



Best Supplement for Pre & Post-natal Women

Maintaining a high nutrient and well-balanced diet is one of the most important aspects that you can ensure a better health of your baby as well as the mother yourself. [1-3] Women who are able to maintain a balanced diet tend to have fewer complications during pregnancy and labor. [1-3]

However, even keeping yourself strictly to follow a balanced diet may not ensure that you can get adequate amount of specific nutrients for expectant women. [1-3] Prenatal calcium plus vitamin D3 tablet contains nutrients which are important for expectant and postnatal women supplemental to reach your daily needs.

Calcium for Fetal Development

Calcium is the most necessary mineral for human. Women normally need more calcium than male, especially during pregnancy. [4] In pregnant women, calcium is actively transported across the placenta from mother to fetus for fetal skeleton development. Stepping into the third trimester of pregnancy, fetus requires about 200 to 250 mg/day calcium to sustain skeletal growth. [5] Besides bone and dental health, calcium also helps maintain the functions of neurotransduction, cardiovascular dilation and contraction, and blood clotting. [6,7]

Calcium for Hypertension & Pre-eclampsia

Yet another important benefit of calcium in pregnant women is that it can reduce the risk of pre-eclampsia. Hypertension is a major cause of maternal death and perinatal mortality worldwide while half the women with hypertension have pre-eclampsia. Adequate intake of calcium could help maintain normal blood pressure thus promote healthy pregnancy. [8,9]

Vitamin D3 for Overall Health

Vitamin D3, also known as cholecalciferol, is a fat soluble vitamin which facilitates body absorption of calcium. [5,10,11] It also increases phosphorus absorption through the intestine and reabsorption in the kidney. [10] Therefore, adequate vitamin D3 intake will help enhance bone growth and keep our teeth strong. [5,10,11] Vitamin D3 is produced by our skin after exposure to sunlight and also available from diet.

Observational studies have shown that vitamin D status is related to asthma and allergic outcomes of the infant. [12] Although human can obtain vitamin D3 through diet and sunlight, people nowadays mostly work indoor and thus are at risk of insufficient vitamin D3. It is important to take dietary supplement for adequate vitamin D3 intake and as such to maintain proper calcium supply, bone health and respiratory function of the baby.

How Much Calcium and Vitamin D Do You Need?

The Institute of Medicine of the National Academies has made the following recommendations to pregnant or lactating women on the daily intake value: [4]

Age group	Recommended dietary allowance for Calcium (mg/day)	Recommended dietary allowance for Vitamin D (IU/day)
14-18 years old, Pregnant/ lactating	1300	600
19-50 years old, Pregnant/ lactating	1000	600

Calcium and Vitamin D supplementation is beneficial to both mother and baby:

- Help meet the pregnancy & lactation nutritional needs [5,10,11]
- Improve nutrient absorption in the intestine [10]
- Strengthen bones and teeth [5,10,11]
- Promote respiratory health especially during early childhood [12]
- Reduce risk of pre-term birth, hypertension & pre-eclampsia [8-9]

Recommended daily dose:

Adults take 1 to 2 tablets daily or as recommended by physicians.

References:

1. Imdad A, Bhutta ZA. Effect of balanced protein energy supplementation during pregnancy on birth outcomes. *BMC Public Health* 2011;11(Suppl 3): S17.
2. Black RE, Allen LH, Bhutta ZA, Caulfield LE, de Onis M et al. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 2008;371(9608):243-60.
3. Shah PS, Ohlsson A; Knowledge Synthesis Group on Determinants of Low Birth Weight and Preterm Births. Effects of prenatal multimicronutrient supplementation on pregnancy outcomes: a meta-analysis. *CMAJ*. 2009;180(12):E99-108.
4. Institute of Medicine of the National Academies. Report Brief - Dietary Reference Intakes for Calcium and Vitamin D. Revised: March 2011.
5. Institute of Medicine Committee to Review Dietary Reference Intakes for Vitamin D and Calcium; Ross AC, Taylor CL, Yaktine AL, Del Valle HB (eds). *Dietary Reference Intakes for Calcium and Vitamin D*. Washington DC: National Academies Press; 2011.
6. Strauss, Saltman PD. Spinal bone loss in postmenopausal women supplemented with calcium and trace mineral. *Jour Nutr*. 1994; 124: 1060-4.
7. Allen DG, Lamb GD, Westerblad H. Impaired calcium release during fatigue. *J Appl Physiol*. 2008;104:296-305.
8. Hofmeyr GJ, Duley L, Atallah A. Dietary calcium supplementation for prevention of pre-eclampsia and related problems: a systematic review and commentary. *BJOG*. 2007;114(8):933-43.
9. Imdad A, Jabeen A, Bhutta ZA. Role of calcium supplementation during pregnancy in reducing risk of developing gestational hypertensive disorders: a meta-analysis of studies from developing countries. *BMC Public Health*. 2011 Apr 13;11Suppl 3:S18.
10. Dietary Supplement Fact Sheet: Vitamin D. Office of Dietary Supplements. National Institutes of Health. Reviewed: June 24, 2011. Available at <http://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/>.
11. Kulie T, Groff A, Redmer J, Hounshell J, Schragger S. Vitamin D: An Evidence-Based Review. *J Am Board Fam Med*. 2009;22(6):698-706.
12. Yong SB, Wu CC, Wang L, Yang KD. Influence and mechanisms of maternal and infant diets on the development of childhood asthma. *Pediatr Neonatol*. 2013;54(1):5-11.

