



# Prenatal & Postnatal

Nutritional Support for Mother and Baby



## WHY DO I NEED A PRENATAL OR POSTNATAL SUPPLEMENT?

A prenatal and postnatal multivitamin/mineral supplement provides essential daily nutritional support for pregnancy and lactation.<sup>1</sup> According to nationally representative research data, from diet alone Americans on average are failing to meet daily recommended levels of key nutrients such as vitamins A, C, D, E and K, calcium, magnesium, potassium and zinc, to name a few.<sup>2</sup> Therefore, supplementation with a prenatal or postnatal multivitamin/mineral supplement helps address nutrient gaps to support the health of the mother and her developing baby.

Pregnancy and lactation place higher calorie and nutrient demands on the body, since the mother must meet the nutritional needs of a growing baby without sacrificing her own nutrient requirements. Multivitamin/mineral supplements designed for pregnancy or breastfeeding contain nutrients critical to support the needs of both the mother and the growing baby, often including but not limited to folic acid, iron, calcium, vitamin D, iodine and DHA.<sup>1</sup>

## WHEN SHOULD I BEGIN TAKING A PRENATAL OR POSTNATAL SUPPLEMENT?

A prenatal multivitamin supplement should be taken by women of childbearing age who are trying to conceive and throughout their pregnancy. The rationale for commencing the supplementation regimen prior to official pregnancy determination is to ensure the mother is receiving key nutrients needed even before she may know she is pregnant. For example, healthful diets with adequate folate/folic acid may reduce a woman's risk of having a child with a brain or spinal cord defect. However, the neural tube is already formed by day 28 of gestation, before many women know they are pregnant.<sup>3</sup> A postnatal multivitamin supplement should be taken by women following childbirth, during breastfeeding, to support the enhanced nutrient needs of a nursing mother and her baby.<sup>1</sup>

## KEY NUTRIENTS FOR PREGNANCY & LACTATION:

### Folate/Folic Acid:

Also known as vitamin B<sub>9</sub>, folate is the natural food form found particularly in leafy-green vegetables and legumes. Folic acid is the synthetic form used to fortify foods and found in supplements. In order to help individuals (particularly women of childbearing age) consume adequate folic acid, foods like breakfast cereal, bread, pasta and rice have been fortified with folic acid throughout the United States food supply since 1996.<sup>4</sup> Both forms may be consumed to meet the overall dietary requirement. Adequate folic acid in healthful diets is important for the developing fetus and may reduce a woman's risk of having a child with a brain or spinal cord defect. Folic acid should start to be taken prior to conception through the sixth week of pregnancy.<sup>3-4</sup>

Institute of Medicine (IOM) Recommended Dietary Allowances (RDAs) for folate/folic acid:<sup>5</sup>

- ✓ **Women of childbearing age:** 400 mcg Dietary Folate Equivalents (DFE)/day
- ✓ **Pregnant women:** 600 mcg DFE/day
- ✓ **Lactating women:** 500 mcg DFE/day

### Iron:

Iron is an essential mineral utilized by red blood cells to help carry oxygen to organs, tissues and baby.<sup>1</sup> Women's iron needs during pregnancy substantially increase to support their increased blood volume and red blood cell formation, as well as the healthy growth of their baby.<sup>6</sup> The RDA for iron intake during pregnancy is 27 mg/day and during breastfeeding is 9–10 mg/day.<sup>6</sup> Low maternal iron status during pregnancy has been associated with increased risk of low birth weight, preterm delivery and other adverse outcomes.<sup>7</sup>



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## Calcium and Vitamin D:

Calcium and vitamin D are both essential nutrients for fetal skeletal development, helping the fetus and infant build healthy, strong bones and help prevent rickets.<sup>8-9†</sup> Calcium requirements during pregnancy and lactation are 1,000 mg/day for women ages 19+ years and 1,300 mg/day for adolescent women ages 14–18 years.<sup>8</sup> Without sufficient daily calcium intake, calcium is sacrificed from the mother's bones to support the rapid bone mineral accrual in the developing fetus.<sup>8</sup> Vitamin D helps improve calcium absorption in the gut and also independently provides bone mineral support functions.<sup>8-9†</sup> The vitamin D requirement during pregnancy and lactation is 15 mcg (600 IU)/day for bone health,<sup>8</sup> but is likely higher (37.5 – 50 mcg / 1,500–2,000 IU daily)<sup>9-10</sup> to raise serum vitamin D levels into the healthy range. Although dairy provides a good source of calcium and vitamin D, national research demonstrates that 49% and 93% of Americans fail to meet their calcium and vitamin D needs, respectively, from diet alone.<sup>2</sup> A prenatal and postnatal multivitamin/mineral supplement can help fill these key nutrient gaps.

## Iodine:

Iodine is an essential mineral, important for normal thyroid function and neurocognitive development in fetuses and infants.<sup>6†</sup> Iodine is found in the diet mostly from iodized salt, seafood and dairy (e.g. milk), however, increased consumption of processed foods (which largely use non-iodized salt), along with trends of non-iodized salt (e.g. sea salt), has led to a decrease in dietary iodine intake and status in American women of childbearing age.<sup>11</sup> The IOM RDA for iodine is 220 mcg/day during pregnancy and 290 mcg/day for lactation,<sup>6</sup> which can be met either through diet alone, or with the help of a prenatal or postnatal supplement. The American Academy of Pediatrics recommends a prenatal supplement with 150 micrograms of iodide daily, along with consuming iodized table salt during pregnancy.

## DHA:

Docosahexaenoic acid (DHA) is a polyunsaturated omega-3 fatty acid mainly supplied to the diet from marine-based sources such as salmon, tuna, and sardines. Research demonstrates that DHA helps support the healthy growth and development of the baby's brain, eyes and nervous system.<sup>12-13†</sup> After birth during the postnatal period, DHA remains important to baby's development. Breast milk is not naturally high in DHA, therefore it is critical to ensure adequate DHA in the diet or through supplementation while breastfeeding. It is recommended by the Perinatal Lipid Intake Working Group, European Food Safety Authority, and International Society for the Study of Fatty Acids and Lipids that pregnant and breastfeeding women consume at least 200 mg of DHA daily.

Fatty fish are excellent dietary sources of omega-3 fatty acids. Women of child-bearing age, pregnant women and breastfeeding mothers are advised to consume 8–12 ounces (2–3 servings) of lower-mercury fish every week, according to the latest dietary guidelines for Americans.<sup>14</sup> Since Americans are not meeting this fish intake recommendation (only consume 4 ounces of total fish per week on average),<sup>15</sup> and avoiding certain fish with high mercury content is essential during pregnancy and lactation, supplementing the diet with a prenatal or postnatal multivitamin containing DHA is prudent.

## CHECK WITH A HEALTHCARE PROFESSIONAL

It is always advisable to consult your primary healthcare professional regarding the use of dietary supplements, especially during pregnancy and lactation, as it is important to understand dosing and any potential interactions with medications.

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