



PATIENT EDUCATION

*What You Need to Know About  
Pharmacogenomic Testing:*

**The Right Drug at the Right Dose  
Based on Your Genes**

**EDUCATION**  
learning EXCELLENCE  
**HEALTHY** CARING  
**LIVING** INTERACTION

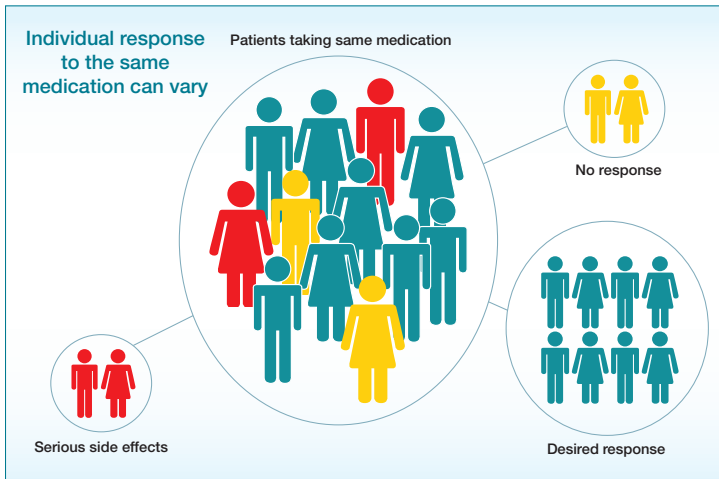
BARBARA WOODWARD LIPS  
PATIENT EDUCATION CENTER



## What is pharmacogenomics?

Pharmacogenomics, written PGx, is the study of how your genes may affect the way your body responds to or interacts with some medications.

Genes are inherited from your biological parents. They carry information that determine characteristics such as eye color and blood type. Genes can also influence how you process and respond to medications.



## What factors impact your response to medications?

PGx testing is one tool your health care team can use to help identify the right medication for you. Many factors impact how a person responds to medications, including:

- Genetic factors
- Age
- Sex
- Race/ethnicity
- Illness or organ function, especially kidney or liver function
- Smoking and alcohol use
- Food interactions
- Other medications

## **Why might PGx testing be recommended or considered?**

PGx testing is a type of genetic test. There are different reasons why your health care provider may order PGx testing to help guide your current or future medication use, such as:

- To avoid or prevent serious side effects related to certain medications.
- To adjust the dose of a current medication or recommend a different medication.
- To identify a medication or dose of a medication most likely to work for you before you take it.

## **How is PGx testing done?**

PGx testing can be done using a small sample of blood or saliva. Or it can be done by collecting a cheek swab for lab testing.

## **How much does PGx testing cost? Is it covered by insurance?**

The cost varies depending on which test(s) is ordered. Some insurance companies may cover PGx testing depending on your policy and reasons for testing. Contact your insurance provider about your coverage before you are tested if this is a concern.

## Will PGx testing affect my insurance coverage?

GINA, the Genetic Information Nondiscrimination Act, prohibits medical insurance companies and employers from discriminating against people based on genetic information. This includes PGx test results.

To learn more about the Genetic Information Nondiscrimination Act, go to this URL:  
<https://www.genome.gov/about-genomics/policy-issues/Genetic-Discrimination>.

### About PGx results

- **DO NOT make any changes to the medications** or the dosages of medications you take without talking to your health care provider or pharmacist.
- **Share your results with all of your health care providers** as part of your personal health history.
- **PGx results provide guidelines for some medications.**
- **PGx testing DOES NOT:**
  - Apply to all medications.
  - Address all medication side effects or medication allergies.
  - Explain drug-drug interactions or drug-food interactions.
- **PGx results are specific to the person being tested only. DO NOT use your PGx results to guide medication decisions for others.**

# Notes

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## BARBARA WOODWARD LIPS PATIENT EDUCATION CENTER

Mrs. Lips, a resident of San Antonio, Texas, was a loyal Mayo Clinic patient of more than 40 years and a self-made business leader who significantly expanded her family's activities in oil, gas and ranching. Upon her death in 1995, Mrs. Lips paid the ultimate compliment by leaving her entire estate to Mayo Clinic. By naming the Barbara Woodward Lips Patient Education Center, Mayo honors her generosity, her love of learning, her belief in patient empowerment and her dedication to high-quality care.

*This material is for your education and information only. This content does not replace medical advice, diagnosis or treatment. New medical research may change this information. If you have questions about a medical condition, always talk with your health care provider.*

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