

Our Clinical Approach

Noninvasive Sample Collection

We pursue noninvasive testing because we believe that medical treatment should have as little impact on the patient as possible. Noninvasive sample collection is a hallmark of our testing and why we have chosen to focus almost exclusively on saliva and stool. The convenience of noninvasive sample collection relieves patients of the common anxiety over needles and conventional blood draws. Patients can collect their samples in the convenience of their own home and send their samples directly to the laboratory for their provider to receive the results.

From our perspective, if a target substance can be identified and measured in saliva, there is no need for a blood test. Blood tests can be expensive, more labor intensive, inconvenient, and carry the risk of adverse health outcomes. We recommend choosing a noninvasive diagnostic test as a primary option, whenever possible.

Clinical Validity

The ability for a laboratory to measure something is only important when there is a clinically relevant application. The philosophy of DiagnosTechs is to offer panels and tests that are highly reliable and have direct application to medical treatment. Our original testing panel, the Adrenal Stress Index (ASI), was the first to introduce cortisol testing by saliva to routine clinical practice. Today saliva is understood to be the gold standard for measuring unbound, active hormone levels in the human body. In addition to saliva, our stool testing uses state-of-the-art methodologies and equipment to analyze microbes, parasites, pathogens, and inflammation markers, which can help diagnose a wide range of physical symptoms.

Precision and Reliability

We continuously invest in new technology to improve our testing. Testing methodologies and reference ranges are regularly examined and refined to deliver the best possible results.

Chronobiology

Because hormone levels fluctuate over time, noninvasive sample collection allows us to measure at specified time intervals to create a more accurate assessment of hormone levels throughout a day or month. A provider may take these results to compare different periods of patient treatment or other physiological states – such as on hormone replacement therapy. Since patients collect their samples themselves, it is uniquely convenient for patients to collect multiple samples without the hassle or pain of a visit to the lab for a blood draw.

Saliva Testing Advantages

Saliva testing specifically measures free, unbound hormone levels. This is because saliva-producing, or acinar, cells only allow unbound steroid hormones into the salivary ducts. This eliminates the need to estimate how much circulating hormone is present in a patient's body.

If measuring total hormone levels in serum, calculations are required to estimate levels of free hormone. Even then, the levels are estimates and are not predictably reliable measures of free hormone activity at the tissue level. The advantage of salivary testing is creating a useful picture of biologically active levels of hormones at the tissue and cellular level.

Dynamic, Chronobiological Measurements

In order to accurately study how hormones affect a patient, it is necessary to look at hormone levels dynamically. In other words, hormone fluctuations are just as important as their level at any given point in time. The practice of including a time component to the evaluation of a patient is called chronobiology. There are many well-known chronobiological processes, including sleep/wake cycles, seasonal mood changes, and the monthly menstrual cycle.

The hormones that influence many of the cycles in our lives can be viewed as markers to check if our body is in a healthy state from the standpoint of chronobiology. For example, multiple-sample saliva testing allows a clinician to monitor hormonal shifts and regulation over an *entire* monthly cycle! This information can have profound diagnostic significance and can lead to therapeutic strategies which may be overlooked by single-sample testing of hormones.

All major steroid hormones, and select peptide hormones, and antibodies can be readily detected and measured with reproducible results from a patient's saliva. Enzyme-linked immunosorbent assay (ELISA) is the most prevalent laboratory technique utilized in measuring hormones, antigens, and antibodies within the saliva. The process involves using a prepared solution of antibody that is specific for an analyte being measured. The saliva sample is exposed to the solution that has the known antibody. If the substance tested for is present in the saliva, the antibody will bind to the substance and an enzyme-linked chemical reaction will notify the scientist via a change in color. These test results may be designed to provide either qualitative ("positive" vs. "negative") results or quantitative results (i.e. 5-50 nM, for example).

With these things in mind, saliva analysis through ELISA is an excellent alternative to blood serum testing, as it is clinically applicable, and scientifically accepted to study a patient's chronobiology, while also being more economical.

Stool Testing Approach

Many stool tests are simplistic – looking for a single element or small group of biomarkers. Our Gastrointestinal Health Panels are quite comprehensive and can provide detailed insights into microbial presence and balance, potential parasites, pathogens, and inflammation markers. Results will identify or rule out many potential causes of patient symptoms.

Other Sample Types

Urine – currently, we use urine to measure Pylorins-D in our Bone Health Panel and to detect metals and elements in our Toxic Metals and Elements panels.

Mucosal Swab – the mucosal swab is designed to identify yeast, either as part of the Yeast Panel or in a Flexi-Matrix Custom Panel.