

# Pharmacogenomics: a strong link in the patient-physician relationship

# A guide for patients and their doctors

This guide is designed to help you discuss the relevance of pharmacogenomic testing with your doctor.

Your doctor is your ally: he or she is there to help you manage your health. Use a transparent approach to explain your expectations and your experience with current and past treatments. Together, you can find out what works best for you.

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Pharmacogenomics is a science that has been gaining ground in the medical profession and among the public for several years now. However, it's important to provide your doctor with information about this science, so that he or she can prescribe a test for you.

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#### In this guide you will find:

- → A questionnaire to help you prepare for your appointment with your doctor
- → A complete section for your doctor with essential information on pharmacogenomics
- → Tools to help you obtain a prescription for a pharmacogenomic test
- → Contact information



# Pre-appointment questionnaire



Before your appointment, it may be helpful to think about some questions that will help you provide your doctor with important information about your treatment.

### Here's a list of questions to help guide you:

1.	What medications are you currently taking? Write down the name of your medication, its dosage and how long you've been taking it.
2.	What medications have you taken in the past? Remember to include medications that have worked as well as those that have not.
3.	What side effects have you experienced with your current or past medications?  For example, have you experienced restlessness, dizziness, dry mouth, headaches, loss of appetite, fatigue, nausea, insomnia, weight gain, weight loss, muscle soreness, etc.?
<b>4</b> .	Have you noticed any improvement in your symptoms with your current treatment?  If yes, describe the improvement. If not, explain what continues to be a problem.
5.	Are there any symptoms or recent changes in your health that concern you?  If you experience fluctuations in your mood, difficulty concentrating, or changes in your sleeping patterns or appetite, make a note of them.
6.	Do you have a family history of unusual reactions to certain medications?  This information can help your doctor better understand your situation and personalize your treatment.
7.	Would you like to discuss any other concerns about your treatment or your health in general?  It's a good idea to write down any questions you have in advance, so you don't forget anything during your appointment.
8.	Do you have specific priorities or goals for your treatment (e.g. reducing side effects, improving quality of life, etc.)?  This can help your doctor tailor his or her approach to your needs.

# Information for your doctor



# What is pharmacogenomics (PGx)?

PGx tests are recommended to optimize polypharmacy and when pharmacological treatments do not generate the expected results:

→ Intolerable side effects

- → Lack of efficacy and sub-optimal response
- → Reluctance to take medication

The test is designed to guide medication choices in the following areas:

#### **Mental health**

Depressive disorders Anxiety disorders Bipolar disorders ADHD

#### **Pain management**

Chronic pain Acute pain

#### **Cardio health**

Hypercholesterolemia Coronary artery disease Acute coronary syndrome

#### **Examples of medication classes covered**

Antidepressants Anxiolytics Antipsychotics Psychostimulants Opioids
NSAIDS
Muscle relaxers
Complementary treatments

Antiplatelet agents
Anticoagulants
Beta-blockers

In all our tests, If a genetic issue is detected, potentially life-saving recommendations are provided for the following medications: carbamazepine, oxcarbazepine, phenytoin, clopidogrel, codeine, tramadol, tamoxifen, voriconazole, capecitabine, fluorouracil, azathioprine, mercaptopurine, thioguanine, cisplatin.

# The CANMAT (2023) recommends

PGx testing for patients with major depressive disorder, after suboptimal response to an initial antidepressant.<sup>1</sup>

1. Lam et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) 2023 Update on Clinical Guidelines for Management of Major Depressive Disorder in Adults (2024) Can J Psychiatry

# Utilité clinique de la PGx

PGx significantly **reduced** the incidence of side effects **by 30%** (n=6,193, p<0.0001).<sup>2</sup>

PGx **reduced** the incidence of ischemic events **by 35**% in post-PCI patients (n=5,302, p<0.011).<sup>3</sup>

PGx increased the rate of remission by 41%

in patients with major depressive disorder.<sup>4</sup> (Meta-analysis of thirteen randomized controlled trials)

30% ↓ 35% ↓ 41% ↑

<sup>1.</sup> Swen et al. A 12-gene pharmacogenetic panel to prevent adverse drug reactions: an open-label, multicentre, controlled, cluster-randomised crossover implementation study (2023) Lancet.

2. Ingraham et al. Genetic-Guided Oral P2Y12 Inhibitor Selection and Cumulative Ischemic Events After Percutaneous Coronary Intervention (2023) JACC Cardiovasc Interv.

<sup>3.</sup> Brown et al. Pharmacogenomic Testing and DepressiveSymptom Remission: A Systematic Review and Meta-Analysis of Prospective, Controlled Clinical Trials (2022) Clin Pharmacol Ther.



# Information contained in the PGx test report

For some patients, finding a treatment that works with few, or no side effects can be time-consuming and frustrating. The failure of a pharmacological treatment not only allows the health problem to persist or worsen, but a negative experience with a medication can complicate adherence to subsequent treatment.

#### A PGx test is a saliva test that allows you to answer the following questions:

Exposure	Should an adjustment of standard doses be considered because of a lower or higher than normal metabolic capacity?
Efficiency	Is the patient more or less likely to respond well to treatment?
Side effects	Is the patient predisposed to side effects?

# Prescribing tests and obtaining results

Simply complete the prescription and hand it over to your patient.

#### View results

Notification is sent by e-mail as soon as the results are available, usually within 10 working days. The detailed report is accessible via Biron's secure portal.

#### Benefit from clinical support



#### Patient support

Consultation with a pharmacist is included



#### **Physician support**

Assistance from PGx experts (PhD) is included

#### More resources

Discover the online resources available to support your practice, from test prescription to report interpretation.

Visit

biron.com/ pgx-healthcare



# Contact Biron Genetics for more information



1 855 943-6379

1 514 317-2241

# About Biron Health Group

Founded in 1952, **Biron** is recognized for its expertise in **six fields of healthcare**:

- → Medical Laboratory
- → Health at Work

→ Sleep Care

- → Genetics
- → Medical Imaging
- → Pathology

A proud Quebec company, Biron brings together the strengths of nearly 1,000 competent, rigorous and caring professionals. This attentive team supports you in your everyday practice by offering services that help you focus on what is most important.