

Beta hCG

Human Chorionic Gonadotropin(hCG) is a hormone, normally produced by placenta during pregnancy. The hCG level rises rapidly during the first trimester and then slowly declines. Within a few weeks after delivery it is no longer detectable in blood.

The hCG molecule is composed of two subunits – alpha and beta. The alpha-subunit is common to all members of glycoprotein-hormone family(LH, TSH, FSH, hCG), while the beta-subunit is unique to hCG.

Beta hCG prevents the destruction of the corpus luteum and helps to maintain pregnancy.

Why the Beta hCG Test is Performed?

The test may be done to detect pregnancy. It is also ordered when following conditions are suspected:

- Ectopic pregnancy
- Miscarriage
- Testicular cancer
- Ovarian cancer
- Gestational trophoblastic disease
- Down syndrome (in this case, the beta hCG test is used in combination with other screening tests)

How the Test is Performed and How to Prepare for the Test?

hCG can be detected in a sample of urine or blood. hCG urine tests and qualitative beta hCG tests only show if the hormone is present and are either positive or negative. To measure the exact amount of beta hCG, a blood sample is taken from a vein.

No special preparation is necessary.

What Abnormal Results Mean

In non-pregnant women, hCG levels are undetectable, so a positive result of the test may indicate pregnancy.

Higher-than-normal level may be due to:

- Normal pregnancy
- More than one fetus
- Gestational trophoblastic disease (GTD)
- Choriocarcinoma of the uterus
- Down syndrome in a fetus
- Ovarian cancer
- Testicular cancer (in men)
- In sportsmen elevated levels may indicate doping.

Lower-than-normal levels may be due to:

- Fetal death
- Incomplete miscarriage
- Threatened spontaneous abortion
- Ectopic pregnancy
- Anembrionic pregnancy (blighted ovum)

Alternative Names

No alternative names.

Useful Information

- Some medicines may affect the results of the test.
- A single hCG reading may not be enough information for most diagnosis, so multiple testings of hCG might be needed.