

# Chorionic gonadotropin

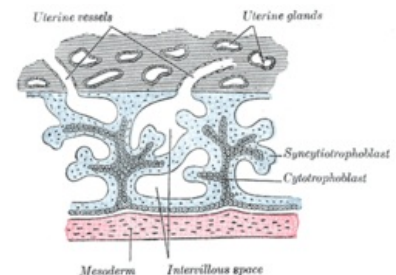
Human chorionic gonadotropin (hCG) belongs together with lutropin (LH), follitropin (FSH) and thyrotropin (TSH) to the group of glycoprotein hormones. Unlike other glycoprotein hormones produced in the adenohypophysis, hCG is produced by the syncytiotrophoblast of the placenta during pregnancy. It stimulates the growth of the corpus luteum, which produces estrogens and progesterone. Chemically, hCG consists of two subunits – '*alpha and beta*'. The alpha-subunits of all glycoproteins are identical, the biological specificity of these hormones is determined by the beta-subunits.

placenta - syncytiotrophoblast  
glycoprotein of 237 AMK  
corpus luteum  
LHCG receptors  
118850 (<https://omim.org/entry/118850>)

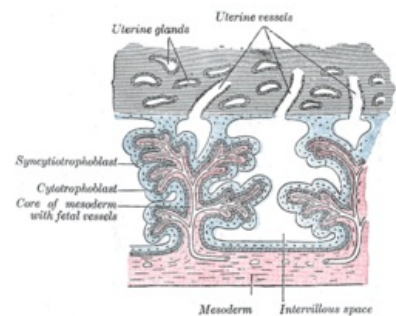
The presence of hCG in a woman's blood or urine is evidence of pregnancy and helps monitor its progress. A value lower than the normal limit of hCG is a signal for an ectopic pregnancy, a dead fetus or an imminent miscarriage. On the contrary, elevated hCG values signal a multiple pregnancy and enable an early diagnosis of trisomy 21 - Down's syndrome (together with the determination of AFP and uE3). The production of hCG increases rapidly in early pregnancy. We record maximum growth between the 80s and 90s. day of pregnancy, *then its production decreases (in the 4th month), and after the 25th week the hCG value remains stable until delivery. Its urinary excretion ends about the 7th day after birth, i.e. after the expulsion of the fetus and placenta.*

## HCG levels since the beginning of pregnancy and its development

Time since conception	Time since last period	mIU/l <sup>[1]</sup>
7 days	21 days	0-5
14 days	28 days	3-426
21 days	35 days	18-7 340
28 days	42 days	1,080-56,500
35-42 days	49-56 days	7,650-229,000
43-64 days	57-78 days	25,700-288,000
57-78 days	79-100 days	13,300-253,000
17-24 week	Second trimester	4,060-65,400
From week 25	Third trimester	3,640-117,000



syncytiotrophoblast, primary villi



syncytiotrophoblast, secondary villi

## Links

### Related Articles

- Placenta

### References

- KLENER, Paul. *Internal Medicine*. 3rd revised and supplemented edition. Galen, 2006. ISBN 80-7262-430-X.
- KOBILKOVÁ, Jitka. *Fundamentals of Gynecology and Obstetrics*. 1. edition. Galen, 2005. 368 pp. ISBN 80-7262-315-X.

### References

1. NASEPORODNICE.CZ,. *Level of hCG in the blood - hormone signaling the beginning of pregnancy* [online]. [cit. 2011-02-09]. <<http://www.naseporodnice.cz/hladina-hcg-v-krvi-hormon-signalizujici-pocatek-tehotenstvi.php>>.