

PGx and Personalized Medicine

What if there was a test that could look inside your body and give your doctor vital information?

~ **What is Personalized Medicine?** ~

“Is the science that allows us to predict a drug response based on an individual’s complete genetic makeup.”

-Felix Frueh, Former Associate Director/FDA

Personalized medicine helps doctors individualize drug therapy, decrease adverse drug reactions, and increase the effectiveness of treatment plans

Some facts to consider...

- The U.S. population is 325 million
- 4 Billion prescriptions written in the U.S. each year
 - 250 million Americans consume medication
- There are over 2 million Adverse Drug Reactions (ADR) hospitalizations annually
 - There are over 125,000 ADR deaths annually
- The average Medicare patient takes 5-8 drugs, some as high as 20+ drugs per day.
 - Patients taking over 11 drugs have a 96% chance of an ADR.

PGx Testing

A simple cheek swab test that tells doctors which medications:

- Will work best for you
- Will not work for you
- May cause harmful side effects
- May have catastrophic interactions

Benefits of PGx

- Eliminates the guesswork in prescribing medications
- Reduces risk of adverse drug reactions and harmful side effects
- Saves patients time and money with fewer trips to the physician and pharmacy
 - Puts an end to the old trial-and-error approach to medicine
- Precision medicine – the right drug, right dosage, right from the beginning

PGx testing is currently in use at leading research hospitals such as:

- The Mayo Clinic
- Vanderbilt University Medical Centre
- St. Jude’s Children’s Research Hospital
- Cleveland Clinic
- Stanford University Medical Center
- George Washington University Medical Center
- Johns Hopkins Medical Institute

St. Jude Children’s Hospital provides PGx tests for all patients, stating:

“If you knew about this genetic information and did not act on it, you would not be practicing good medicine.”

The right information, right drug, right dosage, right from the beginning

Patients who need a PGx test urgently:

Are taking medications with FDA's black box warnings that require/recommend PGx testing

- Have multiple drugs prescribed
- Have a history of poor medication compliance
- Have multiple chronic conditions and taking multiple medications to treat conditions
- Require a higher-than-standard dosage to achieve the desired result
- Have had a severe adverse drug reaction
- Have had unexpected or unexplained responses to medications
- Have had multiple unsuccessful drug trials