

## Considering Diversity in Pulmonary Function Testing


**Pulmonary function tests**, or breathing tests, are used to understand your lung health. Each person has unique characteristics that impact their lung function, and this diversity has to be considered when performing and interpreting breathing tests. Results are used to diagnose lung conditions and guide the best treatment plan. Breathing test results may be applied in employment, disability, or other settings to understand your lung health. Health professionals compare your results with what is expected in people without lung disease who may be like you, in terms of height, age, sex, and race. Many important questions have been raised asking if sex and race are important when applied to test results. This handout tries to help you understand and address concerns you may have about the use of race and sex before or after your breathing tests have been performed.

**You may be asked about your race and your biologic sex at birth before your breathing tests.**



### Is race important?

- Average lung function differs across races in healthy people
- This is due to a variety of factors which are not well-understood
- Adjusting lung function for race may or may not best represent your lung health
- Whether race is or is not considered in expected values may impact how your results are used (e.g., employment, disability, treatments) and is actively being examined

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This Patient Information Series fact sheet is based on the ATS Statement found in the April 15, 2023 issue of the *American Journal of Respiratory and Critical Care Medicine* (<https://www.atsjournals.org/doi/10.1164/rccm.202302-0310ST>).

### Is sex important?

- Your sex at birth is one of the factors that determines your lung development and chest size
- People who identify as transgender or gender nonbinary are often misclassified, which can affect how their results are used

### How might race and sex be important for your results?

Generally, if you have normal lung function or severe lung disease, considering or not considering race is unlikely to change how your results are interpreted. But in people with milder changes in lung function, the use of race may alter how your results are interpreted.

Adjusting for sex can also impact whether you are diagnosed with lung disease or not. Using inaccurate birth sex can incorrectly diagnose some people as having lung disease.

## Where do we go from here?

We are still studying the best way to understand breathing test results in an equitable and respectful manner. You and your healthcare team should discuss issues of diversity and how they affect ways to improve your breathing.

When it comes to your lung function tests, your healthcare team should interpret your results based on what they know about you, not solely on the expected results that are in the report. ●

## Action Steps

- Talk to your healthcare provider about the role your race or sex at birth plays in understanding your diagnosis or deciding upon your treatment plan
- Ask your healthcare provider about other diagnostic tools that do not use race or sex at birth and how results from those tools might influence your care
- Engage in open conversations about how diversity and your lung health may be important for your employment or disability qualification

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## Additional Information

For more information on the specifics of how breathing tests are done, or on health equity in lung medicine:

### American Thoracic Society

Pulmonary Function Tests

- <https://www.thoracic.org/patients/patient-resources/resources/pulmonary-function-tests.pdf>

Health Equity

- <https://www.thoracic.org/about/health-equality/documents-and-resources-on-health-equality.php>

### CHEST

How to Improve Your Pulmonary Care Experience (for Transgender and Gender-Diverse Individuals)

- <https://www.chestnet.org/Topic-Collections/Infographics/Individuals-Who-Are-Transgender-and-Gender-Diverse-How-to-Improve-Your-Pulmonary-Care-Experience>

### American Lung Association

Lung Function Tests

- <https://www.lung.org/lung-health-diseases/lung-procedures-and-tests/lung-function-tests>

### European Lung Foundation

Spirometry

- <https://europeanlung.org/en/information-hub/lung-tests-and-procedures/>