

PHARMACOGENOMICS FINDING THE RIGHT MEDICATION FOR YOU

WHAT IS PHARMACOGENOMICS?

Pharmacogenomics, or pharmacogenetics, is the study of how your genes affect your body's response to medications. The word "pharmacogenomics" is combined from the words *pharmacology* and *genomics*:

- *Pharmacology* deals with the uses and effects of medications.
- *Genomics* deals with understanding genes and their roles.

Genes carry information that you inherit from your parents. Genes determine which characteristics you have, such as your eye color and blood type. Your genes influence how your body responds to medications.

INDIVIDUALIZED MEDICINE

WHY SHOULD I HAVE PHARMACOGENOMIC TESTING?

The purpose of pharmacogenomic testing is to find out if a medication is right for you.

Pharmacogenomic testing can help to determine:

- how likely a medication is to work for you,
- the best dose of a medication, or
- if you could have serious side effects from a medication.

A pharmacogenomic test may help to predict your response to one or a few medications. However, it cannot tell you how you will respond to all medications.

HOW LONG DOES IT TAKE TO GET THE RESULTS BACK?

Results for most pharmacogenomic tests are available within a week or two.

WHAT SHOULD I DO WITH MY TEST RESULTS?

Talk to your health care provider or pharmacist about the results. They may recommend that you:

- keep taking a medication,
- · change the dose of a medication,
- · stop taking a medication, or
- take a different medication.

HOW MUCH DOES PHARMACOGENOMIC TESTING COST?

The cost varies depending on which specific test is ordered, but is usually a few to several hundred dollars. Mayo Clinic's Patient Account Services may be able to provide an estimate by telephone.

IS PHARMACOGENOMIC TESTING COVERED BY MY INSURANCE COMPANY?

Some insurance companies may cover

pharmacogenomic testing, depending on your specific policy and your reasons for testing. Contact your insurance provider about coverage prior to testing if this is a concern. It may be helpful to get the ICD-9 procedure and CPT billing codes for the specific lab tests from your health care provider before you call the insurance company.

Notes:

WILL PHARMACOGENOMIC TESTING AFFECT MY INSURANCE COVERAGE?

A federal law called the Genetic Information Nondiscrimination Act (GINA) generally makes it illegal for health insurance companies to discriminate against you based on your genetic information. This federal law doesn't protect you against genetic discrimination by life insurance, disability insurance, or long-term care insurance companies. Some states have laws in these areas.

HOW IS PHARMACOGENOMICS RELATED TO INDIVIDUALIZED MEDICINE?

Pharmacogenomics is part of an expanding area of health care called individualized, or personalized, medicine. In individualized medicine, health care is tailored to the patient's unique needs. The goal of individualized medicine is to better predict, prevent, diagnose, and treat diseases to help patients live longer and healthier lives.

• • • • FOR MORE INFORMATION:

If you have questions about this information, you may talk with your health care provider.

Rochester,	Phoenix &	Jacksonville,
MN	Scottsdale, AZ	FL
507-284-2511	480-301-8000	904-953-2000

You may also refer to any of these resources:

- Mayo Clinic Center for Individualized Medicine: http://mayoresearch.mayo.edu/center-for-individualizedmedicine/pharmacogenomics.asp
- National Institutes of Health (NIH): http://www.genome.gov/27530645
- Genetic Information Nondiscrimination Act: http://www.ginahelp.org/GINAhelp.pdf

Mayo does not sponsor or endorse the linked sites, nor does Mayo guarantee the accuracy of the information contained in these Web sites. These links are provided for general education and information only, and should not be relied upon for personal diagnosis or treatment. Non-English sites have not been reviewed for accuracy of translation.



MAYO CLINIC | 200 First Street SW | Rochester, MN 55905 | mayoclinic.org