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DATE: January 18, 2017
TO: WIC Staff
FROM: Valerie Haack, Training Coordinator
SUBJECT: Prenatal Vitamins—Topic of the Month

A healthy diet is the ideal way to get adequate vitamins and minerals, but increased nutrient needs during pregnancy makes it very difficult to get enough of some key nutrients from diet alone. Most OB/GYN doctors will recommend a prenatal vitamin during pregnancy to ensure consistent intake of key nutrients throughout the pregnancy.

How are prenatal vitamins different from other vitamins? Prenatal vitamins usually contain higher levels of *folic acid* and *iron* than other adult vitamins. Unfortunately, there are no nutrient standards or requirements for vitamins to be labeled “prenatal”, and *nutrient content varies widely* from brand to brand. Gummy vitamins, which are quite popular, are usually more expensive and often don’t contain iron and some other key nutrients needed during pregnancy.

What should women look for in a prenatal vitamin? The vitamin aisle can be rather confusing and daunting for the average person, and even more confusing for someone who may not speak or read English well. To keep it simple, **look for the following nutrients in a prenatal vitamin:**

- **Folic Acid: 400 mcg**
- **Iron: 30 mg**
- **Iodine: 150 mcg**

Other important nutrients include:

- Vitamin D
- Calcium
- DHA
- Zinc
- Vitamin C
- Vitamin A
- Vitamin E
- Copper
- B Vitamins

A prenatal vitamin that includes ***Folic Acid, Iron, and Iodine***, will likely contain adequate amounts of ***most*** other nutrients listed.

FOLIC ACID. The RDA for folate during pregnancy is 600 mcg/day. Folic acid helps prevent neural tube defects, which develop in the first 28 days after conception -- before many women know they are pregnant. Because about half of all pregnancies are unplanned, it's recommended that *any woman who could get pregnant* take 400 mcg of folic acid daily, starting before conception and continuing throughout pregnancy.

A woman who has already had a baby with a neural tube defect should speak with her health care provider about whether she might need to take a different dose of folic acid. Studies have shown that taking a larger dose (up to 4,000 mcg) at least one month before and during the first trimester may be beneficial for those women.

Foods containing folic acid include green leafy vegetables, nuts, beans (legumes), citrus fruits, orange juice and many fortified foods (including many WIC breakfast cereals). Because it can be difficult to consistently get enough food folate from the diet, public health guidelines recommend a daily supplement for all women capable of becoming pregnant.

IRON. Early in pregnancy there is a 35% increase in the plasma volume, requiring more iron. Growth of the fetus, placenta, and other maternal tissues *increases the demand for iron threefold* in the second and third trimesters, to approximately 5.0 mg iron/day - which may trigger physiologic anemia even in women with adequate iron stores. There is an association between low hemoglobin values and the risk of a premature birth and low birth weight. Anemia during pregnancy may also affect the iron stores in the infant.

Iron is important postpartum too. It is estimated the average woman loses 250 mg of iron during childbirth, and an additional 300 mg of iron is needed to replenish iron stores after delivery to ensure a woman starts her next pregnancy with adequate iron stores. Iron requirements are also increased during lactation. Replenishment of iron stores is a very important component of inter-conception nutrition, and is the reason that postpartum women are highly encouraged to focus on healthy eating and advised to continue taking their prenatal vitamins, or a multivitamin with iron.

IODINE —a newer recommendation. The American Thyroid Association and the National Research Council recommends iodine supplementation (150 mcg/day) as part of a prenatal vitamin/mineral supplement for pregnant and lactating women. Not all prenatal formulations contain iodine. This recommendation stems from a shift away from iodized salt to things like sea salt or kosher salt. Also, salt added to processed foods is not iodized. These shifts have resulted in a less consistent intake of iodine for some pregnant women.

Iodine sufficiency during pregnancy is extremely important for proper fetal neurodevelopment. During early pregnancy, the fetus depends entirely on maternal iodine intake for fetal thyroid gland development. Iodine needs increase during pregnancy and lactation. The RDA is 220 mcg/day for pregnant women. But an excess of iodine may lead to fetal goiter and developmental delay, so women are advised to consume no more than the RDA.

More isn't necessarily better. Pregnant women *should not* take individual supplements in addition to prenatal vitamins, unless specifically instructed to do so by their health care provider. High levels of some vitamins and minerals keep others from being absorbed and over-consumption of some vitamins and minerals may be harmful to the fetus.

Are prenatal vitamins covered by insurance? A prescription is needed for insurance to cover the cost of prenatal vitamins. Pregnant women sometimes wait for insurance eligibility determination before seeking prenatal care, and consequently might not see their provider until after their first trimester. *Early enrollment in WIC* provides an opportunity to discuss starting an over-the-counter prenatal or multi-vitamin right away, as well as an opportunity to encourage healthy eating early in the pregnancy.

What factors might contribute to higher risk of nutrient deficiencies during pregnancy? If any of these risk factors are identified, a high risk care plan is needed and the care plan may need to include more frequent WIC visits during pregnancy to better support this individual. (**factors may or may not require*

a high risk plan) Other referrals and regular communication with the participant's health care provider will help support the participant.

- Adolescence;
- Pregnant w/ multiples (recommend folic acid: 1000 ug/day, and vitamin B-6: 2 mg/day);
- Substance abuse history, including tobacco use*;
- Those taking certain medications that can alter absorption;
- Malabsorption syndromes and inflammatory bowel disease;
- Bariatric surgery (deficient in vitamin D and B-12, possibly other nutrients)
- Strict vegetarians and vegans (deficient in vitamin D and B-12)*
- Eating disorders
- Lactose intolerance*
- Severe hyperemesis (morning sickness)
- History of neural-tube defects (higher folic acid recommended)
- Limited income causing food insecurity or inconsistent dietary intake*

Talking with participants about Prenatal Vitamins:

- ❖ Generally, participants want to please their WIC staff person. If simply asked; ***“Do you take a prenatal vitamin?”*** the answer may be ***“Yes”*** even if they have concerns or challenges with actually doing so.

Start with an open-ended question, such as, ***“What vitamins and supplements are you taking?”*** and explore further by asking questions like ***“what things do you do to remember to take your prenatal vitamin?”*** or ***“What time of day do you take the vitamin?”***. These questions are more likely to lead to additional conversation. Or you might ask if they have “advice” that you could share with others about how they worked through any barriers.

- ❖ If they haven't purchased the prenatal vitamins yet, explore why that might be and whether they would like some guidance in choosing a prenatal vitamin. If you sense resistance to taking a vitamin, you might ask ***“What have you heard about prenatal vitamins?”*** to get at some of their hesitations.
- ❖ Consider visiting 2-3 stores near your WIC clinic to investigate which brands of prenatal vitamins contain the nutrients needed at a more affordable price so you can provide guidance to moms who request it. Many times store brands are a good choice. You might also look for brands that do not contain gelatin, gluten or dyes—common things some women want to avoid. Find out where the participant shops and discuss options available at that store.
- ❖ Many “Gummy” vitamins do not contain iron, and most are more expensive, but they are very popular. **Children's chewables** (different than gummies) with iron can be a good choice for women with nausea, until they are feeling better and can take a prenatal vitamin.
- ❖ Sometimes women, unable to tolerate a prenatal in early pregnancy, are told to take 2 children's vitamins. However, the RDAs for children are very similar to those for adults, and the woman might get more of a nutrient than needed, with excess vitamin A being a potential concern. Taking just one children's complete vitamin with iron would be a general recommendation until a prenatal can be tolerated in the second trimester.

The chart **on the next page** gives examples of common concerns and how they might be discussed. What common concerns would you add to the chart? Think through how you might address additional concerns with participants.

References:

[AAP Policy Statement on Iodine Deficiency](#)

[Minnesota Medical Assistance Summary of Coverage](#)

[DRI for Pregnant Women](#)

[Mayo Clinic Prenatal Vitamins Why They Matter How to Choose](#)

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Common Concerns with Prenatal Vitamins	Examples of Affirmations or a Reflection	Examples of Exploring or Asking Permission	Information that could be shared
The prenatal vitamin makes me sick.	<p>“That sounds awful”</p> <p>“So it’s hard to make yourself take your prenatal vitamin”</p> <p>“I’ve talked to other moms that have experienced that too”</p>	<p>“What have you tried that makes it better?”</p> <p>“Can I share some tricks that have worked for other moms?”</p>	<ul style="list-style-type: none"> • Take vitamin at the time of day that you are feeling your best (for many women, it is later in the evening). • Split the vitamin in half and take 2 different times. • Ask your doctor about taking a children’s chewable with iron until nausea is better. • Take with a small amount of food, like crackers.
The prenatal vitamin will make my baby grow too big.	<p>“You want to have a healthy baby that’s just the right size”</p>	<p>“Can I share a little bit about how vitamins help your baby to be healthy?”</p>	<p>“Vitamins make sure that your body has the nutrition needed so your baby’s brain, bones and muscles can develop correctly. They won’t affect how much your baby weighs.”</p>
Prenatal vitamins have gelatin (or dye, or gluten).	<p>“You’re worried there are things in the prenatal vitamin that you don’t want to put in your body”</p>	<p>“Can I share some brands of vitamins that don’t have gelatin?”</p> <p>“Is there anything else you would like to avoid in the vitamin?”</p>	<p>Share list of vitamins that do not contain gelatin, but have the recommended supplementation of Folic acid, Iodine and Iron.</p>
Vitamins are expensive.	<p>“You have limited resources to buy vitamins, but you know that they are important to take to help make sure your baby is healthy”</p>	<p>“Can I share some less expensive brands of vitamins that are very good choices, that you can buy at the stores close to here?”</p>	<p>Share list of vitamins at the store where the participant shops that meet the recommendations for Folic Acid, Iodine and Iron, with approximate costs.</p>
I can’t remember to take them.	<p>“You aren’t used to taking a vitamin each day, and so you sometimes forget”</p>	<p>“What has worked for you in the past?”</p> <p>“What might help you remember?”</p>	<ul style="list-style-type: none"> • Help participant walk through her day and come up with ideas for when she might be more likely to remember, or things she can do to remind her (e.g., phone alarm) • Consider talking about a weekly goal, rather than a goal of taking it “every day”
They make me constipated.	<p>“That’s no fun”</p> <p>“Constipation is something that many pregnant moms struggle with”</p>	<p>Constipation can be caused by the hormone changes during pregnancy.</p> <p>“Can I share some things that you might try that could help with constipation?”</p>	<p>Base recommendations on participant’s nutrition assessment, as well as interest. Let participant choose what to concentrate on. Suggestions might include,</p> <ul style="list-style-type: none"> • increase high fiber foods • increase fluid intake • increase exercise