

# FERTILITY BLOOD SPOT

*Hormone imbalances are associated with numerous symptoms and health conditions. Assessing and diagnosing these changes are important for fertility. Female hormones fluctuate through a menstrual cycle and at various times of a woman's life. FSH and LH levels are measured to gauge ovarian reserve and ovulation whilst SHBG, the binding protein together with sex hormones are markers of fertility. This test provides a focused overview of the hormones associated with fertility.*

## Hormones and Aging

Hormones are powerful molecules that are essential for life. Imbalances of hormones affects other organ systems like the adrenals, thyroid and nervous system. What many people fail to recognise however, is that partial deficiencies also have a wide reaching negative effect on the human body. This is understandable however, when a hormone's mechanism of action is understood.

Aging is one process which is associated with hormone decline. In the past it was thought that this reduction was a normal consequence of the aging process. However, more recently an alternative theory has been proposed; that hormones do not decrease because we age, but rather we age because our hormones decrease i.e. that a reduction in hormonal cellular, genetic and protein control, is the physiological cause of the deterioration of the body which leads to the aging process. It therefore follows that treating hormonal deficiencies (overt, moderate or mild) will prevent or ameliorate disorders associated with the aging process. The treatment of osteoporosis with testosterone and estrogen in men and women is just one example of this. In addition, ensuring that hormone levels are optimal will enhance quality of life in the aging population by improving mood, memory, assertiveness, sexual function and muscle mass. Assessing and diagnosing these changes are important to decrease unnecessary suffering and prevent degenerative diseases.

### SYMPTOMS AND CONDITIONS ASSOCIATED WITH INFERTILITY

Endometriosis	Polycystic Ovarian Syndrome (PCOS)
Fibroids	Anovulatory cycles
Hypothalamic dysfunction (LH and/or FSH)	Prolactinemia

This test can also be used to complement a salivary or urinary hormone test.

## Blood Spot Testing

Blood spot is ideal for testing peptide hormones such as FSH, LH, prolactin, and thyroid hormones, including reverse T3, as well as thyroid antibodies. A blood spot is a relatively simple collection requiring a finger prick and has well-established reference ranges. Serum hormones are predominantly representative of protein bound hormones, and does not differentiate between bound and free hormone. This may lead to misleading results in which hormone levels appear to be normal or even high normal because of an abundance of bound hormone. However, if the free hormone level is low, the patient can be functionally deficient even with a normal total hormone level. Serum hormones measure hormones in a sample drawn at time of collection. It fails to identify circadian rhythms or allow for ease of collection in multiple collections, for example through a cycle. Blood spot not does typically measure metabolites of hormones which may form a valuable part of therapy.

## FERTILITY BLOOD SPOT [Test code: 1417]

❖ LH, FSH, DHEAs, Testosterone, SHBG, calculated free Testosterone

## Other female hormone tests available

- **Female Cycle (28 Day) Hormone Profile (saliva) [1004]:** 11x E2, 11x Progesterone day 3, 5, 8, 11, 12, 14, 16, 18, 20, 23, 28; Testosterone day 11
- **Female hormone profile - Basic (saliva) [1005]:** DHEAs, E1, E2, E3, Progesterone, Testosterone, ratios
- **Female Hormone Profile – Extensive (saliva) [1006]:** DHEAs, E1, E2, E3, Progesterone, Testosterone, Androstenedione, ratios
- **Female Hormone Profile (serum) [1104]:** E1, E2, E3, FSH, LH, Progesterone, Prolactin, DHEAs, SHBG, Testosterone, free Testosterone
- **Female Hormone Profile (spot or 24 hour urine):** T4, T3, T4/T3 ratios, Cortisol, DHEA, Testosterone, Progesterone, E1, E2, E3
- **Female Hormone Blood Spot – Basic [1401]:** E2, Progesterone, Testosterone, SHBG, DHEAs, Cortisol
- **Female Hormone Blood Spot – Extensive [1405]:** E2, Progesterone, Testosterone, SHBG, DHEAs, Cortisol; TSH, free T4, free T3, Thyroid peroxidase antibodies
- **Advanced Hormones Dried Urine [1501]:** E1, E2, E3, 2OHE2, 2OHE1, 4OHE2, 4OHE1, 16αOHE1, 2MeOE2, 2MeOE1, 4MeOE2, 4MeOE1; Pregnanediol, Allopregnanolone, Allopregnanediol, 3α-Dihydroprogesterone, 20α-Dihydroprogesterone, Dexocyclocosterone, Corticosterone; Testosterone, Epi-Testosterone, 5αDHT, Androstenedione, DHEA, 5α3α-Androstanediol; Total Cortisol, Free Cortisol, Total Cortisone, Free Cortisone, Tetrahydrocortisol, Tetrahydrocortisone; Melatonin (6-hydroxymelatonin sulfate)
- **Intermediate Hormones Dried Urine [1502]:** E1, E2, E3, 2OHE1, 4OHE2, 4OHE1, 16αOH E1, 2MeOE1, 4MeOE2; Pregnanediol, Allopregnanolone; Testosterone, Epi-Testosterone, 5αDHT, Androstenedione, DHEA; Total Cortisol, Free Cortisol, Total Cortisone, Free Cortisone, Tetrahydrocortisol, Tetrahydrocortisone; Melatonin (6-hydroxymelatonin sulfate)
- **Basic Hormones Dried Urine [1503]:** E1, E2, E3, Pregnanediol, Allopregnanolone; Testosterone, 5α-DHT, DHEA; Total Cortisol
- **Estrogen Elite Dried Urine [1505]:** E1, E2, E3, 2OHE2, 2OHE1, 4OHE2, 4OHE1, 16αOHE1, 2MeOE2, 2MeOE1, 4MeOE2, 4MeOE1; Pregnanediol, Allopregnanolone; Testosterone, 5αDHT, Androstenedione, DHEA, 5α3α-Androstanediol
- **Estrogen Essential Dried Urine [1506]:** E1, E2, E3, 2OHE2, 2OHE1, 4OHE2, 4OHE1, 16αOHE1, 2MeOE2, 2MeOE1, 4MeOE2, 4MeOE1

## How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form test code and have the patient phone NutriPATH Customer Service on 1300 688 522.



Phone 1300 688 522 for further details  
[www.nutripath.com.au](http://www.nutripath.com.au)