Reams Urine & Saliva Testing: Don't Waste Your Money

From the wacky world of alternative medicine we have a completely useless set of 'medical' laboratory tests that are diagnostic of nothing except gullibility.

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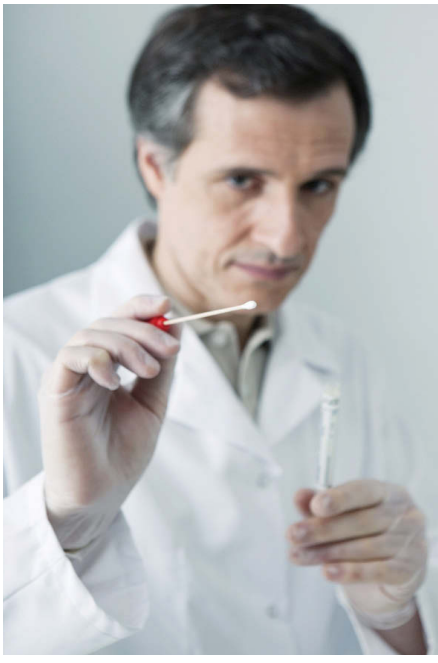
As an experienced medical laboratory scientist I am bound by my profession's code of ethics to shed light on a laboratory test that is useless for the diagnosis or evaluation of any disease. The American Society of Clinical Laboratory Scientist's Code of Ethics, Section 1, Duty to the Patient, states that it is our professional duty to safeguard the patient from incompetent or illegal practice by others.

Incompetent indeed! At the end of one of my immunology lectures, a student asked if I knew anything about the Reams urine and saliva test. I have been a professional in the clinical laboratory field for over thirty years, and I had never heard of such a test. We certainly don't teach this test in our clinical laboratory science program at our university, and after investigating this test I don't believe we ever will.

My first clue that the Reams urine and saliva test (also called the Reams Biological Theory of Ionization Test or RBTI) is completely useless is that the several websites that offer this test answer their own question: What does this test reveal? Well, according to these alternative medicine gurus, quite a lot: it supposedly determines the calcium needs for your body chemistry; tells what you are digesting and not digesting; shows vitamin and mineral deficiencies; reveals if your blood sugar is high, low, or normal; will show if your body is supporting excess yeast (candidiasis) or parasites; indicates if there is excess stress on your organs such as the kidneys, liver, heart, colon, or gall bladder; gives the health of the liver and gall bladder; and reveals if your body's environment may be supporting circulatory problems, high or low blood pressure, arthritis, weight gain, high cholesterol, or kidney/gall stones.

Several problems are evident right off the bat. Many of these issues are couched in alternative medicine speak. This test certainly cannot detect "stress" on any organ, whatever that means. A term like *stress* on the so-and-so organs is so vague as to be meaningless to medical professionals. There is no patient that could be admitted



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to a hospital with a diagnosis of excess stress on the gall bladder. A physician trying to admit a patient with this sort of diagnosis on the basis of the results of this test would and should have his or her admitting privileges reviewed immediately.

Another clue that this test comes to us from the world of alternative medicine is that the test claims much too much information from an analysis of urine and saliva. Neither a urine nor a saliva test can evaluate the calcium needs of anyone. An analysis of urine and saliva cannot tell if you have high blood pressure or low blood pressure. A much better idea is to go to your local pharmacy and test your own blood pressure at their self-service blood pressure station.

Urine and saliva samples are never used to help diagnose arthritis, high cholesterol, parasites, or a yeast infection. Urine and saliva samples have little diagnostic value in detecting kidney or gall stones or vitamin and mineral deficiencies. And finally, how this test could possibly tell what one is digesting and not digesting escapes me.

This test also misses the mark on identifying people who may have high blood sugar. Persons with high blood sugar will have some glucose (sugar) in the urine but on careful examination I find that this test mistakenly measures several other things and identifies them as sugar. It tests for brix. Brace yourself! Brix is a measurement of the amount of sugar in grape juice so wine makers can calculate how much alcohol will be produced from the batch of juice that was tested. It is a simple test to perform; a drop of juice is placed in a refractometer and the specific gravity is read. A refractometer is a simple optical device that measures the bending of light by the solution being tested; the more dissolved substances in the solution, the more the light bends. The reading is converted to a brix scale that tells how many grams of sugar there are in 100 grams of juice solution, or the percent of sugar.

Specific gravity is simply a measurement of a solution compared to pure water. Pure water is 1.000 while solutions that have dissolved substances in them are slightly more dense than pure water and thus have a higher specific gravity than 1.000. So a specific gravity reading (or brix) on grape juice would be measuring sugar because that is what is dissolved in the juice. Those that offer the Reams test have somehow determined that a brix measurement of 1.5 is ideal while healing takes place in the 1.2 to 2.0 range.

A standard medical test for urine does include specific gravity, but an elevated reading is not due to sugar in a healthy individual. It is due to the concentration of the urine and the amount of dissolved substances like urea, sodium, potassium, etc., in the sample. The specific gravity tells the physician if the patient's kidneys have the ability to concentrate urine.

Using a brix scale to determine sugar in urine is meaningless because there is normally little to no sugar in human urine. Even if an individual has sugar in the urine, the brix scale is useless because one would also be measuring unknown concentrations of dissolved urea, sodium, potassium, etc. The practitioners explain that in addition to the sugar, the brix number represents the amount of potential energy available per pound of body weight. How they measure this amount of potential energy per pound of body weight and the units in which they measure it are unclear. What this nonsense means is anybody's guess. Any so-called "medical laboratory" using a brix winery scale to test urine should be thoroughly investigated.

This test also measures the pH of both urine and saliva. Promoters of this test explain that pH is a measurement of resistance and indicates the speed at which energy is moving through the body. Again, this is nonsense. Any student who has taken an introductory chemistry course knows that pH is a measure of the acidity or alkalinity of a solution, not a measure of energy speed. Technically pH is the negative log of the hydro-

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gen ion (acid) concentration (Sackheim 1994, 199). It has nothing to do with the speed of energy moving through the body. This idea is meaningless anyway unless one is struck by lightning. During those milliseconds, one might be genuinely concerned about the speed at which energy is moving through the body.

The pH of urine is routinely measured in a medical laboratory, but it will be neutral, alkaline, or acidic because urine is the medium our bodies use to get rid of excess alkalinity or acidity to keep our blood at a healthy and slightly alkaline state. The pH of saliva is near neutral to keep acids from dissolving away our teeth (Sackheim 1994, 200). Saliva pH is a rarely ordered test because saliva's pH doesn't vary much and has little diagnostic value.

Cell debris is a term that is ill defined, and it is not measured in medical laboratories. In the Reams test, cell debris is apparently important and is measured in the urine in some mysterious fashion. Perhaps these people are looking at the turbidity of the urine. Some practitioners call this cell debris "albumen" [*sic*]. Evidently cell debris is the number of dead cells leaving the body. Someone, perhaps Dr. Cary Reams, the originator of this test, has decided that the ideal cell debris number is 0.04M. I have no idea where this number comes from or what it means or how it is measured.

This may be related to the so-called cell exchange rate, another meaningless parameter. Practitioners tell us there are three classes of cells: alpha cells, delta cells, and omega cells. Alpha cells are whole healthy cells, delta cells are damaged or dead cells, and omega cells are dead cells that are sticking together. This classification of cells based on lifespan is pure fantasy and cannot be found in any biology or medical textbook. Proponents claim that in a healthy cell exchange rate the number of healthy cells replaces the dying cells on a one to one ratio.

If these practitioners are looking at urine under a microscope, which I hope they are not, they will most likely see some cells, especially if the urine is from a female. Epithelial cells are often present in urine because they are naturally sloughed off during urination but this is completely normal. How they can tell if these cells are being replaced on a one-to-one basis is unknown. I have never seen a urinalysis report that listed the numbers of delta and omega cells found in a urine sample.

Proponents also claim that the urine requires a urea reading, urea being the "Ammonia Nitrates and the Nitrate Nitrates" in the urine. This is a big error; nitrates are not urea. Also, anyone familiar with chemistry knows that chemical names are not capitalized. I am not sure what "ammonia nitrates" are, but ammonium nitrate is fertilizer and should never be found in the urine.

One enthusiast claims that urea is the undigested protein in the body. This is simply wrong. Urea is a nitrogen-containing waste compound that is produced when protein is digested.

Nitrate is a molecule that is made up of one nitrogen and three oxygen atoms and is normally present in the urine. It is derived from our diet and is excreted by the kidneys. Nitrates are hardly ever measured in urine, as this test has very little diagnostic value. Their term *nitrate nitrates* is not used in actual science. A nitrite molecule is similar to a nitrate molecule except that it has one fewer oxygen atom. Urine can be tested for nitrites produced by bacteria, an indication of a urinary tract infection, but there is no actual test in existence for something called *nitrate nitrates* (Brunzel 2013, 123).

One enthusiast claims that urea is the undigested protein in the body. This is simply wrong. Urea is a nitrogen-containing waste compound that is produced when protein is digested (Sackheim 1994, 457). A high urea reading, according to this practitioner, is due to the "heart beating TOO HARD, NOT TOO FAST!" [*sic*]. The practitioner gives no explanation as to why undigested protein would make the heart beat

too hard or any explanation as to why some of these words are in all capital letters.

Urea has a completely different chemical structure than nitrate. The level of urea depends on the amount of protein in the diet, hydration, and kidney function. I have no idea what these alternative medicine proponents are doing, but if they are using nitrate to determine the amount of urea in a urine sample they are in error. These are two completely different substances. One does not count apples to determine how many oranges are available in the produce aisle.

Albumin (which they spell as "albumen") is a protein normally found in the blood. There may be significant amounts in the urine in individuals with some types of kidney disease or other conditions (Brunzel 2013, 83). Albumin is precisely measured in the laboratory through a chemical reaction.

One practitioner claims that albumin is the number of dead cells in the body (it is not) and that he can tell the amount of albumin by merely looking at the urine—no laboratory instrument needed: one only needs to hold the urine sample up to the light and look for a cloudy mass. The cloudy mass of albumin is supposedly carcinoma (another word for cancer) cells and the normal amount of these cells should be around 40,000 per 100 pounds of body weight. Claiming that 40,000 cancer cells in urine are normal defies all logic. Common sense would dictate that detecting any number of cancer cells is not normal let alone 40,000 of them per 100 pounds of body weight. Cloudiness in urine can be from many causes ranging from precipitated harmless substances to a bacterial infection, but urine cloudiness cannot be used to quantify albumin.

Urinary salt (sodium and chloride) is measured with a conductivity meter, and it is claimed that this is a measure of the amount of salt the body retains. These practitioners evidently do not understand that salt in the urine is the salt our bodies are *eliminating*, not the salt we are *retaining*. The amount of salt in our blood is critical and is kept within a very narrow range. Any excess salt is expelled through the urine (Sackheim 1994, 460).

So what does all of this nonsense mean? How can we interpret all of this information we get from testing our urine and saliva? According to the Reams biological theory of ionization, we merely line up these questionable laboratory values in a specific order and look at them: the brix, the urine pH, the saliva pH, total salt measurement, albumin, and the nitrate nitrogen over the ammonia nitrates. Evidently normal readings are: 1.5, 6.4, 6.4, 6-7, 0.04M, and 3/3, respectively, and anything other than these values indicates serious abnormalities that can be alleviated by, you guessed it, a carefully prescribed program of vitamin and mineral supplementation. So we can conclude that if our tests indicate stress on the gall bladder we can correct this debilitating condition by taking the proper supplements suggested by our local alternative medicine practitioner. The skillful sprinkling of science-like words and meaningless technical-sounding lab jibber jabber allow this silliness to take on a thin veneer of seeming legitimacy. Fascinating indeed!

One proponent of this test sums it up beautifully: "All living things operate within a measurable frequency and this test analyzes the frequency which a person gives off so we can see how much energy the body has, where it is escaping unnecessarily, and where the energy is being used (not being assimilated)." Now if that statement doesn't clear things up I don't know what does. This test is available for a price of between $90 and $150. My advice: don't waste your money unless you can figure out what in the world these people are talking about. I, for one, cannot. ■

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References

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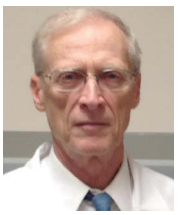

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