

# Topic: SQL-Like Joins in Base R

 , **sas**, & More!



# Welcome to Today's Lecture!

## Today's Lecture

- Base R is lean – some very solid commands
- But not SQL-like
  - *dplyr* package is SQL-like
  - Joins are obvious
  - I don't like the syntax
  - I don't like the “tibble”
- I do joins in base R

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# Left Joins in Base R

- In public health, a lot of us use SAS, but some of us use Python or R.
- We are used to *merge* commands.
- In SQL, there is *join* terminology.
- If you are not used to join terminology, it can be confusing to learn about all the different types of joins in one tutorial.
- Today, we will focus on how to do a left join properly in base R. If you are trying to do a left join and you do something else, it is a mistake!

## Resources

Use-case: Left joins to assemble a complete NHANES dataset:

<https://dethwench.com/nhanes-datasets-for-use-in-data-analysis/>

Focus on left joins in base R – how NOT to make mistakes in your joins:

<https://dethwench.com/how-to-join-using-merge-in-base-r/>



# Why “left joins” and not other joins?

- In public health, biostatistics, healthcare, etc. we often have data about enumerated experimental units
  - People, hospitals, etc.
- They are essentially “entities”
- We want to *join on/merge* on “attributes” from other datasets
- We are concerned with assembling a full picture (row of data) about each individual in the data
- We are NOT concerned with other join activities

## Uses of SQL-type Joins in Other Contexts

- **Deduplication across datasets**
- **Understanding overlap between datasets**
- **Updating data tables with the most current data**
- **Creating big datasets of disparate data for training AI algorithms**



## Questions?

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