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Max Muster
Musterstrasse
Musterort
Deutschland

Surname, First name Muster, Max

DOB 03-08-1970

Sex male

Lab number 1-5838

Report date 04-10-2021

Laboratory report

Enclosed you will find the results of your laboratory examination. In addition to your results, you will also receive a summary of the correlating effects, regarding the tested parameters. These are compiled without any knowledge on the clinical background and as such, may only be used as an interpretation aid. In case of health problems, please consult a doctor or practitioner for medical treatment and accompaniment for making the best decisions for your health. We explicitly warn against beginning, suspending, or changing any medication or therapy without consulting your doctor or practitioner.

Test: Comprehensive Hormone Check

Comprehensive Hormone Check

Sample material: Saliva **Date collected:** 26-09-2021

Date received: 28-09-2021

| Analyte | Result | Reference Range | Result |
|-------------------------|------------|--|--------|
| Sex Hormones | | | |
| Testosterone | 50 pg/ml | 30-92 pg/ml 14-19 years: 18-248 pg/ml 20-29 years: 41-143 pg/ml 30-39 years: 32-100 pg/ml 40-49 years: 30-98 pg/ml 50-59 years: 30-92 pg/ml 60+ years: 23-87 pg/ml Higher values under substitution | |
| Progesterone | 30 pg/ml | 5-58 pg/ml | |
| Oestradiol | 1,00 pg/ml | 0,4-3,3 pg/ml | |
| Stress Hormones | | | |
| Cortisol (morning) | 3000 pg/ml | 920-12900 pg/ml | |
| Cortisol (late morning) | 2000 pg/ml | 790-7450 pg/ml | |

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| Analyte | Result | Reference Range | Result |
|-------------------------------|------------|---|---|
| Cortisol (noon) | 1000 pg/ml | 420-4180 pg/ml |  |
| Cortisol (after noon) | 1000 pg/ml | 320-3100 pg/ml |  |
| Cortisol (evening) | 1000 pg/ml | 200-3000 pg/ml |  |
| DHEA (morning) | 200 pg/ml | 58-480 pg/ml <40 years: 117-747 pg/ml 40+ years: 58-480 pg/ml Higher values under substitution |  |
| Hormone Ratios | | | |
| Cortisol/DHEA Ratio (morning) | 11,9 :1 | 2-85 :1 |  |
| Pg/E2 | 25,8 :1 | 30-200 :1 |  |

Testosterone

The age-appropriate testosterone level indicates a sufficient synthesis capacity and has a healthy effect on the body weight and hormone system. Testosterone is produced from cholesterol via DHEA and androstenedione mainly in the testicles and adrenal glands, but also in the skin and fat cells. It promotes the release of fats from the adipose tissue. Testosterone can be converted to dihydrotestosterone (DHT) by the enzyme 5-alpha-reductase. DHT is the metabolically active form of testosterone: Through DHT men get their male characteristics, such as increased body hair, beard, deep voice, etc. If testosterone is not converted to DHT, it can be converted to oestradiol by the enzyme aromatase. Testosterone protects against accumulation of fat in the abdominal area. In men, a sufficient testosterone synthesis is crucial for performance, fat metabolism, spermatogenesis, and libido.

Progesterone

The progesterone level is within the normal range. Progesterone is a hormone, which is produced in men in the adrenal glands and testicles. It has a mood lifting effect, neutralizes the effect of oestrogens on the breast tissue, stimulates the bone and collagen growth and encourages the reduction of fat tissue during physical activity.

Oestradiol

The oestradiol level is within normal range. oestradiol is a sex hormone which is produced in men in the adrenal glands and fat tissue. It ensures that we store fat and water, promotes collagen and bone formation, has a positive effect on blood circulation, controls the production of clotting factors and helps us sleep through the night.

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Cortisol (morning)

The morning cortisol level is within the normal range. Cortisol is a stress hormone which is produced in the adrenal cortex. Stress is the strongest stimulus for the cortisol distribution. Stress hormones are chemical messengers that help the body to react to extraordinary strain. Our body can not differentiate between positive and negative stress. Stressors include heavy physical labor, competitive sports, psychological and physical stress situations, serious illnesses but also positive events such as wedding preparations, new family members or a new job. It has an anti-inflammatory effect, stimulates the fat decomposition, and increases the protein turnover. The cortisol distribution is subject to daily fluctuations.

Cortisol (late morning)

The cortisol release has a typical daily pattern in which the cortisol levels drop in the course of the day. The maximum values are reached during the first hour and a half after waking up. Shortly thereafter, the cortisol level already drops rapidly by about 50 %. The measured cortisol levels are therefore within the normal range for a person who woke up about two to three hours ago.

Cortisol (noon)

Five hours after waking up, usually at noon, the strongest cortisol drop is over. From here on, the level drops only slowly. The cortisol level is considered normal.

Cortisol (after noon)

Normally the cortisol level continues to fall gradually in the afternoon. However, some people show another small peak in the daily cortisol profile. The value may therefore also be slightly higher than the value at lunchtime, but it should remain within the reference range. The level measured here is classified as normal.

Cortisol (evening)

The minimum cortisol level in the daily profile is reached in the evening. A low cortisol level in the evening and in the first half of the night is a prerequisite for melatonin production and thus also for deep and restful sleep. There is no evidence of a disturbance.

DHEA (morning)

The DHEA levels are within the normal range. DHEA is produced mainly in the adrenal glands. It functions as a precursor to male and female sex hormones, including testosterone and oestrogen. DHEA may also have other roles, for example, as a neurosteroid. Most of its effects are unclear. However, it is known that DHEA plays an important role as a cortisol antagonist. Cortisol and DHEA have opposing actions e.g. on stress balance and immune function. The DHEA levels depend on the daily rhythm and age. DHEA decreases by up to 80 % between the ages of 25 and 75.



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Cortisol/DHEA Ratio (morning)

Since cortisol and DHEA have opposing effects, they should be viewed together as a ratio. A rather low ratio stands for a better state of health. With increasing age, however, the cortisol/DHEA ratio can increase. A cortisol/DHEA ratio within the normal range indicates a balanced ratio of the two opponents cortisol and DHEA. This indicates a sufficient hormonal capacity of the body to cope with stress.

Pg/E2

The progesterone/oestradiol ratio is too low. This means progesterone is decreased in relation to oestradiol. This is known as a so-called oestrogen dominance. An oestrogen dominance does not necessarily mean an excess of oestrogen or a lack of progesterone. It describes an imbalance between oestrogen and its counterpart progesterone. The body reacts as though too much oestrogen is present. This can even be the case with an oestrogen deficiency, as the relative ratio between the two is decisive. The progesterone/oestradiol ratio can also be helpful by indications for a relative oestrogen dominance, if the progesterone and oestrogen values are within the normal range. Comment on the calculation of the ratio: The quotient was calculated in the unit mole.

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