

ATTACHMENT:

Useful remarks for patient and doctor, to be associated to the analytical results. Your doctor should interpret this report.

Cod. ID: 123456

CCV: 6bf

Date: 01/01/2013

Patient: Rossi Mario



Rapport de:

NatrixLab

Via Cavallotti, 16

42122 Reggio Emilia

Aut.n. 67 del 26.01.10

Direttore Sanitario

Dott. Michele Cataldo

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MENOPAUSE WOMAN'S TEST (Assessment of hormone balance)

WOMEN AND HORMONES

TESTOSTERONE

PROGESTERONE

EXTRADIOL

ANDROSTENEDIONE

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WOMEN AND HORMONES

Hormones are endogenous substances produced by the endocrine system, which act as messengers and which answer the various needs and requirements of the organism. Hormones are produced by glands inside the body: in the central nervous system, the hypothalamus, the hypophysis and, descending the body, the parathyroid glands and the thyroid gland, the adrenal glands, the pancreas and the sexual glands (ovaries in women, testicles in men). Every hormone has different functions and is secreted or activated only if and when necessary.

The menopause represents an important change in a woman's life, since both physical and psychological modifications take place.

To understand how best to deal with this change, it is necessary to analyse the concentrations of the various hormones.

The cease of ovary activity does not represent the complete disappearance of the sexual hormones, since they are also produced by the adrenal glands.

The type of menopause can be defined on the basis of the balance between the three large groups of sexual hormones: the progesterones, the oestrogens and the male hormones.

Let's see what hormones are considered in this test:

OESTROGENS

Oestrogens stimulate the development of the secondary female characteristics, they allow for fecundation and pregnancy, and they regulate the menstrual cycle, as well as the distribution of body fat, favouring the deposit on hips, buttocks, thighs and abdomen. They exercise a protective action against osteoporosis; they protect against the cardiovascular and arteriosclerosis risk. They also stimulate lipolysis in muscular and fat tissues. They regulate many brain functions such as memory. They also influence the thyroid hormones, with an antagonist action, and insulin, increasing its action.

However, an excessive concentration of oestrogens can expose a woman to a greater risk of developing certain forms of cancer, such as breast cancer, insulin resistance and infertility.

The oestrogen level changes according to body weight, therefore keeping weight under control influences the balance of the sexual hormones.

When oestrogen levels decrease, the first symptoms are the so-called "hot flushes", which occur particularly at night, also causing sleep disturbances. The decrease also causes thinning and loss of elasticity of the vaginal walls, reduced lubrication, osteoporosis and increased cardiovascular risk.

EXTRADIOL

Female sexual hormone, produced from testosterone. Extradiol is produced in the ovary, and partly also in the adrenal glands, and during pregnancy in the placenta. It intervenes above all in the woman's sexual development phase, but it also regulates other processes of the organism: it protects against osteoporosis and the cardiovascular risk, decreasing the levels of LDL cholesterol, otherwise known as "bad cholesterol". Extradiol is the most important of the family of oestrogens, which also include oestriol and estrone.

PROGESTERONE

This is a steroid hormone, derived from cholesterol. It is a female sexual hormone, responsible for ovulation, fertility and the menopause. Its concentration is very important in the embryo implantation phase and during pregnancy; in fact, it is not only produced in the ovaries and in the adrenal gland, but also in the placenta. Concentrations are much lower, however, in the follicular phase and during menstruation. Furthermore, progesterone is a thermogenic hormone, i.e. favouring body temperature increase of about 1°C. During the menopause, the adrenal gland remains the only gland producing progesterone, and there is consequently a consistent decrease in its level in circulation. Low levels of progesterone cause symptoms similar to those produced by oestrogen deficiency.

TESTOSTERONE

This is an androgynous hormone, produced by the sexual glands. It performs a fundamental activity during male development. In adults it favours the growth of body hair, maintenance of the secondary sexual characteristics and the onset of baldness.

It maintains libido, stimulates spermatogenesis and the production of erythropoietin. It also has anabolic properties, i.e. it favours protein synthesis and the growth of lean body mass instead of fat body mass.

During the menopause, balanced levels of testosterone in respect of the other hormones, contribute to maintaining a woman's general well-being. Imbalanced levels can be caused by overweight and obesity due to an abundant presence of the aromatase enzyme in the adipose fat which transforms the testosterone into estradiol.

Another reason for imbalance in testosterone concentrations may be associated with heart disease and cardiovascular risk.

ANDROSTENEDIONE

Androstenedione is a steroid hormone produced by the adrenal glands and by the sexual glands. It is the precursor of estradiol and testosterone.

The adrenal gland synthesis of androstenedione increases after the menopause. Increased levels of androstenedione are often associated with acne, excess body hair and baldness.

USEFUL RECOMMENDATIONS

To rebalance hormone levels, it is necessary to plan all round action with your own doctor. It is necessary to check on thyroid hypo-functioning and alteration in hepatic detoxification.

It is necessary to draw up a balanced, healthy diet, rich in fibre and vegetables, with few pre-prepared foods, rich in anti-oxidising substances and foods containing sulphur compounds (garlic, onions, egg white), to drink water (at least 1.5 litres per day) rich in calcium. One should always practise physical activity for at least 30 minutes a day, sleep at least 8 hours a night, limit smoking and the intake of alcohol and coffee, and spend time in the open air and in the sunshine.

REPEATING THE TEST

Repeating the test every 3-6 months is recommended. In the case of therapeutic monitoring, or disease, the test should be repeated according to the recommendations of the patient's doctor. In the case of difficulty in interpreting the result or in the case of diseases already in progress, the opinion of a specialist, who can give targeted therapeutic support, should be sought.

IMPORTANT

The results of the test must always and in any case be examined by the doctor considering the clinical situation of every single patient. This test cannot be reproduced partially.

The laboratory results, graphs and explanations contained in this dossier must not be considered as a medical diagnosis. It only represents an instrument available to the patient's own doctor, who can use it together with the findings of a medical examination or other diagnostic tests, to formulate a correct therapy and to diagnose the subject's state of well being.

SALIVA TEST

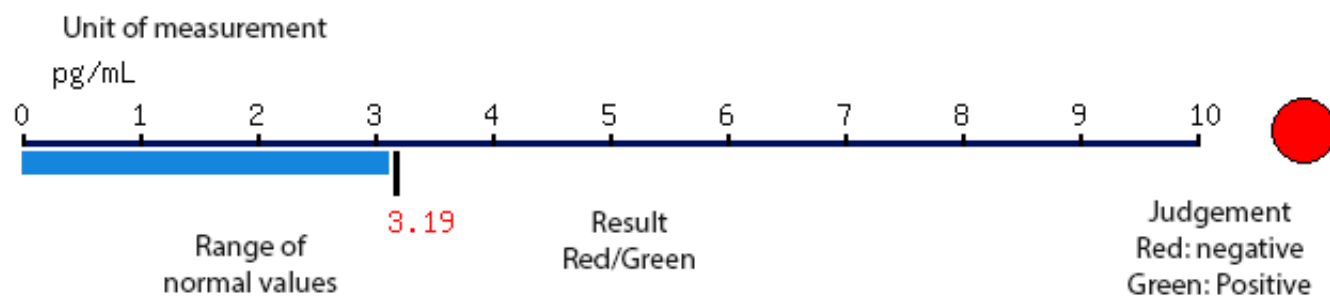
Saliva contains mucins, digestive enzymes, electrolytes, immunoglobulins and hormones. The hormones passively pass through the membrane of the saliva glands and reach the saliva only in a small percentage; the percentage corresponds to the "free" hormone, i.e. not linked to other proteins. This percentage corresponds to the active part of the hormones in circulation.

Unlike saliva, 95-99% of the hormones in the blood are linked to proteins, and they are not bio-available and therefore they are inactive. Many studies show that the concentrations of hormones in saliva correspond to those found in blood serum.

TEST READING GUIDE

Key:

- GREEN TRAFFIC LIGHT: the result is in the range of normal values
- RED TRAFFIC LIGHT: the result is outside the range of normal values
- RANGE OF NORMAL VALUES: indicated by the blue line



TEST RESULTS:

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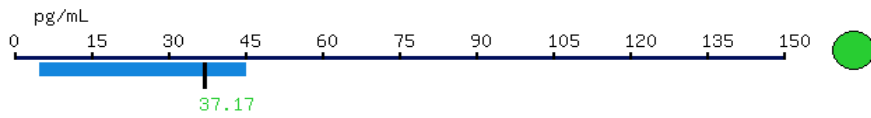
MENOPAUSE WOMAN'S TEST **(Assessment of hormone balance)**

Dott.ssa Ausilia Rausa

A handwritten signature in black ink, appearing to read "ARausa", is positioned below the printed name.

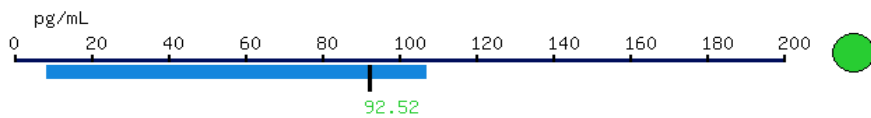
Results

Testosterone



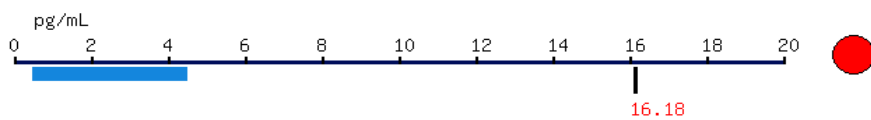
37.17 pg/mL
(5 - 45)

Progesterone



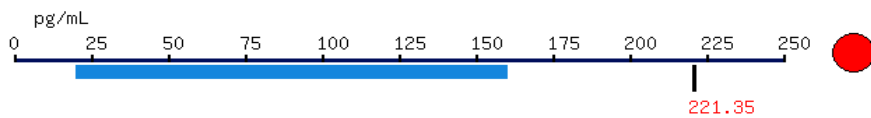
92.52 pg/mL
(8.6 - 107.0)

Extradiol



16.18 pg/mL
(0.5 - 4.5)

Androstenedione



221.35 pg/mL
(20 - 160)