

Genes Can Determine A Drug's Effectiveness

(NAPSA)—When it comes to prescription medications, one size does not always fit all. Different patients can have varied responses to the same medication based on a number of factors—such as weight, age and their genes.

The good news is that knowing about your DNA could make all the difference when it comes to a medication's effectiveness. That's because your genetic makeup can influence the way your body will react to certain medications and knowing that information can help a physician prescribe the right drug or dose.

In the past, doctors have used a trial-and-error approach to determine whether a drug was working properly for a patient. But now there are genetic tests for several commonly prescribed medications that can help doctors target dosing more precisely.

Genetic tests, which often involve a saliva test or simple swab from the inside of your cheek, can determine how a medication is metabolized or broken down in the body and indicates if you'll need a higher or lower dose of the drug or if the medication will be effective at all.

Knowing how a patient will respond to a drug can prevent serious side effects or can ensure that the drug being taken is having the desired effect. These gene tests can be lifesavers, such as for those taking certain breast cancer and heart disease medications.

For example, tamoxifen is one of the most commonly prescribed breast cancer drugs. It's used to prevent the recurrence of the disease, and for most women, it's extremely effective.

However, for the 10 percent of women who don't metabolize it



It may be to your benefit to ask your doctor if a genetic test is indicated for your prescription drugs.

properly, taking the drug may provide little or no benefit. With a genetic test, their physician can decide if they should be on tamoxifen or if another drug would be more beneficial.

According to the experts at Medco, gene testing can also be important for patients taking an anti-clotting medication. Known by its brand name Plavix, it's used to prevent heart attacks and strokes. Even though it is one of the world's most prescribed drugs, there are patients who do not fully benefit from it because of their genetic makeup.

Based on this evidence, the Food and Drug Administration has issued a warning, stating that the drug can be less effective for patients with this gene mutation, putting them at risk of a serious cardiovascular problem.

Patients taking another heart medication known by its brand name Coumadin can also benefit from a gene test. For years, doctors have struggled with starting patients on the correct dose of this blood thinner.

To learn more about the benefits of genetic testing, visit www.medco.com.