

This is probably the most important document I found at the medical library. This is an appendix in a medical textbook which reported the biochemical changes in blood plasma or serum in women using combined oral contraceptives.

Of the 96 substances (minerals, vitamins, hormones, amino acids, proteins and enzymes) measured in the blood, 95 changed as a result of oral contraceptive use!¹ It is black and white documentation that oral contraceptives change every cell in the body and disrupt its balance in profound ways. It illustrates birth control's connection to thyroid deficiency, diabetes and heart disease, and dates back to its distribution world wide in spite of the data.

The data were originally presented to the World Health Organization in a symposium on Advances in Fertility Regulation in 1976.

¹ E.S.E. Hafez, Editor. Human Reproduction: Conception and Contraception (2nd ed.). Cambridge: Harper & Row, 1980, p. 890.

*ESE Hafez, Ed.
Human Reproduction:
Conception and Contraception (2nd Ed.)
Cambridge: Harper & Row 1980*

biochemical changes in blood plasma or serum in women using combined oral contraceptives

Biochemical Group	Substance	Usual Effect
6 Mineral elements	Calcium	Small increase
	Phosphate	Small decrease
	Magnesium	Moderate decrease
	Iron	Large increase
	Copper	Large increase
	Zinc	Small decrease
7 Vitamins	Retinol	Large increase
	Carotenes	No change
	Folic acid	Small decrease
	Pyridoxal phosphate	Small decrease
	Vitamin B ₁₂	Small decrease
	Tocopherols	Small decrease
	Ascorbic acid	Moderate decrease
21 Hormones	LH	Midcycle peak absent
	FSH	Midcycle peak absent
	Progesterone	Decreased
	17 α -Hydroxyprogesterone	Decreased
	Estradiol	Decreased
	Testosterone	Moderate increase
	Dehydroepiandrosterone	Moderate decrease
	Androsterone	Moderate decrease
	Corticosteroids	Large increase
	Aldosterone	Large increase
	Angiotensin-I	Moderate increase
	Angiotensin-II	Moderate increase
	Renin	Moderate decrease
	Insulin	Moderate increase
	Growth hormone	Moderate increase
	Protein-bound iodine	Moderate increase
	T ³ -resin uptake	Moderate decrease
	Free thyroxine index	Increased
	TSH	Moderate decrease
ACTH	Moderate decrease	
Prolactin	Moderate increase	
23 Amino acids	α -Amino nitrogen	Moderate decrease
	Aspartate	Small increase
	Asparagine	Small increase
	Alanine	Small decrease
	α -Aminobutyrate	Small increase
	Arginine	Small increase
	Citrulline	Small decrease
	Cysteine	Small decrease
	Glutamate	Small decrease

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Biochemical Group	Substance	Usual Effect
	Glycine	Small decrease
	Histidine	Small decrease
	Isoleucine	Small increase
	Lysine	Small decrease
	Leucine	Small decrease
	Methionine	Small decrease
	Phenylalanine	Small increase
	Proline	Small increase
	Serine	Small increase
	Threonine	Small increase
	Tryptophan	Small increase
	Taurine	Small decrease
	Tyrosine	Small decrease
	Valine	Small decrease
23 Protein (other than hormonal or enzyme)	Renin-substrate	Large increase
	Haptoglobin	Moderate decrease
	Transferrin	Large increase
	Ceruloplasmin	Large increase
	Transcortin	Large increase
	α_2 -Macroglobulin	Moderate increase
	Albumin	Moderate decrease
	Orosomucoid	Moderate decrease
	α_1 -Glycoprotein	Moderate decrease
	α_1 -Lipoprotein	Small increase
	β_1 -Lipoprotein	Small increase
	α_1 -Glycoprotein	Small decrease
	α_2 -SH-Glycoprotein	Small increase
	C-reactive protein	Small increase
	Rheumatoid factor	Small increase
	Antinuclear antibody	Small increase
	Fibrinogen	Moderate increase
	Factor IX	Small increase
	Factor VIII	Moderate increase
	Factor VII	Moderate increase
	Plasminogen	Moderate increase
	Antithrombin III	Moderate decrease
	Retinol-binding protein	Large increase
7 Enzymes	Fibrinolysin	Small increase
	Proconvertin	Small increase
	Aminotransferases	Small increase
	γ -Glutamyltranspeptidase	Moderate increase
	Amylase	Small increase
	Lipase	Small increase
	Monoamine oxidase	Moderate decrease
9 Miscellaneous	Glucose	Small increase (variable)
	Total lipids	Moderate increase
	Cholesterol	Small increase
	Triglycerides	Moderate increase
	Phospholipids	Small increase
	Glycerol	Small decrease
	β -Hydroxybutyrate	Small increase
	Pyruvate	Moderate increase
	Nonesterified fatty acids	Moderate decrease

96 total substances

(Briggs MH [1976]: Combined oral contraceptives. In WHO Symposium on Advances in Fertility Regulation. Moscow, USSR, p 253)