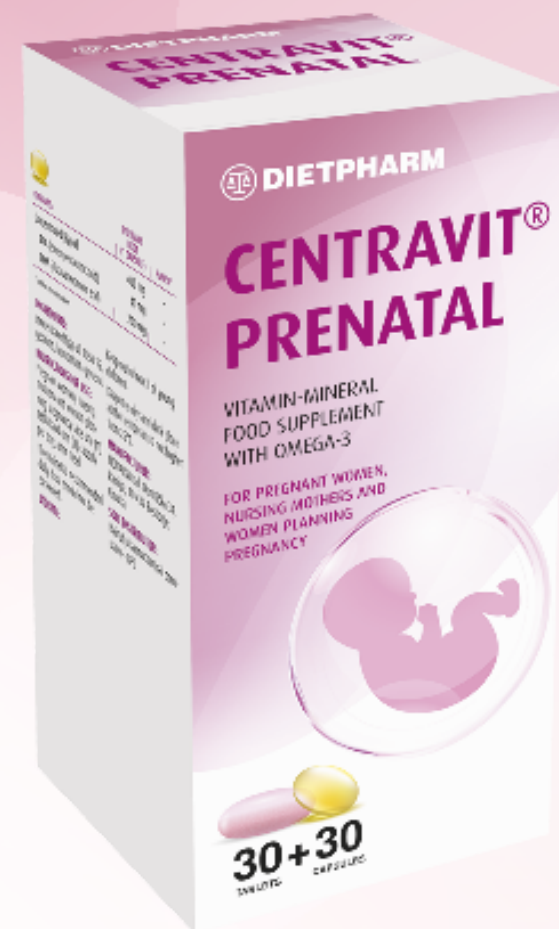


CENTRAVIT PRENATAL

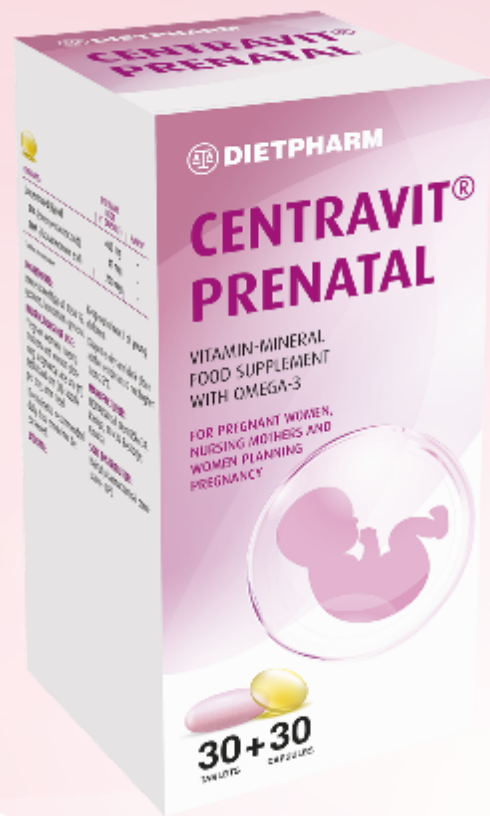
FOOD SUPPLEMENT WITH OMEGA 3

**VITAMIN-MINERAL FOOD SUPPLEMENT WITH OMEGA-3
FOR PREGNANT WOMEN, NURSING MOTHERS AND WOMEN
PLANNING PREGNANCY**

30 TABLETS + 30 CAPSULES



CENTRAVIT PRENATAL vs. Centravit[®] prenatal



CENTRAVIT PRENATAL



Contains:	per recommended daily dose (1 tablet)	%NRV*
Calcium (calcium phosphate)	150 mg	19
Vitamin C (L-ascorbic acid)	85 mg	106
Niacin (nicotinamide)	18 mg NE	113
Vitamin E (DL-alpha-tocopheryl acetate)	11,1 mg α-TE	93
Zinc (zinc oxide)	11 mg	110
Iron (ferrous bisglycinate)	14 mg	100
Pantothenic acid (calcium D-pantothenate)	6 mg	100
Vitamin B6 (pyridoxine hydrochloride)	2 mg	143
Vitamin B1 (thiamine mononitrate)	1,4 mg	127
Riboflavin (riboflavin)	1,4 mg	100
Copper (cupric citrate)	1 mg	100
Folic acid	400 µg	
(6S)-5-methyltetrahydrofolic acid, glucosamine salt (5-MTHF-glucosamine)	200 µg	200
pteroylmonoglutamic acid	200 µg	
Iodine (potassium iodide)	150 µg	100
Selenium (sodium selenite)	60 µg	109
Biotin (D-biotin)	30 µg	60
Vitamin D (cholecalciferol)	5 µg	100
Vitamin B12 (cyanocobalamin)	2,6 µg	104

Contains:	per recommended daily dose (1 capsule)	%NRV*
Concentrated fish oil:	400 mg	-
EPA (eicosapentaenoic acid)	40 mg	-
DHA (docosahexaenoic acid)	200 mg	-

Centravit® prenatal



Contains (1 tablet):	per daily dose (1 tablet)	% PU/NRV*
Calcium (tricalcium phosphate)	150 mg	19
Vitamin C (L-ascorbic acid)	85 mg	106
Niacin (nicotinamide)	18 mg NE	113
Vitamin E (DL-alpha-tocopheryl acetate)	11,1 mg α-TE	93
Zinc (zinc oxide)	11 mg	110
Iron (ferrous fumarate)	9 mg	64
Pantothenic acid (calcium D-pantothenate)	6 mg	100
Vitamin B6 (pyridoxine hydrochloride)	2 mg	143
Thiamin (thiamine mononitrate)	1,4 mg	127
Riboflavin (riboflavin)	1,4 mg	100
Copper (cupric citrate)	1 mg	100
Folic acid (pteroylmonoglutamic acid)	600 µg	300
Selenium (sodium selenite)	60 µg	109
Biotin (D-biotin)	30 µg	60
Vitamin D (cholecalciferol)	5 µg	100
Vitamin B12 (cyanocobalamin)	2,6 µg	104

Contains (1 capsule):	per daily dose mg (1 capsule)	NRV*%
Fish oil standardized to:	400	-
EPA (eicosapentaenoic acid)	24	-
DHA (docosahexaenoic acid)	172	-

Factors Influencing Nutrient Requirements and the Need for Supplementation

- diet (vegetarian, intolerance, not cooking, dietary restrictions)
- smoking
- alcohol
- heavy periods
- physical inactivity
- low income

- repeated pregnancy within a short time
 - previous use of contraceptives

- blood loss after childbirth (iron))
- decrease of mother's nutrient status during the pregnancy
- production of milk

- increased need for nutrients (50-100%)¹
- nausea and vomiting – lower nutrient status
- unhappiness with being pregnant

1. Institute of Medicine: Dietary reference intakes. National Academy Press, 2001

Prenatal vitamins

Required ingredients:

- **folic acid, iron, calcium**

Other ingredients

- vitamin D, vitamin C, vitamin A, vitamin E, zinc, copper

Prenatal vitamins are dietary supplements not replacement for the healthy diet.

WHEN TO START WITH PRENATAL SUPPLEMENTATION?

Few months before conception; at the beginning of pregnancy if not planned.

HOW LONG TO TAKE SUPPLEMENTATION?

During the whole pregnancy and lactation.

Physicians can prescribe additional supplementation, depending on health status of pregnant women.

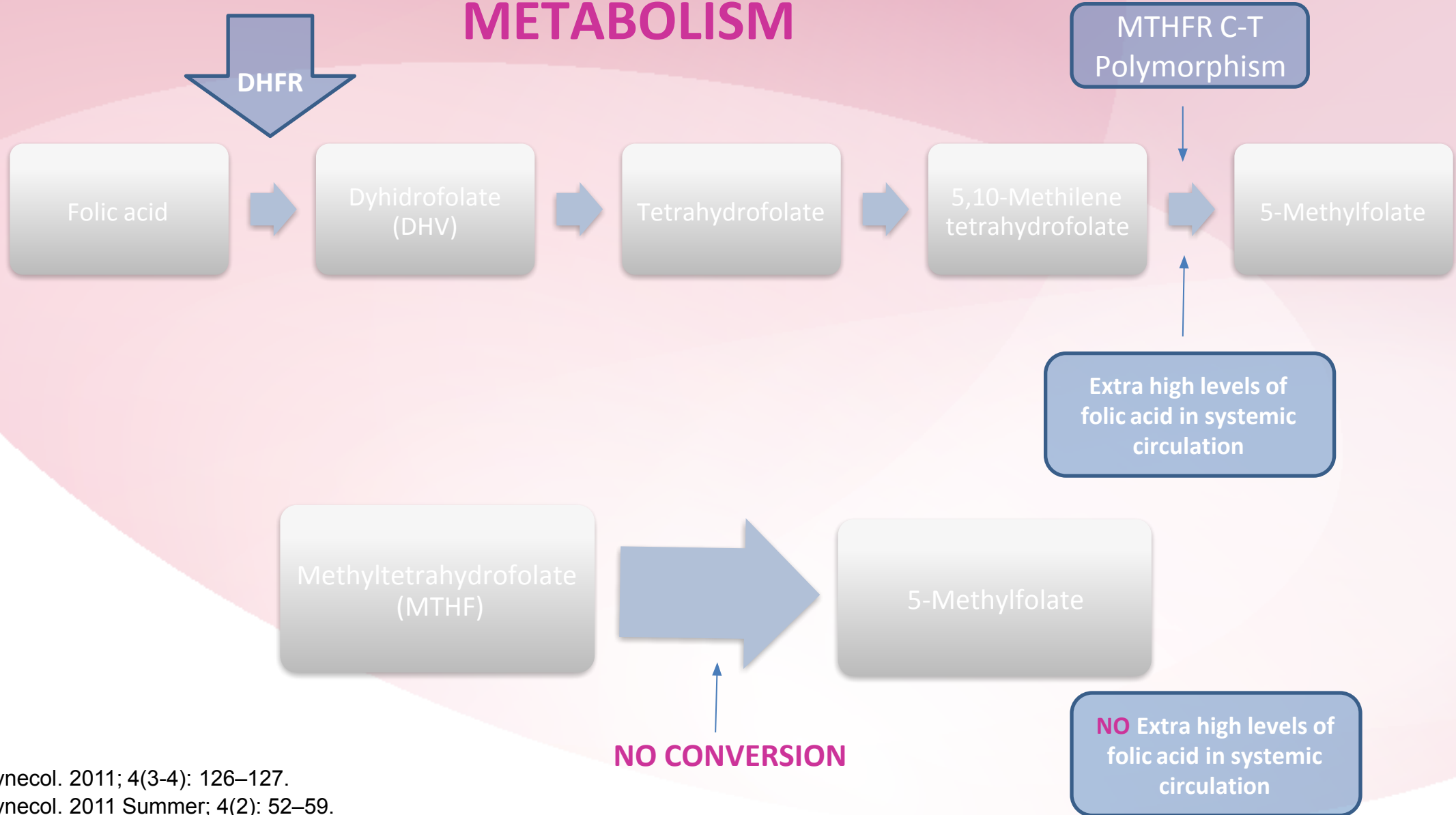
Folic acid

- During pregnancy the rate of cell division and erythrocyte formation increases dramatically (uterus enlargement, placenta development, maternal blood volume increased, embryo development)
- Folate is transferred from the mother to the growing fetus increasing the demand for folate beyond her sole requirements
- Women at risk of low folate status:
 - Those not taking the recommended quantity of folic acid supplement;
 - Those on restricted diets (chronic dieters);
 - Those with lower socio-economic status;
 - Those with limited or uncertain availability of nutritionally adequate and safe food.

Recomendations in pregnancy:

- 400-800 μg at least one month before and three months after beginning of pregnancy
- reduces the risk of fetal neural tube failure up to 70%

FOLATE METABOLISM



METHYLTETRAHIDROFOLATE (MTHF) – active folic acid

- 40-60% of the population has **heterozygotic polymorphism** - impaired folic acid conversion to MTHF - reduces methylation up to 40%
- 5-15% in Europe - **homozygous polymorphism** - reduces methylation up to 70%

RECOMMENDATION FOR FOOD SUPPLEMENTS

COMBINATION OF PTEROILMONOGLUTAMIC ACID AND METHYLTETRAHYDROFOLATE (MTHF)

(common folic acid and active folate)

IRON ABSORPTION

Ferrous - divalent (Fe²⁺): fumarate, gluconate, sulfate, glycin sulfate

- GI side effects (inflammation, nausea, abdominal pain), expect in slow-release forms
- good bioavailability (10-15%)

Ferric - trivalent (Fe³⁺): citrate

- poor bioavailability, many side effects, limited conversion of Fe³⁺ to Fe²⁺

Heme – iron: bound to hemoglobin, highest bioavailability, not much in use - it is compensated for the increased dosage of other forms

Amino Acids Chelates (bysglicinates, dyglicinates) and **Fe-polysaccharide complex**

- good bioavailability
- less GI side effects than Fe²⁺ or Fe³⁺ salts

FACTORS THAT INFLUENCE IRON ABSORPTION

Physical State (bioavailability)	heme > Fe^{2+} > Fe^{3+}
Inhibitors	phytates, tannins, soil clay, laundry starch, iron overload, antacids
Competitors	lead, cobalt, strontium, manganese, zinc
Facilitators	ascorbate, citrate, amino acids , iron deficiency

IRON BISGLYCINATE

- Fe + bisglycinate (ferrous iron bound to amino acid glycine)
- Absorption in the small intestine
- **Highly bioavailable iron in the presence of absorption inhibitors** (phytates and flavonoids)
- **Does not inhibit the absorption of other minerals and oligoelements** (zinc and calcium)
- Fe-bisglycinate vs. Fe-sulfate - effective in half the lower dose
- Absorption is controlled by the amount of stored iron in the body

Less GI (gastrointestinal) side effects - nausea, constipation

Less GI (gastrointestinal) side effects - compared to sulfate and fumarate

Jod

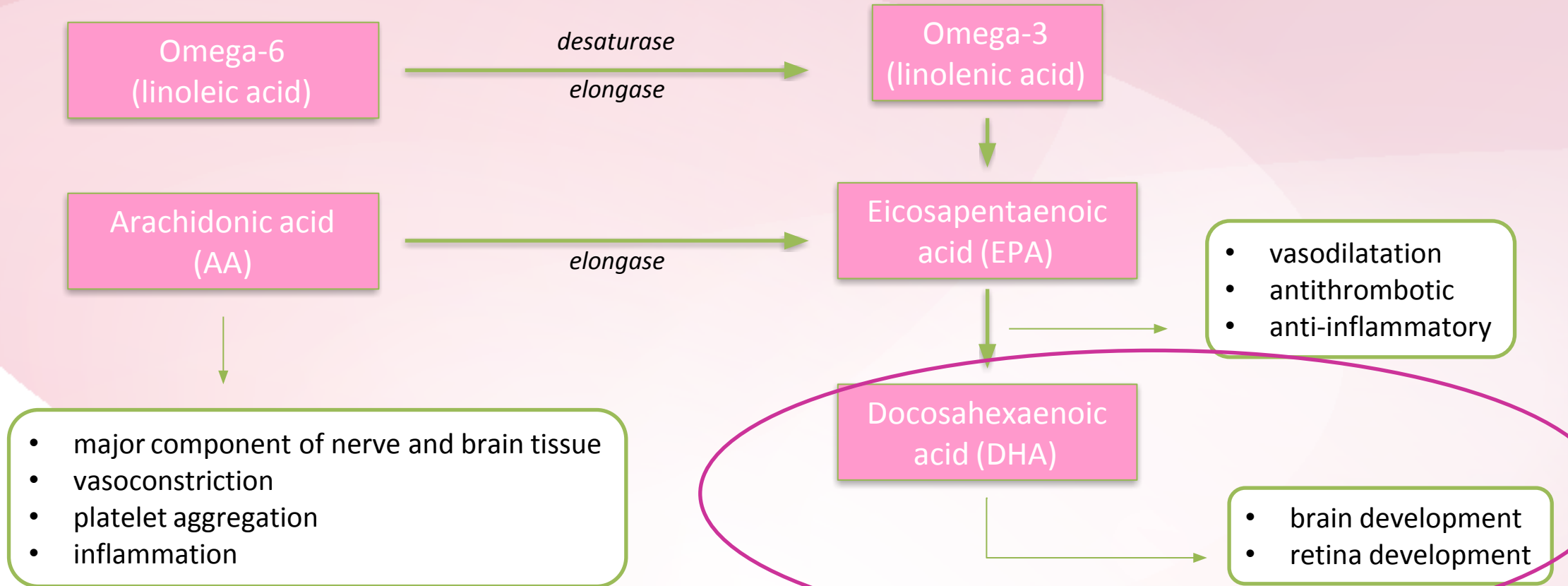
- Essential for brain development in fetuses and small children
- Increased need for iodine during pregnancy
 - Insufficient iodine during pregnancy - Congenital hypothyroidism (slowed cognitive development and mental retardation)
 - Excess iodine during pregnancy - Congenital hypothyroidism - 11x more than safe upper limit
- Limit algae intake during pregnancy and lactation (uneven iodine content, toxins)
- No additional iodinated salt is recommended for increased need during pregnancy
- Croatia - every second pregnant woman insufficient in iodine
- **Need for iodine supplementation during pregnancy**



Recommendations:
150 µg/dan for adults
250 µg/dan in pregnancy

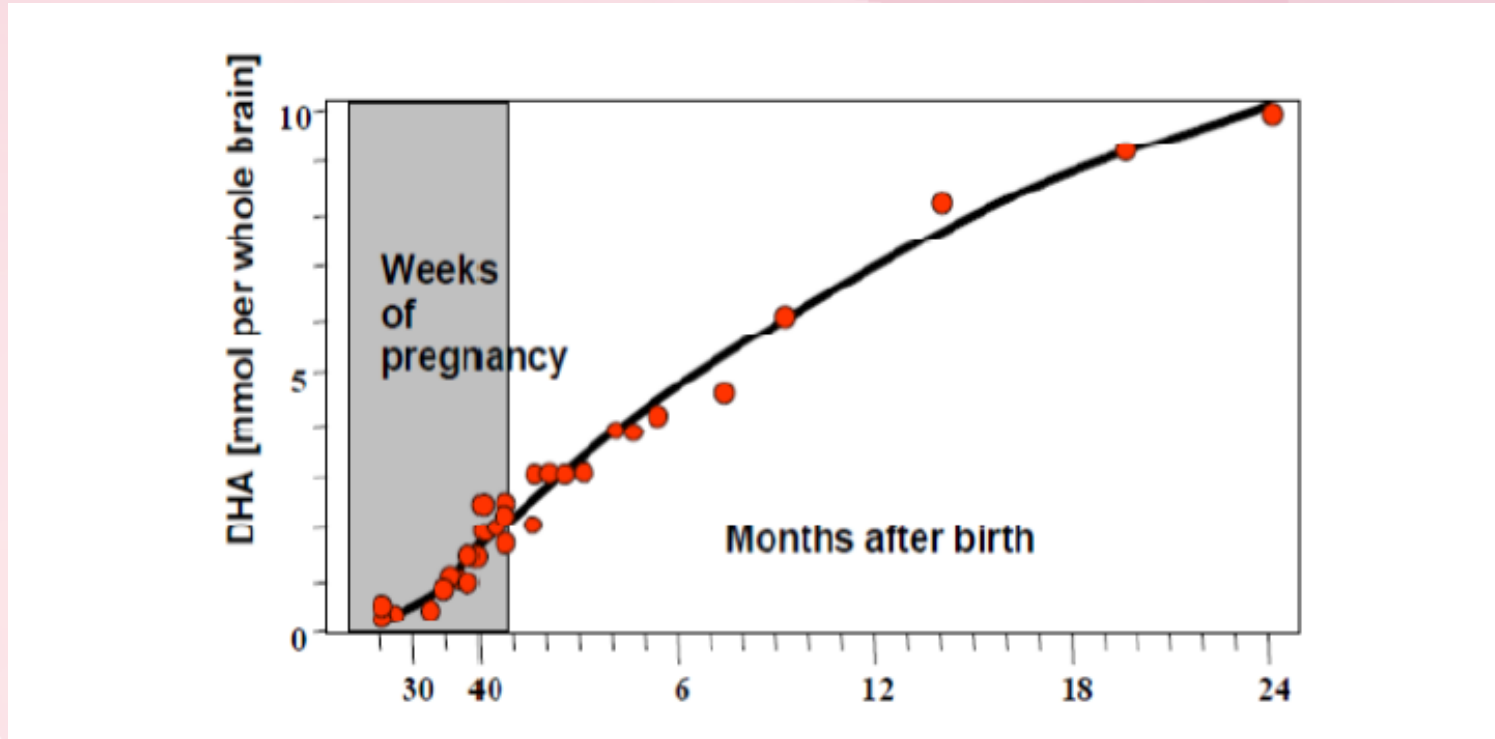
Essential Fatty Acids

Biosynthesis and Physiology



DHA – ACCUMULATION IN FETUS BRAIN

during pregnancy and after birth



NEED FOR DHA SUPPLEMENTATION DURING PREGNANCY AND LACTATION

CENTRAVIT PRENATAL

- ✓ **VITAMINS + MINERALS + OMEGA 3**
- ✓ 100% safe during pregnancy and lactation
- ✓ **NEW!**
 - ✓ METHYLTETRAHYDROFOLATE (MTHF) – active folic acid
 - ✓ Ferrous bisglycinate
 - ✓ Iodine
- ✓ For pregnant women, nursing mothers and women planning pregnancy

