

What is pharmacogenetic testing?

Pharmacogenetic testing is a type of DNA test that uses your **genetic profile** (information about your specific genes) to predict how your body will respond to specific medications. Your provider may recommend pharmacogenetic testing to help identify what medication or medication dose might work best for you.

What is TPMT?

TPMT stands for thiopurine methyltransferase, which is a substance in your body that helps to inactivate (turn-off) certain medications you may take. The ability of TPMT to inactivate medications varies between different people based on their DNA. About 1 in 10 (10%) people have **slow TPMT activity**, meaning their bodies take more time to inactivate certain medications. About 1 in 200 (0.5%) people have **very slow TPMT activity**, meaning their bodies take significantly more time to inactivate certain medications.

How is the testing done?

There are several methods to obtain a DNA sample, including through a blood draw, saliva (spit) collection, or cheek swab. Your provider will share the specific method for your test with you. After collecting the sample it is sent to a clinical laboratory that evaluates your DNA and identifies the TPMT activity you likely have.

How will my provider use the test result?

Your provider will use the result to determine which medications are most likely to work well for you. Some examples of medications that can be personalized based on the TPMT pharmacogenetic test include:

- Azathioprine (Imuran)
- Mercaptopurine (Purixan)
- Thioguanine (Tabloid)

Your provider will attempt to determine your treatment based on:

- Your TPMT pharmacogenetic test result
- Your other medications and conditions
- The medications your provider is considering prescribing

Treatments you could benefit from include:

- Additional pharmacogenetic testing for other genes that impact the medication(s)
- A different medication
- A lower dose of that medication

What should I do with the test result?

Your providers at Michigan Medicine will be able to view this test result to help determine the best medications for you. If you see providers at other institutions let them know that you have been tested for TPMT and share your result with them so that they can also use this information to personalize your medications.

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Author: Amy Pasternak, PharmD, BCPS

Plain Language Editor: Amy McAlister, MSA

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