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“Visit to the Drug Store” *Assignment*

For many people, taking a multivitamin or herbal supplement is part of their daily routine. We may take vitamins to feel better, prevent a cold, to gain energy or even improve our memories. Choosing the correct vitamins are important to our overall health, or even preparing our bodies for the health of a new life. For this assignment, I chose to investigate prenatal vitamins.

Prenatal vitamins are designed to help your baby get the nutrients that are essential for growth and healthy development. Prenatal vitamins consist of a variety of vitamins and minerals including folic acid, DHA, iron, calcium and Vitamins A, C & D.

Upon my observations during my visit to a local CVS, I noticed that the prenatal vitamins were grouped together and were at eye-level. Approximately six brand names were displayed, in several forms (tablets, gummies, etc.) and I noticed words such as “ultra, pure, natural, gentle, supports, provides and even OB/GYN recommended” used to promote the product. Though a prenatal vitamin wasn’t listed specifically in the *Drug Information Handbook for Dentistry*, I did break down the main ingredients, specifically folic acid and DHA, as they were the prominently listed on the packages.

Folic acid is the naturally occurring, water-soluble vitamin folate and is integral to the synthesis and maintenance of DNA, metabolism of amino acids, production of red blood cells, and growth of the fetus and placenta. Folic acid is used to treat megaloblastic and macrocytic anemias due to folate deficiency. Folate is found in many foods and is most readily acquired from green leafy vegetables (or foliage) which gave it its name. As listed in the *Drug Information Handbook for Dentistry*, the Recommended Daily Allowance (RDA) for folic acid during pregnancy is 600mcg/day and during lactation is 500mcg/day.

The adverse reactions of taking folate include: slight cardiovascular flushing, general central nervous system malaise, rash, erythema, pruritus, bronchospasm and even allergic reactions. In addition to its FDA approval use, folic acid also has an off-label use for the prevention of neural tube defects. There are no cited precautions to dental procedures.

Omega-3 Fatty Acids, specifically Docosahexaenoic acid (DHA), is another primary supplement in prenatal vitamins. Omega-3 fatty acids are essential fatty acids that must be consumed in the diet. Adequate consumption of omega-3 fatty acids is vitally important during pregnancy as they are critical building blocks for the development of a fetal brain and their retina. Omega-3 fatty acids may also play a role in determining the length of pregnancy and in preventing prenatal depression. The RDA for DHA Omega-3 fatty acids in pregnant and lactating women is 300mg.

Some possible adverse reactions to DHA are fatigue, skin-rash, diarrhea and nasopharyngitis. Omega-3 fatty acids also contain fish oil which may result in adverse reactions for those patients with shellfish allergies. There are no significant effects or complications regarding dental treatment.

From watching the “Supplements and Safety” documentary and from my research, I have learned to be weary of vitamins and supplements. It seems that the RDA is usually surpassed on these products which is truly concerning. As mentioned in the documentary, the consumer does not know the truth about the composition of their supplements unless they are thoroughly tested. Without FDA regulation, our daily vitamin routine is very risky and we as consumers should always take caution when ingesting our daily vitamins.

In conclusion, prenatal vitamins may not be a “one size fits all” type of supplement. According to the CDC, “preconception care must be tailored to meet the needs of the individual”. Given that prenatal care should occur throughout the reproductive years, some recommendations will be more relevant to women at specific stages in their lives and with varying levels of risk. Though there are RDA for these supplements, other factors such as diet and weight play a contributing role to how much additional nutrition is needed in order to sustain the health of a mother and her child. All women of reproductive age should be assessed for nutritional adequacy by a health care professional and if only they deem it necessary should one consider taking a prenatal vitamin supplement.



Resources:

"Prenatal Vitamins: Help or Hype?" *Contemporary OB/GYN* 57.11 (2012): 26-38. Web.
<http://web.a.ebscohost.com.citytech.ezproxy.cuny.edu:2048/ehost/pdfviewer/pdfviewer?vid=1&sid=8b10f012-e2e9-42fa-b3a4-96fddd2f3c96%40sessionmgr4009>

"The clinical content of preconception care: an overview and preparation of this supplement"
Jack, Brian W. et al. *American Journal of Obstetrics & Gynecology*, Volume 199, Issue 6, S266 - S279. [http://www.ajog.org/article/S0002-9378\(08\)00887-9/abstract](http://www.ajog.org/article/S0002-9378(08)00887-9/abstract)

Centers for Disease Control and Prevention. Preconception Health and Health Care: *Preconception Clinical Care for Women Nutrition*. 2014.
https://www.cdc.gov/preconception/documents/clinical-content_womensnutritionfactsheet3.pdf.

Coletta, Jaclyn M, Stacey J Bell, and Ashley S Roman. "Omega-3 Fatty Acids and Pregnancy." *Reviews in Obstetrics and Gynecology* 3.4 (2010): 163–171.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3046737/>

Drug Information Handbook for Dentistry, 22nd Edition. Lexicomp. 2016.