



HORMONAL HEALTH for WOMEN

Understanding hormonal health is crucial for women, particularly during significant life stages such as menopause. This protocol outlines key hormones, their levels, and their significance in women's health, especially as they pertain to menopause. Although this document gives an insight into female hormonal profile it's also recommended to have a full blood panel check overall health.

OESTRADIOL

For menopausal levels, serum oestradiol is typically < 50 pg/mL, or below 110 pmol/L, though results can vary by laboratory and individual factors. An oestradiol level less than 50 pg/mL is often used as a diagnostic threshold for menopause. Your healthcare provider should interpret your specific test results in the context of your individual health history and symptoms to provide a meaningful diagnosis.

OESTRADIOL LEVELS

After menopause, the ovaries produce significantly less estrogen. Therefore, low estradiol levels are expected and are a key indicator that a woman has reached menopause.

Fluctuating levels:

During the menopausal transition (perimenopause), oestradiol levels can fluctuate, showing high and low levels before settling into the postmenopausal state. **Diagnostic Threshold:**

A widely accepted threshold for confirming menopausal status is a serum oestradiol level below 50 pg/mL.

Lab and Individual Factors:

Your age, health history, the specific lab performing the test, and the timing of the blood draw can all affect the results.

FOLLICLE STIMULATING HORMONE

For women in the menopausal stage, follicle-stimulating hormone (FSH) levels are typically high, with a general range of 25.8 to 134.8 mIU/mL (or IU/L) after menopause, though elevated levels of >30 IU/L are often considered an objective indicator of menopause and perimenopause. However, FSH levels can fluctuate significantly, especially during perimenopause, and a diagnosis of menopause should not be based on a single test.

LUTENSING HORMONE

During perimenopause and menopause, luteinising hormone (LH) levels increase because the ovaries produce less estrogen and progesterone. The pituitary gland responds to this decline by producing more LH, in an attempt to stimulate the ovaries to work. High LH levels are therefore a key indicator of reduced ovarian function and the transition towards menopause

PROGESTERONE

Progesterone levels decline during menopause, so it is often prescribed with oestrogen as part of hormone replacement therapy (HRT) to reduce symptoms like hot flashes and low mood, while also protecting the womb lining from thickening, which can increase cancer risk. Progesterone can be taken as an oral tablet, intrauterine system (IUS), or as part of a combined skin patch with oestrogen. A doctor must determine the appropriate type and dosage, as symptoms and effectiveness can vary individually.

PROLACTIN

In menopause, prolactin levels generally decrease due to the decline in estrogen's stimulatory effect on prolactin secretion. While prolactin is often associated with pregnancy and lactation, it also plays roles in metabolism, stress response, and immune function. However, in postmenopausal women, prolactin can contribute to cardiovascular risk factors and impact bone health

TESTOSTERONE

Testosterone, while not a first-line treatment, can be used to address low sex drive and other symptoms during menopause, particularly when HRT alone isn't sufficient. It's typically prescribed alongside other hormone replacement therapies (HRT) when a woman experiences persistent low libido testosterone is often an ideal hormone for patients to take as part of their hormone treatment plan.

SEX HORMONE BINDING GLOBULIN

In postmenopausal women, Sex Hormone-Binding Globulin (SHBG) levels typically decrease due to the decline in estrogen. SHBG acts as a carrier protein for estrogen and testosterone, binding to them and making them biologically inactive until released. While declining estrogen is a major factor in the reduction of SHBG, factors like high insulin, excess body fat, and older age can also contribute to lower SHBG levels in postmenopausal women

FREE ANDROGEN INDEX

The Free Androgen Index (FAI) is calculated as a percentage using a woman's total testosterone and Sex Hormone-Binding Globulin (SHBG) levels to estimate the amount of free (unbound) testosterone in the blood. In menopause, SHBG levels decrease, which can lead to a higher FAI, and this increase in free androgens is associated with potential negative effects, such as vascular aging. The British Menopause Society (BMS) suggests aiming to keep a

woman's FAI below 5% when she is using testosterone for hormone replacement therapy (HRT), though clinical improvement of symptoms is more important than a specific level.

FULL BLOOD PANEL

It is recommended to also have a full blood panel to review your overall health.

Full Blood Count includes:

Heart Health

Nutritional Health

Liver Health Kidney Health

Diabetes Health urine analysis

Bone Health

Thyroid Health

Tumour Markers

