

Salivary diagnostics: Everything you wanted to know about your spit

Spit is important. It's the natural fluid that moistens your mouth, supports your ability to eat and speak, and can help keep your mouth and ultimately your overall body healthy. Yet today, scientists are discovering even more ways that your spit is essential to your body and health.

Here are some questions and answers that may help you better understand why your spit is "it" and what you can expect in the future through scientific advances.

What is salivary diagnostics?

Salivary diagnostics is the study of your spit. Scientists look for certain elements and compounds including various biomarkers that can help them diagnose and predict certain health conditions.

What are biomarkers?

These are traceable substances that exist in saliva that can help detect and even predict certain diseases. Scientists have spent years identifying these biological markers associated with different diseases.

Why is saliva so important?

Your spit contains a fluid produced by the salivary glands that is rich in proteins and also contains certain amounts of biochemicals found in the blood that filter into the mouth. These proteins and biochemical substances can be linked to health conditions such as gum disease, HIV and even cancer and can pass from the blood into the saliva. Over a period of time, an increased concentration of these elements can make saliva a promising diagnostic fluid that has multiple advantages over blood.

What are the advantages of testing saliva over a blood test?

There are many advantages to testing your spit. First of all, it's easy to collect. A simple swab of the cheek or droplet of saliva is all it takes. There's no pain involved. Needles are a thing of the past when it comes to saliva testing. Other advantages can include:

- The ability to test in many settings outside of a medical facility such as your home. Saliva tests can be easily transportable anywhere and can be self-administered.
- A much lower cost. Plus, you may experience fewer doctor visits and less frequent hospital visits to run tests, in the end saving you both time and money.
- A faster turnaround. Testing your spit can allow for more immediate results and communication between you and your medical provider. This means you can be treated earlier should anything be detected.

Is salivary diagnostics a genetic test?

Some tests are, but not all. The type of testing where scientists analyze the certain DNA or genetic descriptors a person may have in their saliva to either confirm or predict a disease is considered a genetic test. Often times, the testing of saliva is used as a diagnostic test to confirm a diagnosis when a person has signs or symptoms of a possible disease. Yet, the testing of saliva can also be considered a predictive test that can show which individuals have a higher chance of getting a disease even before symptoms appear.

Does the government regulate this type of testing?

Yes. There are federal guidelines in place that regulate genetic testing. In 2008, the federal government created the Genetic Information Nondiscrimination Act (GINA) in an effort to monitor and protect individuals from the misuse of this type of testing and information.

Who sees my information?

Only you can determine who sees your information. As mentioned earlier, we are all protected from the misuse or non-voluntary disclosure of genetic data by the U.S. government's GINA regulations. Additionally, your genetic profile is considered Protected Health Information (PHI) and is additionally protected by the Health Insurance Portability and Accountability Act (HIPAA).

Will my health insurance cover a test such as this?

Most salivary diagnostic testing is not readily available in the market today. Yet, down the road when it does become more accessible, the potential for health insurers and health benefit providers to evaluate whether or not to include this type of testing into their plans is very likely.

Can I get a saliva test today?

Yes, but options are rather limited. Current tests available include various hormonal, HIV, and alcohol tests which produce rapid and accurate results. Other salivary-related tests that are currently available can help detect whether or not an individual carries a certain gene associated with a health condition such as breast cancer. Yet, typically the cost for these types of tests can be expensive and results tend to take several weeks.

Can children take the test?

Anybody, young or old, can be tested. Since all it takes is a simple cheek swab or droplet of saliva and it's painless, children don't have any reason to fear taking the test.

What can I expect in the future with this test?

With the rapid advancement of technology, scientists hope salivary diagnostics will become more readily available in the future. Efforts are underway to develop portable, miniaturized testing devices where a small sample of saliva can be collected during a visit to your dentist or doctor and the results are automated and immediate. Combined with saliva sample collection or

cell collection (by gentle brushing of the skin surface), this technology could eliminate the need for blood sampling or mouth tissue biopsy, in many cases.

Building on the research of today, saliva has the potential of becoming an even more commonly used diagnostic fluid. Ongoing studies indicate that your spit may be useful for detecting various types of diseases including gum disease, multiple cancers (including breast cancer), heart disease, diabetes, Sjögren's syndrome, and many more health conditions that can substantially impact your life.