

Pharmacogenetic Testing for SLCO1B1

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 SLCO1B1?

SLCO1B1 is a gene that tells your body how to make a substance called organic anion transporter 1B1. This substance helps move some medications through your body so the medication can be inactivated (turned-off). The ability of SLCO1B1 to transport medications varies between different people based on their DNA. About 1 in 40 (2.5%) people have **increased SLCO1B1 function**, meaning their bodies move certain medications through the body more quickly. About 3 in 10 (30%) people have **decreased SLCO1B1 function**, meaning their bodies take more time to move certain medications through the body. About 1 in 40 (2.5%) people have **poor SLCO1B1 function**, meaning their bodies take significantly more time to move certain medications through the body.

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 SLCO1B1 function 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 SLCO1B1 pharmacogenetic test include:

- Atorvastatin (Lipitor)
- Fluvastatin (Lescol)
- Lovastatin (Altoprev)
- Pitavastatin (Livalo)
- Pravastatin (Pravachol)
- Rosuvastatin (Crestor)
- Simvastatin (Zocor)

Your provider will attempt to determine your treatment based on:

- Your SLCO1B1 pharmacogenetic test result
- Your other medications and conditions
- The medications your provider is considering

Treatments you could benefit from include:

- 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 SLCO1B1 and share your result with them so that they can also use this information to personalize your medications.

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