



D.U.T.C.H. TESTING – DRIED URINE TEST FOR COMPREHENSIVE HORMONES

WHAT IS D.U.T.C.H, AND HOW WOULD A TEST HELP YOU?

The D.U.T.C.H Test is an advanced comprehensive test for assessing what is occurring with reproductive and adrenal hormones. By identifying the root causes to hormonal imbalances, symptoms can be reduced and eliminated, and goals for optimal health achieved.

For women hormonal imbalances occur regularly and can emerge as small niggling daily symptoms, but can lead to more serious problems if not attended to. **For men**, over time a gradual change in hormone balance is experienced with testosterone and DHEA levels falling and estrogen increasing. **Many people assume and feel these symptoms (see below) are normal or part of the journey of getting older.** However, dealing with these changes is vitally important, and treatment

can help with prevention of possible oncoming chronic health issues, and/or help maintain a healthy lifestyle.

The test **also provides information to how the body handles estrogen through your liver (a very important focus for cancer markers), and how methylation pathways are functioning.**

Optimal function of methylation is required for gene regulation (turning genes on and off), building neurotransmitters (dopamine, serotonin, epinephrine), hormone processes and metabolism, building immune cells (T cells and NK cells), producing energy (CoQ10, ATP, Carnitine), production of protective coating on nerves (via myelination), and synthesis of DNA and RNA.

Practitioner testimonials about DUTCH
<https://dutchtest.com/testimonials/>

Symptoms

MEN

- Mood swings
- Libido issues
- Sexual dysfunction
- Hair loss
- Stress
- Fatigue
- Anxiety
- Changes in prostate

WOMEN

- Pre-Menstrual Symptoms (PMS) e.g. acne, cramps breast tenderness, mood swings
- Cycles issues – heavy/irregular
- Menopause – night sweats, flushes, low libido
- Fatigue
- Stress and/or Anxiety
- Hair loss, facial hair
- Changes in breast tissue

WHAT DOES THE TEST INCLUDE?

Sex Hormones – Estrogen (E1, E2, E3), Progesterone, Androgens (Testosterone, DHEA-S)

Adrenal Hormones – DHEA-S, Total DHEA production, Daily Free Cortisol & Cortisone, Metabolised Cortisol (e.g. how much you are actually making), Creatinine

Nutritional Organic Acids markers – Vitamin B12, B6, Glutathione

Neurotransmitter Metabolites – Dopamine, Norepinephrine/Epinephrine, Serotonin, Melatonin, Oxidative Stress / DNA Damage (measured as 8-OHdG)

NOTE: Male tests are as above, but have less info on progesterone.

FREQUENTLY ASKED QUESTIONS

What methods are used to do the test?

Mass spectrometry – a very accurate way of testing. The D.U.T.C.H. test uses a combination of gas chromatography (for reproductive hormones and smaller molecules), and liquid chromatography (for adrenals e.g. cortisol, cortisol metabolites).

What exactly is measured in urine and is it as good as blood or saliva testing?

As urine is a waste product it is often asked – is urine worth testing. The answer is 'yes'. The hormones in urine are in a water soluble form. In blood the hormones are bound to proteins and only a small fraction is bioavailable to get into tissue/cells to do what is needed to do. Only the free bioavailable part is what will get into urine.

Why is the thyroid not tested?

Thyroid is not tested as the best results for thyroid are in blood (serum) tests. These are also available through The Good Health Room.

Why does cortisone get tested throughout the day and not just cortisol?

In simple terms, when cortisol is made (active form made through the adrenals), it circulates throughout the body – the highest levels are in the morning, and then it drops off during the day. As it circulates – especially in the colon, saliva gland and kidney, it will get readily deactivated to cortisone (the inactive form). As cortisone, it can then circulate as well, and its daily pattern then simply helps to confirm the up and down pattern throughout the day. In more complex terms, cortisone is a good secondary marker as to how heavy deactivation is happening in the tissues. If a patient has overactive deactivation, then cortisol is very heavily getting shunted to cortisone, so it can show an underestimation of what is really going on with cortisol.

Are you testing hormones or metabolites of hormones?

Yes and No to both. The test is a reflection of bioavailable hormone and hormone metabolite e.g. estrogen metabolite is being measured (2-OH, 4-OH, and 2-Methoxy) which are downstream metabolites of main estrogens – estradiol and estrone. However estradiol is not actually being tested, but rather estradiol is tested as a conjugate (meaning in your blood and circulating in your whole system bound to a protein – the total hormone measured). Some of the hormone is also free to be conjugated and in the form that is found in urine (water soluble form) – which is an excellent reflection and correlation (from tests done) of bioavailable hormone as it exists in blood.

How does this urine test compare to 24-Hour Urine Testing?

Creatinine is commonly used – it is a product in your urine, and is excreted at a predictable rate and used to correct for hydration. When a sample is collected and measured out e.g. estradiol, a number is given for how much estrogen per volume of urine is found. If there is more hydration then the number of estrogen per volume is going to change e.g. concentrated if not drinking enough, more dilute if drinking a lot. Creatinine moves along with that hydration. The amount of creatinine in large/small urine samples over 24 hours will be the same – therefore a very predictable number.

That number is then used and divided by creatinine for each hormone and that allows for correcting of hydration (which also correlates extremely well against a 24-hour urine sample). This approach is an excellent and robust way to test and give an accurate value. Some 24-hour urine testing has been shown to not be as accurate due to patient error.

NOTE: DUTCH testing is not used if any severe kidney problems exists (blood testing is best).

Why is pregnenolone not tested?

Pregnenolone cannot be tested in urine (it has to be a blood test).

Why is Growth Hormone (GH) not tested?

Growth Hormone (GH) can be tested in urine, but it usually takes a large volume of urine for it to be tested.

REFERENCES:

DUTCH TEST – <https://dutchtest.com/>

Methylation – <https://drjockers.com/understanding-methylation/>