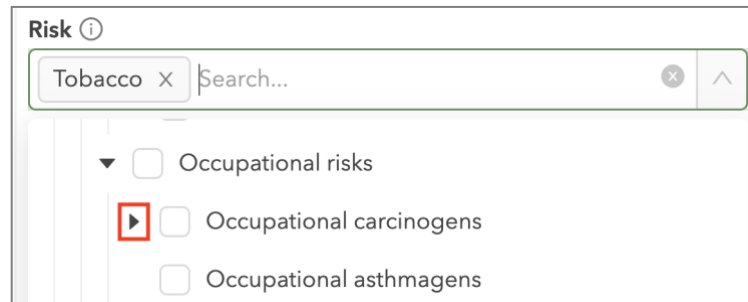

Figure 7. A collapsed level 3 risk: "Occupational carcinogens."

Tooltips: Informational tooltips are provided for some drop-menu names and values within some drop-down menus. Hover on a tooltip (the circle icon with an "i" in the center) to receive a definition for the item.
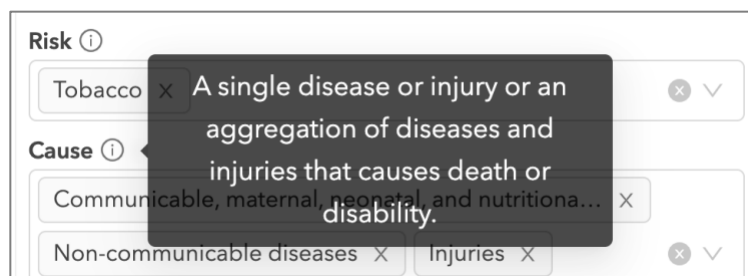

Figure 8. Tooltip for "Cause."

To clear a specific selection from any drop-down, click the "x" to the right of its name.
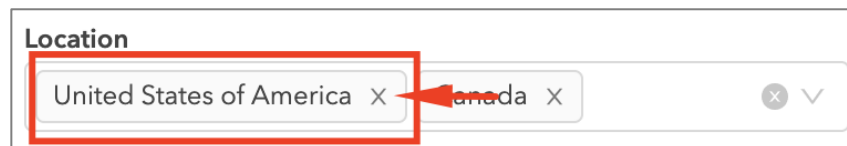

Figure 9. Clearing a specific selection.

To clear all selections from any drop-down, click the "Clear selection" icon (an "x" in a gray circle) in the far right.
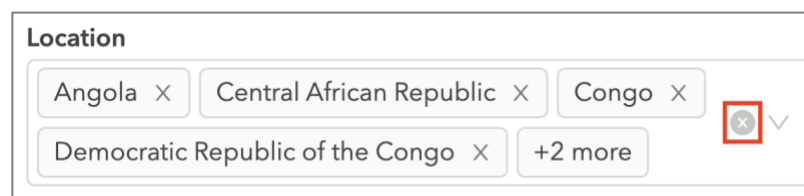

Figure 10. Clearing all selections.

Guidance for Querying the Data

GBD Estimate: This menu defines the type of indicator results you can access: GBD Cause of death or injury, Risk factor, Impairment, etc.

Each GBD Estimate values includes a different set of measures. See the **Appendix: GBD Estimate by Measure** for a table displaying the measures provided for each context.

Annual rate of change: By default, the tool provides single-year estimates for the indicators provided in the GBD Estimate menu. To see the average annual rate-of-change estimates for a given indicator and other selected parameters, toggle the **Annual rate of change** button to on. There are three year ranges you can select:
- 1990-2010
- 1990-2019
- 2010-2019

Figure 11. Annual rate of change set to on.

To view **Cause of death or injury** results:
- Select "Cause of death and injury" in the GBD Estimate drop-down
- Select the desired measure(s) in the Measure drop-down
- Select the desired cause(s) in the Cause drop-down
- Select other desired parameters (Metric, Location, Age, Sex, and Year) in the other drop-downs

To view **Risk factor** results:
- Select "Risk factor" in the GBD Estimate drop-down
- Select the desired measure(s) in the Measure drop-down
- Select the desired risk(s) in the Risk drop down
- Select the desired related cause(s) in the Cause drop-down*
- Select other desired parameters

To view **Etiology** results:
- Select "Etiology" in the GBD Estimate drop-down
- Select the desired measure(s) in the Measure drop-down
- Select the desired impairment(s) in the Etiology drop down
- Select the desired related cause(s) in the Cause drop-down*
- Select other desired parameters

To view **Impairment** results:
- Select "Impairment" in the GBD Estimate drop-down
- Select the desired measure(s) in the Measure drop-down
- Select the desired impairment(s) in the Impairment drop down
- Select the desired related cause(s) in the Cause drop-down*
- Select other desired parameters

To view **Summary exposure value (SEV)** results:
- Select "Summary exposure value (SEV)" in the GBD Estimate drop-down
- Select the desired risk(s) in the Risk drop down
- Select other desired parameters

To view **Health-adjusted life expectancy (HALE)** results:
- Select "Health-adjusted life expectancy (HALE)" in the GBD Estimate drop-down
- Select other desired parameters

To view **Injuries by nature** results:
- Select "Injuries by nature" in the GBD Estimate drop-down
- Select the desired measure(s) in the Measure drop-down
- Select the desired injury (or injuries) in the Injury drop down
- Select the desired related cause(s) in the Cause drop-down*
- Select other desired parameters

(* Alternately, you can choose "select all" in the Cause drop-down; only results for causes related to the selected risks, impairments, etiologies, or injuries will be returned.)

Click the **Search** button to execute a query.

NOTE: "Population," "Fertility," and "All Cause Mortality (Life Expectancy)" and "Life Tables" are also included in the GBD Estimate menu. Select any of these items, and a link will appear to a GHDx catalog record. These records contain CSV files with results for these items.

Further Filtering Results

You can further filter results that appear in the data table using the search icon that appears to the right of each table header (e.g., Measure, Location, Sex, etc.).

Measure	Metric	Cause	Location	Age	Sex	Year	Val	Upper	Lo
Deaths	Number	Injuries	United States...	<5 years	Both sexes	2015	3,760.85	4,078.39	
Deaths	Number	Injuries	United States...	5-9 years	Both sexes	2015	1,050.17	1,089.20	
Deaths	Number	Injuries	United States...	10-14 ye...	Both sexes	2015	1,539.52	1,566.38	
Deaths	Number	Injuries	United States...	15-19 ye...	Both sexes	2015	7,211.47	7,297.13	

Figure 12. Data table headers and search icons.

Just click on a search icon and start typing the name of a desired value into the text field that pops up. The results will automatically filter.

Figure 13. Filtering results by "Age."

Large Results

Queries can produce large result sets. If your query would result in more rows than can be displayed in the tool's data table, the following message will appear at the bottom of the search panel:
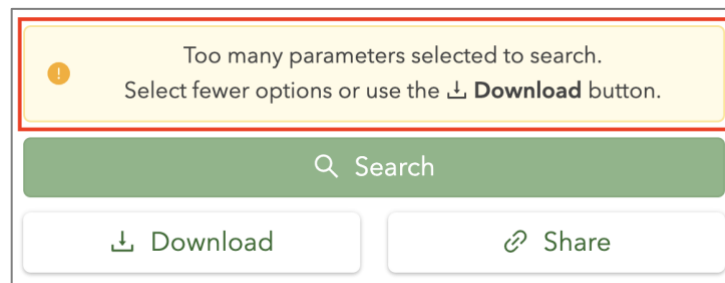

Figure 14. The "Too many parameters" message.

Saving and Downloading Results

To save a query:
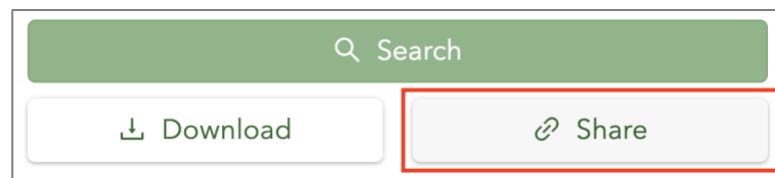1. Click the **Share** button at the bottom of the search panel.

Figure 15. The Share button.

2. When the Share link dialog box appears, click the **Copy** button to save the link to your computer's clipboard.
3. Paste the link in an email, text document, or some other place where you can save and retrieve it.
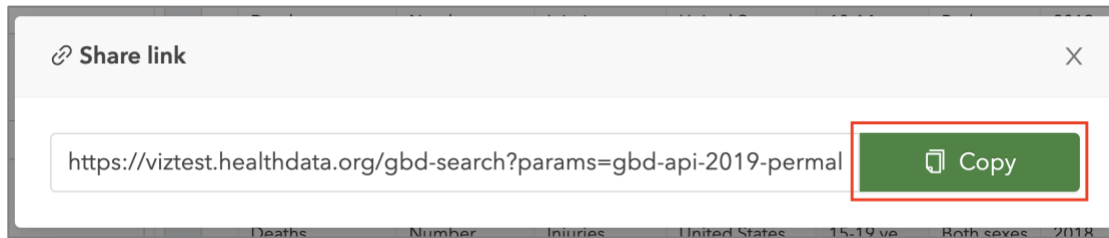
Figure 16. The Share link box.

To download CSV files of results:
1. Click the **Download** button at the bottom of the search panel.
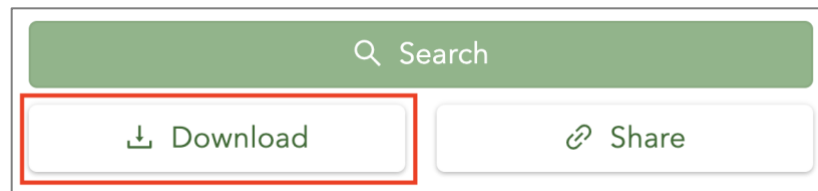

Figure 17. The Download button.

2. Select if your file(s) should include only **IDs** (numeric coding: e.g., 101, 429), **Names** (e.g., Canada, Breast cancer), or **Both**. Then enter your email and click **Submit**.

Figure 18. Value options and submission.

3. You will receive a message that you will receive an email when your download is ready.
4. You will receive a confirmation email with a link to a page where you may check the status of your request. (A request may take up to several hours to complete, depending on the search parameters entered.)
5. You will receive a second email confirming that your download is ready. This message will also contain a link to the status page, which now contains a link, or links, to your data file(s). **Note**: The data are available for download for 7 days; after that, you will need to request them again.
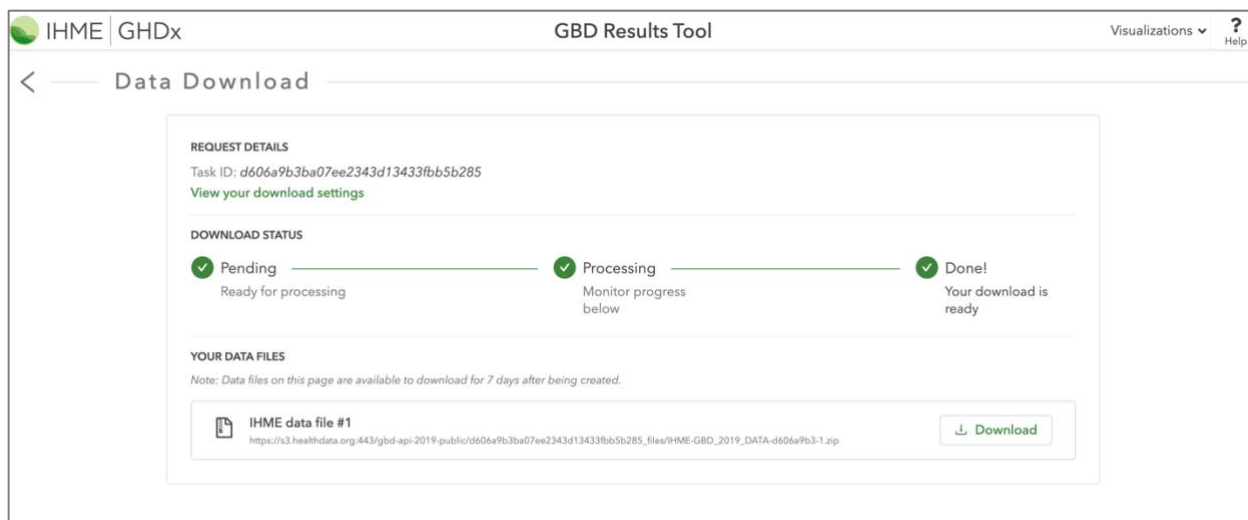
Figure 19. Data Download status page.

Notes/Issues

- While the GBD Results tool can be very powerful for querying and downloading GBD results, including many search parameters may cause some issues.
    - Queries with massive parameters can sometimes result in files that omit some results specified in the query – certain age groups, years, etc.
    - We recommend that you break your query down into smaller parts. For example, do not query all locations AND many or all causes, age groups, years, etc. at the same time.
    - A good rule of thumb would be to search by relatively narrow parameters first and see if the results appear in the data table. Then you may expand your parameters incrementally.
- The tool does not work with Internet Explorer versions 10 and earlier.

If you discover any issues not mentioned in this guide, please send a note to data@healthdata.org

Appendix A: Troubleshooting

This troubleshooting appendix includes workarounds for some of the GBD Results tool's known issues.

Combining Multiple CSV Files

Sometimes, queries will return data in multiple CSV files. Each file will contain a segment of the data and have identical columns and a header row.

To combine multiple CSV files in Excel:
1. Open the first file in the set you want to combine in Excel.
2. Open the next file in the set.

3. Select all cells below the first line in this next file.
    a. Note: A simple way to do this is to select cell A2 (the first and leftmost data-containing cell) and press the following keys: Control + Shift + ↓ + →.
4. Copy the selected cells.
5. Paste the copied cells into the first and leftmost blank cell in the first file.
6. Repeat steps 2-5 until the data from all files have been copied into the first one.

Opening CSV Files with Special Characters in Excel

Sometimes, queries result in files that contain special characters, such as place names with accents like "México." These characters may not display properly when the CSV file is opened in Excel. To solve this problem:

1. Open Notepad. [Note: this applies only to Windows; a solution for Mac users is forthcoming.]
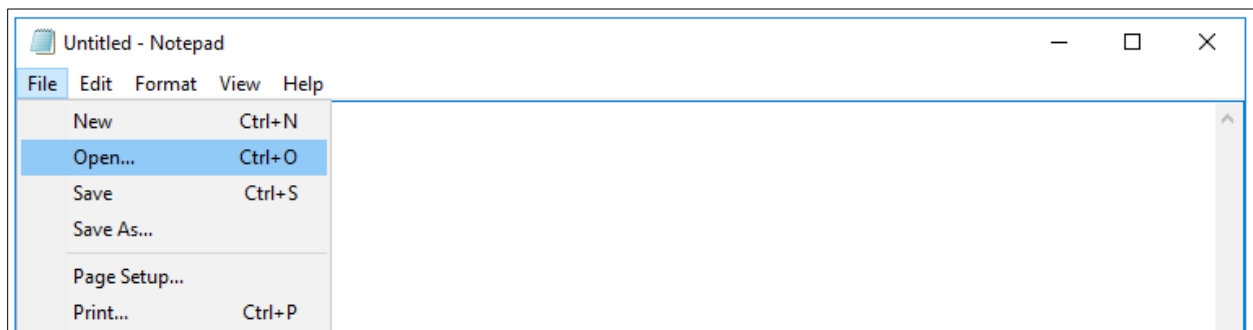2. Click File > Open (Ctrl + O)

Figure 20. Opening a CSV in Notepad.

3. Browse to and open the exported CSV, making sure to select "All Files" in the bottom right.
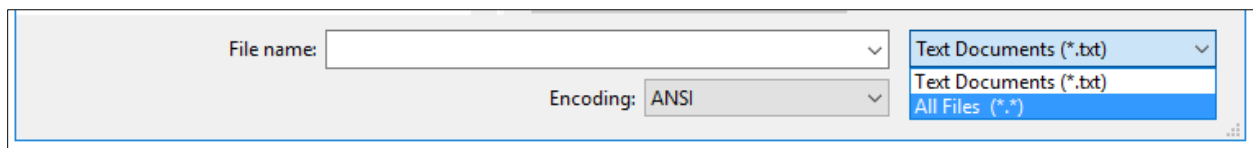

Figure 21. Selecting "All Files"

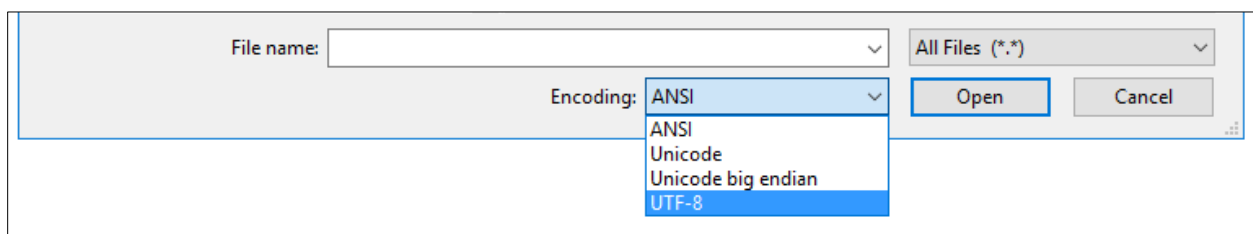4. In the Encoding drop-down menu at the bottom, change from ANSI to UTF-8.

Figure 22. Selecting UTF-8 Encoding.

5. Save the file. When you reopen it in Excel, the special characters should appear correctly.

Appendix B: GBD Estimate by Measure

MEASURE	GBD Estimate							
	Cause of death or injury	Risk factor	Etiology	Impairment	Summary exposure value (SEV)	Health-adjusted life expectancy (HALE)	Injuries by nature	All-cause mortality
Deaths	X	X	X					
DALYs	X	X	X					
YLDs	X	X	X	X			X	
YLLs	X	X	X					
Prevalence	X			X			X	
Incidence	X			X			X	
MMR	X							
SEV					X			
HALE						X		
Life expectancy								X