



THE SIGNIFICANCE OF HOMOCYSTEINE LEVELS IN WOMEN'S HEALTH

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This study examines the importance of homocysteine levels in the context of female health. Homocysteine, a constituent of every cell, is produced from the breakdown of the essential sulfur-containing amino acid methionine. In blood plasma, free (reduced) homocysteine is present in small amounts (1–2%), with approximately 80% of this amino acid binding to blood plasma proteins, primarily albumin, forming a disulfide bond with cysteine-34.

Vitamins B6, B12, and folic acid play crucial roles in homocysteine metabolism. Therefore, the level of this amino acid in the female body serves as a crucial indicator for detecting B12 and folic acid deficiencies. Additionally, homocysteine damages blood vessel walls, rendering them porous. Cholesterol and calcium precipitate onto the damaged surface, forming an atherosclerotic plaque.

A normal concentration of homocysteine is considered to be between 4.5 and 13.5 $\mu\text{mol/L}$. Elevated levels of homocysteine exacerbate thrombosis, making it an independent risk factor for cardiovascular diseases. Microthrombosis results in disturbances in uterine and fetoplacental circulation, which can lead to infertility and miscarriage. In later stages of pregnancy, hyperhomocysteinemia is the cause of chronic fetoplacental insufficiency, chronic intrauterine fetal hypoxia, and consequently, intrauterine fetal growth restriction.

Conclusion: The level of homocysteine plays a crucial role in maintaining the health of the cardiovascular and reproductive systems in women, and its control holds potential significance for the prevention and treatment of various conditions. Regulating homocysteine levels through nutrition, lifestyle, and possibly pharmacological methods may be a vital aspect of women's health maintenance.

REFERENCES:

1. Lentz S.R., Haynes W.G. Homocysteine: Is it a clinically important cardiovascular risk factor? *Clev. Clin. J. Med.*, 2004, v. 71, p. 729–734.
2. Daly S., Cotter A., Molloy A.E., Scott J. Homocysteine and folic acid: implications for pregnancy. *Semin. Vasc. Med.*, 2005, v. 5, p. 190–200.
3. Ciaccio M., Bivona G., Bellia C. Therapeutical approach to plasma homocysteine and cardiovascular risk reduction *Therap. and Clin. Risk Manag.*, 2008, v. 4, p. 219–224.