

# Male & Female

A PUBLICATION OF MICHAEL'S® NATUROPATHIC PROGRAMS

# Reproduction

## Facts



### PROCREATION

Every species on this planet seeks to continue its existence. This is an inbred trait of all living things. Each species has its own unique way of propagating itself and surviving extinction.

For our survival and for optimal health, human beings require a whole regimen of nutrients. Those nutrients come to us in the form of fresh air, clean water, sunshine, fats, carbohydrates, proteins, vitamins and minerals. Another important factor is healthy thinking.

Thinking is becoming recognized as an important aspect of physical

health. I use the term "becoming" because medical science is beginning to recognize the role that emotions play in health and well being of the body. Emotions are born out of concepts that people maintain about themselves. It is a wise decision to make the effort to know yourself.

### REPRODUCTION & PREGNANCY

The process of reproduction, "life's greatest miracle," is the process by which new individuals of a species are produced and genetic material is passed from generation to generation. Parent cells pass along material to daughter cells, including the process of cell division. This very important process allows for growth and development of a fetus, from a cellular level to the level of separation of a child from the mother. Of course, growth continues through childhood and into the adult cycle of life. However, the period of development in the womb and during early childhood are critical to overall health and growth into adulthood.

**Pregnancy, of course, produces profound anatomical changes** in the body. By the end of the third month of gestation, the uterus occupies most of the pelvic cavity. Toward the end of the gestation period, shortly before delivery, the uterus fills nearly the entire abdominal cavity. It pushes the maternal intestines, liver, and stomach upward, elevates the diaphragm, and widens the thoracic cavity. There are physiological changes, as well. For instance, there is usually weight gain due to the fetus, amniotic fluid, added weight of placenta, and increased total body water. Also, there is increased maternal storage of proteins, triglycerides, and minerals. Finally, there is breast enlargement in preparation for lactation.

**Other changes in the body accompany pregnancy.** There is an increase in blood flow and volume, an increase in body oxygen, an increase in appetite, and changes in the skin, to name a few. With all the changes that occur, it becomes even more important to nourish the body (or bodies). More energy is needed to perform activities. Sensible exercise improves oxygen capacity, as well as promoting a greater sense of well-being. Care should be given to the type and intensity of exercise, so as to not injure the fetus or elevate the body temperature.

### LACTATION

**Lactation is defined as secretions and ejection of milk** by the mammary glands. Through lactation, newborns receive essential nourishment and the maternal body completes its reproductive cycle. The sucking action of the newborn initiates nerve impulses which release hormones, namely prolactin, necessary for the feeding process. While prolactin is produced during pregnancy, it doesn't affect lactation until estrogen and progesterone decrease after birth. After the newborn begins nursing, prolactin is produced

in preparation for each upcoming nursing session, and once nursing stops, mammary glands lose their ability to produce milk within a few days.

**Advocates of the nursing process suggest that:** (1) it establishes early and prolonged contact between mother and infant, known as bonding; (2) the infant controls his feeding; (3) nutrients in human milk are easier for the baby to digest and metabolize; (4) breast feeding provides more antibodies for the baby's immune system and; (5) breast feeding promotes healthy development of the baby's facial tissue, teeth, and jaws. There is also less likelihood of allergic reaction in the baby from breast milk.

### NUTRITION PLAYS A VITAL ROLE

**It is quite obvious that fresh air, sunshine and clean water speak for themselves.** Fresh air brings in large amounts of oxygen, which helps to nourish the body. The brain uses 25% of all the oxygen in the body. Sunshine helps the body produce vitamin D, which is essential for many different nutritional and enzymatic transactions. Water, of course, plays a major role in the body's health and without it, the body cannot perform many critical functions. Fresh air and fresh water are the essence of our continued existence as a species.

**Foods provide you with fats, carbohydrates and proteins.** Foods also contain vitamins, minerals and enzymes. All these substances are necessary for good health. Good health is essential to insure the survival of the species. Good health means that people can live longer and reproduce healthy offspring. Research has shown that nutrition plays a major role in reproduction function, by influencing the health of fetal development.

**The importance of good nutrition during the reproductive process** was recently given considerable attention with reports of studies regarding the relationship between folic acid and neural tube defects. The research showed that women consuming adequate daily amounts of folate, a B-Complex vitamin, throughout their childbearing years may reduce their risk of having a child affected with spina bifida or anencephaly, birth defects of the brain or spinal cord. The United States Public Health Service has estimated that approximately 50% of neural tube defect-affected pregnancies in the United States may be averted if all women of childbearing age consume adequate amounts of folates daily.

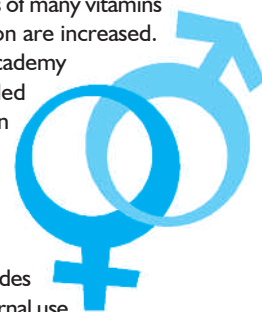
**Nutrition plays an important role in fetal development,** particularly during the first trimester of pregnancy. The amounts of many vitamins and minerals needed during pregnancy and lactation are increased. The National Research Council of the National Academy of Sciences has established separate Recommended Daily Allowances for pregnant and lactating women to reflect these higher nutrient needs.

### NUTRITIONAL SUPPORT FOR REPRODUCTION

**Nourishment for the reproductive process** includes many do's - and many don'ts. For example, the maternal use of chemicals and dangerous drugs has a potentially dangerous effect on the fetus and newborn. There is an enormous list of potentially dangerous products, so question everything you ingest. Also, common sense suggests that the dangers of smoking, drugs, and drinking alcohol are multiplied by two during pregnancy. Exposure to radiation is another danger and caution is advised, especially during the first trimester of pregnancy.

**Both spouses play a role in the reproductive process.** For healthy procreation, it is wise for both partners to strive for healthy well-being.

**Committees of experts on dietary allowances advise** that there needs to be an increase in the intake of most vitamins and minerals during pregnancy and lactation. These committees all agree that maternal supplementation has, in general, a positive effect on birth weight.



The following information is provided to help you better understand the role that certain nutrients play in overall health during the reproductive cycle, as well as the pregnancy and lactation processes of reproduction. Those nutrients are:

**VITAMIN A** is a fat-soluble nutrient which plays an important role in the healthy formation of bones, teeth, and skin. It is necessary during pregnancy and lactation. Since fetal requirements for vitamin A increase maternal needs, a 25% increase over prepregnancy intake is advised by many experts.<sup>1</sup> Vitamin A is used by the body for growth and repair of body tissues and for healthy hair.

**BETA CAROTENE** is the preferred source for vitamin A for a number of very important reasons. Beta carotene is non-toxic because the body converts beta carotene into vitamin A only as it's needed. Beta carotene is one of the antioxidant nutrients much like vitamin C, vitamin E and selenium.

**VITAMIN C** has many uses in the body and, during pregnancy, there is an increased need. Breast milk contains a wide variance of ascorbic acid content per liter, generally between 40-55 mg. It is essential for the absorption of inorganic iron, functions in the production of collagen, and is essential for the immune system. Vitamin C is needed for healthy teeth, gums and bones while affecting the integrity of collagenous structures in the blood vessels. Vitamin C also participates in the conversion of folic to folinic acid.

**VITAMIN D** is an important nutrient in the reproductive cycle. It facilitates calcium absorption and participates in bone metabolism. Studies have shown that vitamin D plays a role in promoting positive calcium balance in pregnant women and one of its metabolites, 25-hydroxyvitamin D, freely crosses the placenta.<sup>2</sup>

**VITAMIN E** protects fat soluble vitamins, and is essential for the hair, skin and mucous membranes. It also participates in the synthesis of hemoglobin.

**VITAMIN B-12** helps form normal red blood cells and a healthy nervous system. B-12 is important for the role it plays in DNA synthesis and the metabolism of single carbon units. It also helps the body metabolize fats, carbohydrates and proteins more effectively.

**FOLIC ACID** is necessary for growth, the division of cells and for the formation of red blood cells. It helps with reproduction and it is necessary for the health of the glands and the liver. Folic acid forms the coenzyme tetrahydrofolic acid, which transfers one-carbon units to various compounds in the synthesis of DNA, RNA, and cysteine.<sup>3</sup> There is evidence that adequate intakes of folic acid during childbearing years may reduce the risk of neural tube defect pregnancy.<sup>4</sup> About 25% of normal pregnant women in the United States have marginal to low serum levels.

**IRON** supplementation is essential for almost all pregnancies, especially for those cases of women with low serum ferritin levels. Studies indicate that 20% of pregnant women in the United States enter pregnancy with low iron stores and may have difficulty meeting the increased iron demands of pregnancy by diet alone.<sup>5</sup> The recommended daily dietary intake is 30 mg of supplemental iron throughout pregnancy.

**B-COMPLEX** vitamins should be considered during pregnancy for two reasons: (1) blood levels generally decline during pregnancy and; (2) fetal levels exceed those in the mother, reflecting active transport across the placenta.<sup>6</sup> A clear reduction in pyridoxal phosphate (vitamin B-6) has been observed in pregnant women. Studies also indicate that B-6 needs tend to increase in pregnant women with diets rich in proteins. Vitamin B-6 is necessary for the proper functioning of both nerves and muscles, including pressure-sensitive nerve cells and cardiac muscles. B-1 (Thiamin) is important for carbohydrate metabolism, digestion, and the functioning of the heart.

**NIACIN** is a B-complex nutrient which plays a role in growth and the proper functioning of the nervous system. Niacin also participates in energy metabolism.

**INOSITOL** is necessary for hair growth, the metabolism of fats and cholesterol and for the formation of lecithin.

**PANTOTHENIC ACID** is essential for growth, contributes to energy functions and is necessary for the skin.

**SELENIUM** preserves tissue elasticity, and works with vitamin E. Like vitamin A, C, and E, selenium is an antioxidant.

**ZINC** aids in the digestion and metabolism of phosphorus and protein. It is a component of insulin and of male reproductive fluid. Zinc also participates in the metabolism of RNA and plays a role in wound healing.

**CALCIUM** is a mineral which is necessary for the metabolism of bones and teeth.

**MAGNESIUM** is essential for the metabolism of potassium and calcium. It is also required for the mobilization of calcium from bone. Magnesium is important as an activator for enzymes involved in the metabolism of carbohydrates and amino acids. It also plays a role in neuromuscular activity and impulse transmission.

**MANGANESE** plays a role in enzyme activation. High levels of this nutrient can be found in the bones, liver and pituitary gland.

**Sources Cited:**

- 1,2,3,5,6Paige, David. Clinical Nutrition, 2nd ed. St. Louis: Mosby, 1988. pp.55, 763, 289.
- 4Food Labeling: Health Claims and Label Statements; Foliates and Neural Tube Defects. Federal Register, V.59, No.2. January 4, 1994.

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A DIVISION OF INNER HEALTH GROUP, INC.  
6003 RANDOLPH BLVD. ● SAN ANTONIO, TEXAS 78233

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## MALE REPRODUCTIVE FACTORS™

Supplement Facts		
Serving Size: Three (3) Tablets		
Servings Per Container: 20		
Amount Per Serving	% Daily Value	
Vitamin A (Beta Carotene)	5000 IU	100%
Vitamin C (as Calcium Ascorbate)	750 mg	1250%
Vitamin E (as d-alpha Tocopheryl Succinate)	375 IU	1250%
Niacin (as Niacinamide)	100 mg	500%
Folic Acid (as Folicin)	400 mcg	100%
Vitamin B-12 (as Cobalamin)	250 mcg	4167%
Pantothenic Acid (as d-Calcium Pantothenate)	100 mg	1000%
Calcium (as Dicalcium Phosphate, Calcium Chelate)	250 mg	25%
Magnesium (as Magnesium Chelate)	50 mg	13%
Zinc (as Zinc Monomethionine**)	100 mg	667%
Selenium (as L-Selenomethionine)	50 mcg	71%
Manganese (as Manganese Chelate)	25 mg	1250%
<b>Proprietary Blend</b>	<b>875 mg*</b>	
Damiana Leaf (Turnera aphrodisiaca), Oriental Ginseng Root (Panax ginseng), Inositol, Arginine (as L-Arginine), Glutamine (as L-Glutamine), Fenugreek Seed (Trigonella graecum), Saw Palmetto Berry (Serenoa serrulata), Cysteine (as L-Cysteine Hydrochloride), Methionine (as DL-Methionine) & Clove (Flower Bud)(Caryophyllum aromaticum)		
*Daily Value not established.		
OTHER INGREDIENTS: Maltodextrin, Dicalcium Phosphate, Stearic Acid & Vegetable Magnesium Stearate.		
**OptiZinc® A Trademark of Inter-Health Nutraceuticals Inc.		

## FEMALE REPRODUCTIVE FACTORS™

Supplement Facts		
Serving Size: Three (3) Tablets		
Servings Per Container: 20		
Amount Per Serving	% Daily Value	
Vitamin A (as Beta Carotene)	5000 IU	100%
Vitamin C (as Calcium Ascorbate)	500 mg	833%
Vitamin E (as d-alpha Tocopheryl Succinate)	225 IU	750%
Thiamin (as Thiamin Mononitrate)	50 mg	3333%
Niacin (as Nicotinic Acid)	50 mg	250%
Folic Acid (as Folicin)	400 mcg	100%
Pantothenic Acid (as d-Calcium Pantothenate)	50 mg	500%
Zinc (as Zinc Monomethionine***)	75 mg	500%
<b>Proprietary Blend</b>	<b>987 mg*</b>	
Essential Fatty Acids (from Flax Seed) (7% gamma Linolenic Acid, 64% Linoleic Acid), Damiana Leaf (Turnera aphrodisiaca), Oriental Ginseng Root (Panax ginseng), Licorice Root (Glycyrrhiza glabra), Gotu Kola (Aerial Part) (Centella asiatica), Red Raspberry Leaf (Rubus idaeus), Wild Yam Root (Dioscorea villosa), Cayenne Fruit (Capsicum annuum) & Clove (Flowerbud) (Caryophyllum aromaticum)		
*Daily Value not established.		
OTHER INGREDIENTS: Maltodextrin, Dicalcium Phosphate, Stearic Acid & Vegetable Magnesium Stearate.		
**OptiZinc® A Trademark of Inter-Health Nutraceuticals Inc.		



✦This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.