PHARMACOGENOMIC

PREVENTIVE PANEL

Guideline-driven
personalized
medication
decisions for everyday
prescribing

MEDICOVER
GENETICS

ABOUT PHARMACOGENOMICS

Pharmacogenomics (PGx) is the study of how your genes affect the way your body responds to medications. Because everyone's DNA is different, some people process medications too quickly, too slowly, or not as expected. This can lead to side effects or medications not working as they should.

Research shows that up to 50% of people experience adverse side effects or poor results from medications due to genetic differences.[1] PGx testing helps prevent this by giving your doctor important insights before treatment begins.

WHAT IS PGx PREVENTIVE PANEL?

The PGx Preventive Panel is a proactive genetic test that helps doctors choose the safest and most effective medications based on your unique genetic profile. It looks at key genes that influence how your body processes medication, helping to reduce the risk of side effects and improve treatment outcomes from the start. It follows trusted international guidelines (CPIC[3], DPWG[4], FDA[5]) and is useful across many areas of care, including pain management, mental health, heart health, and general medicine.

By providing science-based insights before treatment begins, this test helps avoid the trial-and-error approach to finding the right medication and dosage.

WHO COULD **BENEFIT** FROM THIS TEST?

- You are interested in personalized, preventive healthcare
- You are starting new medications or have experienced past side effects
- You are looking to avoid medication trial and error
- You are taking multiple prescriptions (polypharmacy)

IMPORTANCE OF GETTING TESTED

Studies have shown that genetic differences may explain up to 95% of how people respond to medications, and most individuals have at least one relevant variant[2].

This test can help you and your doctor:

- Reduce the risk of side effects and adverse drug reactions (ADRs)
- Personalize treatment based on how your body processes medication
- Avoid medications that might not work for you
- Choose the right drug, at the right dose, from the start

[1]Chenchula et al. 2024, PMID: 38490995; [2]Principi et al. 2023, PMID: 38004461; [3]Clinical Pharmacogenetics Implementation Consortium (CPIC®); [4]Dutch Pharmacogenetics Working Group (DPWG); [5]Food and Drug Administration (FDA).

OUR TEST

The PGx Preventive Panel analyzes 25 genes, including 16 that are strongly linked to how your body responds to medication. These genes affect how drugs are absorbed, broken down, and cleared from the body. To see the full list of genes included in the test and learn how they may affect your response to medications, visit www.medicover-genetics.com.

Your results are analyzed using trusted international guidelines to give your doctor clear, reliable recommendations.

This test can support treatment decisions in many areas of healthcare, such as:

Cardiology
Endocrinology
Gastroenterology
Internal Medicine

Nephrology
Neurology
Oncology
Pain Management

Pediatrics
Psychiatry
Rheumatology
Transplant Medicine

BENEFITS OF PGx PREVENTIVE PANEL

ACTIONABLE
Know your risks before starting medication

PERSONALIZED
Get medications and doses that suit your body

SAFE
Reduce preventable side effects

EFFECTIVE
Improve treatment success

HOW IT WORKS

We examine a small sample of your DNA from a blood draw or buccal swab sample to learn how your body may respond to certain medications. Your sample is carefully analyzed using advanced genetic testing. Our lab looks at 25 important genes that influence how you process many common medicines.

This is a preventive screening, not a diagnostic test, so it does not detect diseases. Instead, it helps predict how you might react to medications before you need them.

Our experts use trusted science and the latest technology to create a personalized report. This report provides clear, useful information to support you and your doctor in choosing the safest and most effective medications and doses.

WHAT ARE THE POSSIBLE **OUTCOMES** OF THE TEST?

The results from the PGx Preventive Panel show how your body may respond to certain medications based on your genetic makeup. A key aspect of the test is how quickly or slowly your body processes drugs, also known as your metabolizer status. Your physician will review the results with you to help make safer and more effective treatment decisions.

Examples of how the metabolizer status can impact treatment decisions:

METABOLIZER STATUS: RAPID

Medical context: Family history of depression
Drug: Antidepressants (e.g., escitalopram, sertraline)
Findings:

- A variant in the *CYP2C19* gene, leading to rapid drug metabolism.
- This means certain antidepressants may be cleared from the body too quickly, making them less effective.

Action: Doctor may adjust the dose or identify more suitable medications that are likely to work better.

METABOLIZER STATUS: NORMAL

Medical context: Taking multiple medications for heart health and pain
Drug: Statins and blood thinners
Findings:

- A variant in the *SLCO1B1* gene increases the risk of muscle pain or weakness from statin use.
- A variant in *CYP2C9* gene indicating a normal metabolism.
- A variant in *VKORC1* gene, leading to higher sensitivity to blood thinners like warfarin, requiring lower doses to avoid bleeding.

Action: Doctor may keep most doses unchanged but make careful adjustments to warfarin and statin use to reduce side effect risks.

METABOLIZER STATUS: LOW

Medical context: Occasional joint pain; considering regular ibuprofen use
Drug: Ibuprofen (NSAID)
Findings:

- A variant in the *CYP2C9* gene, causing slow drug metabolism.
- This increases the risk of adverse effects such as stomach irritation, gastrointestinal bleeding, or kidney damage when taking ibuprofen.

Action: Doctor may switch to a different pain reliever and adjust the dose to reduce risk of stomach or kidney problems.

If you already have a diagnosis and are taking specific medications, we also offer diagnostic PGx tests. These focus on your current treatment and help your doctor make more targeted decisions. Learn more at www.medicover-genetics.com

FREQUENTLY ASKED **QUESTIONS**

1 DO I NEED TO DO ANYTHING TO PREPARE FOR THE TEST?

No special preparation is needed. The test only requires a simple blood draw (preferred) or a buccal swab.

2 WILL THIS TEST TELL ME IF I HAVE A DISEASE?

No. This test doesn't diagnose diseases. It shows how your genes may affect how your body processes medications.

3 HOW LONG DOES IT TAKE TO GET MY RESULTS?

Results are usually ready within 10-15 working days after your sample arrives at our certified lab.

4 DO I NEED THIS TEST IF I'M NOT TAKING ANY MEDICATIONS NOW?

No, it's not required but it can be very helpful. The test provides your doctor with important information in advance. If you ever need medication in the future, your results will already be available to help guide treatment.

5 WHAT IF MY RESULTS SHOW A RISK FOR SIDE EFFECTS?

This test aims to help you avoid medications that may cause problems. Your doctor can use your results to choose safer options or adjust your dosage if needed.

6 ARE THERE ANY LIMITATIONS TO THE TEST?

Yes. This test focuses on well-researched genetic markers linked to how you process medications. It doesn't detect all genetic changes or consider other factors like lifestyle, age, other medications, or medical conditions. Your doctor will take these into account when using your results.

7 WHY CHOOSE MEDICOVER GENETICS?

We use cutting-edge technology and follow international medical guidelines to provide reliable, high-quality results. Our laboratory in Germany meets strict certification and quality standards.

8 CAN CHILDREN OR OLDER ADULTS TAKE THIS TEST?

Yes. The test is safe and useful at any age. Since your genetic makeup doesn't change, results can help guide treatment throughout life.

9 WHAT TYPES OF MEDICATIONS DOES THIS TEST COVER?

The test looks at how your genes may affect your response to many commonly prescribed medications, including those for pain, mental health, heart conditions, infections, and more. It covers over 100 medications supported by international prescribing guidelines.

10 HOW ACCURATE IS THE TEST?

The test is performed in a certified medical laboratory using proven genetic methods and quality standards and follows international guidelines to ensure high accuracy and reliability. It provides insights into how your body may respond to certain medications and supports your doctor in making more personalized treatment decisions.

ABOUT THIS TEST: This PGx test is intended for preventive screening purposes only. It is not diagnostic and should not be used to guide treatment without appropriate clinical consultations. The test complies with GenDG, GDPR, and IVDR. Results are provided exclusively with patient consent.

HOW TO **ORDER**?

Visit a physician to order PGx Preventive Panel

The sample is sent to **Medicover Genetics**

Discuss the medical report with your physician

Arrange sample collection, EDTA blood (preferred) or buccal swab

The sample(s) will be analyzed in our German Medicover Genetics accredited laboratory

MORE **QUESTIONS**?

If you have additional questions or concerns, please contact us at **info.genetics@medicover.com**

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INTL-PGxPREV-PAT-V01