

Prenatal supplements fall far short in crucial nutrition during pregnancy—most women don't even know it

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If there's one thing doctors agree on, it's that all of their pregnant patients should take prenatal supplements. As a result, about 3 in 4

expecting mothers [follow their doctor's advice](#).

But even though they're crucial for the health of mother and baby alike, [prenatal supplements are unregulated](#). There are no rules that require these supplements to contain any nutrients at all, let alone the appropriate doses.

Not surprisingly, research shows that none of the most widely available over-the-counter prenatal supplements—whether they are tablets, capsules, soft gels or gummies—provide [adequate levels of five key nutrients](#): folic acid, iron, vitamin D, calcium and [docosahexaenoic acid](#), a member of the family of omega-3 fatty acids.

All of these nutrients are recommended by the [American College of Obstetrics and Gynecologists](#), and getting enough of them is associated with [improved health outcomes for both pregnant patients and their babies](#).

As a family medicine resident [with a Ph.D. in nutrition](#), I began investigating these products after my patients started asking questions about them. I discovered that many of the critical nutrients required during pregnancy were [missing from these products](#). Meanwhile, other supplements had insufficient or excessive amounts.

Folate

Folate, which [lowers the rate of birth defects by 50%](#), is the central reason why prenatal supplements were developed.

But folate only prevents birth defects when it's taken prior to the 28th day of pregnancy. In other words, certain birth defects are prevented only when a woman is taking a prenatal supplement before she knows she's pregnant.

For this reason, the American College of Obstetrics and Gynecology recommends that women start taking prenatal supplements at least [three months prior to pregnancy](#).

However, only about [one-third of women do](#)—and just 10% of African American women. For them, the folate intended to prevent [birth defects](#) arrives too late.

Even women who do take supplements early in pregnancy might not get the nutrients they need. That includes 400 micrograms of folic acid—a synthetic version of folate—from their daily prenatal supplement. As many as [27% of prenatal supplements contain less](#) than that amount.

On the other hand, while rare, it's not impossible to find products that contain more than 1 milligram of folic acid—a potentially dangerous amount associated with impaired cognitive development, most notably [decreased verbal skills](#).

Omega-3 fatty acids

After their [introduction in the 1980s](#) as a simple multivitamin with a little extra folic acid, prenatal supplements have evolved to deliver an additional nutritional punch. One of those additions, omega-3 fatty acids, serve as building blocks for the construction of the fetal brain. Indeed, [40% of the human brain is comprised of omega-3s](#).

One study of rats showed that insufficient intakes of omega-3s during pregnancy resulted in a [significant decrease in omega-3 levels](#) in the mother's brain. While such a study could never be conducted in humans, this suggests mothers may sacrifice omega-3s from their own brain to support their baby's brain development.

But other studies connecting low levels [of omega-3s to postpartum](#)

[depression](#), a child's intellect or other significant outcomes [have yielded mixed results](#).

However, there does appear to be a link between [omega-3s and preterm birth](#), with increased intakes leading to a decreased risk. [Preterm birth](#)—delivery at less than 37 weeks gestation—[is on the rise](#) in the U.S. and worldwide, with more than 1 in 10 babies [born too early](#).

New guidelines recommend that pregnant women who don't routinely eat enough omega-3 fatty acids should get 600–1,000 milligrams of omega-3s daily. Studies have shown that [this is nearly impossible](#) to find in [a prenatal supplement](#).

However, patients who eat [fatty fish](#) twice weekly—this can be salmon, mackerel, herring, sardines or anchovies—may only need an additional 100–200 milligrams daily of [omega-3s during pregnancy](#). And about 40% of commercial prenatal supplements [provide this amount](#).

But most Americans don't eat two servings of fatty fish weekly. So 95% of pregnant and lactating women in the U.S. [aren't getting enough omega-3s](#). While many women avoid fish in pregnancy due to [concerns around mercury](#), fatty fish that contain omega-3s are low in mercury and are not among the varieties of fish that should be avoided in pregnancy.

Choline

Choline is also critical for fetal brain development. Its requirement increases during pregnancy to 450 milligrams per day, and even more so during lactation—[550 milligrams per day](#).

With the exception of organ meats, like beef liver, few foods have enough choline to meet that requirement. An egg contains about 150 milligrams of choline, a 3-ounce steak has 117, and a half cup of

soybeans has 107. Salmon, broccoli, brussels sprouts, cauliflower, green peas and kidney beans also have some choline.

Because these are not large amounts, pregnant women need to eat several choline-rich foods daily, and probably need a supplement to meet the recommended amount.

But apparently, almost none do: 95% of pregnant women [consume inadequate amounts of choline](#), and more than half of prenatal supplements [have no choline](#). Those that do typically provide far too little of it—less than 100 milligrams.

What's more, some research suggests that consuming even more choline than guidelines recommend could offer additional benefits.

One study showed that doubling the recommended level in the third trimester of pregnancy may [improve a child's attention span](#). Another found that some of the effects of fetal alcohol syndrome [may be mitigated with quadruple the recommended level](#) of choline.

Solutions

These three examples clearly demonstrate that taking prenatal supplements doesn't guarantee a nutritionally adequate pregnancy.

Part of the problem is a lack of education: Doctors are [taught very little in medical school about nutrition](#), and I've observed that most patients just assume they're getting what they need from their prenatal supplements.

Because there are no regulatory standards for these products, there's no incentive to improve them. No one is mandating that these companies change their formulation, so it's not a priority for them.

My intention here is not to discredit these products, but rather to show that they alone are not enough.

Finding the best supplement with just the right amount of each nutrient—not too much and not too little—is difficult, if not impossible. Even price is [not an indicator of quality](#).

To make sure they are getting enough of these nutrients, anyone who is pregnant, or planning to become pregnant, should do these three things:

1. Choose a prenatal supplement with no more and no less than the recommended 400 micrograms of [folic acid](#) daily, and take it for three months prior to conception.
2. Eat two weekly servings of fatty fish and consider taking a daily omega-3 fatty acid supplement of 100–200 milligrams. Or if you don't routinely eat fatty fish, take a supplement containing 600–1,000 milligrams.
3. Gauge their current intake of choline-rich foods, and if they fall short, consider taking a choline supplement.

Getting adequate nutrition during your pregnancy takes a tremendous amount of effort, and it may seem like you're on your own.

I give my patients [a guide](#) to help them navigate their nutritional needs during pregnancy. This can help provide the information needed to overcome the inadequacies of [prenatal supplements](#).

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