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Optimal Prenatal Supplements

SUMMARY KEYWORDS

prenatal, minerals, important, vitamins, pregnancy, choline, women, infant, people, iron, folic acid, pill, nutrients, folate, supplement, calcium, prescription, health problems, terms, health

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I'm Dr. Debby Hamilton, I'm integrated pediatrician with over 25 years of experience. I'm also trained in nutrition and preventive medicine. I am co leader of this pregnancy summit. And I'm also a member of the science advisory board for the neurological Health Foundation. And today, I'm interviewing Dr. Jim Adams, who's a professor at Arizona State, who's also one of the CO leaders, the pregnancy summit. And its developer of work targeted prenatal that is tailored for each trimester, which is very unique. So I'm really looking forward to hearing more about that. He's also a board member of the Neurological Health Foundation. Welcome, Jim. I'm glad to have you here as we talked about prenats, which I think is an extremely important topic for in terms of nutrition for pregnancy.

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Great, thanks so much, Debby. Yeah, absolutely. prenats are just the best investment, the best prevention that we can use to prevent so many health problems for infants and mothers. During pregnancy,

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right? So you kind of answered like,



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Why are prenatal supplements needed?

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In terms of I mean, it seems to make, you know, very common sense to me, you know, studying nutrition, but anything specific that for women thing and pregnancy. Why prenatals?

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Yeah. So the reason is that the nutritional needs increase so much during pregnancy, that the growth and development of the placenta of the fetus itself, infants have very high levels of vitamins and minerals much higher than in adults. And so we're concentrating huge amounts of vitamins and minerals in that infant to help with some very rapid growth and development. And so it's so important so even if a woman is on a healthy diet, most women still need to supplement with additional prenatal supplements are very strong recommenders as you know, of healthy diets and encouraging that as much as possible. But still most women, almost all women need to be taking a very good prenatal, because there's so many vitamins and minerals and you don't want to be low and even one of them,

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right? I mean, I'm a big believer for, you know, women pregnancy, but also children and all people in terms of getting some kind of multivitamin, and mineral just because of our food supply and people don't eat that well. But what about if a woman's considering getting pregnant once she starts the prenatal

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know? So it's very important to

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try to take a prenatal as soon as possible we prefer to started at least three months prior to conception. And so to think about how to get your body as healthy as possible, and as ready as possible before you get pregnant. And the reason is that those first few weeks first few months of infant development, especially brain development is absolutely crucial and you want to have all the nutrients already on board otherwise Some health problems can start in. So many women wait until they know they're pregnant. And that could be a month or two into their pregnancy. And it's great to start a prenatal right away. But it's even better to start up before that pregnancy starts.

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I'm a big believer in, you know, preconception health, as you know, and in some ways, you



know, a lot of pregnancies are unplanned. So my mind What about if you're a woman of childbearing age, maybe you should be taking a prenatal, or at least a multivitamin and mineral so you have some adequate stores. And I like the idea of having at least two to three months, because I know some women even the first couple months don't even know they're pregnant. And as you said, That's such a critical time of development. So if people aren't taking prenatal I'm always worried about those first couple months.

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So important when you said that because half of pregnancies are unplanned, that if you're at any risk, you really Want to be taking a prenatal as early as you can. Many people just don't remember how important vitamins and minerals are. But by definition, as you know, a vitamin or minerals and nutrients that is proven to be essential to human life. It's something that the lack of any one vitamin or any one mineral is known to cause a serious disease or even death in extreme cases. So it's very important to not be low and even one vitamin or mineral, great simple example is calcium needed for bone health. And if you're low in calcium, you'll have osteoporosis. So, so important that you're not low and even one vitamin A mineral at the start of your pregnancy.

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Yeah, I mean, that makes real a lot of sense. And I think it makes sense to people to I always think, you know, you're growing a child and you want to have all those components. So you need to have all those vitamins and minerals. And we'll learn about prenatals I think that's a really confusing area. Go in the store and there's so many different ones that prescription ones. And then how do you know? I mean, are they all the same are all prenatals the same.

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And that's a huge challenge for people that there are 250 prenatals on the market in the US,

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that's a lot.

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It's a lot, it's largely unregulated by the FDA, anyone can call virtually anything, a prenatal. What they have in common is that they have folic acid in them or full late in them. But other than that, it's just incredible variation as to what vitamins and minerals they have. Some will have just folic acid and iron. Some will have several additional vitamins, some will have some will be very good and have a complete set of vitamins and minerals. So it's just a huge variation in the quality and the content of prenatals on the market because it's unregulated. So women really



need to learn about what is a quality prenatal and what is the best one for the health of them and their infant?

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I mean, that's significant. If you think about that. I mean, I know there's higher needs for certain vitamins. And if all prenats are not the same, that some women really might not be getting what they need in terms of, you know, the vitamins and minerals, and they're counting on that, and they're really not getting that. I know there's some prescriptions to what about prescription prenats?

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Yeah, there are about 60 prenats that are so called prescription. And what that means is that the company is requiring it a doctor's permission to be able to purchase that prenatal. The only thing that's special about it is it has a little bit of extra folic acid, which frankly most women probably don't need that extra folic acid. There are a few who do but it's a very small percentage. The real really the only major difference between a prescription prenatal and a regular prenats will cost two to three times as much and the company has a large sales to market it to physicians, but we've analyzed all 250 prenats. And there's really no difference. And we've analyzed all 250 there's really on average, no difference between regular prenatal. Some are very good, some are very limited. And prescription prenats Some are very good, some are very limited. So growing, we don't see there's any major advantage to the so called prescription prenats. If you read the bottle, it says this product is not intended to does not make any label claims does not is not intended to prevent any health problems. So they've done no formal research studies on the so called prescription prenats. They're not like pharmaceuticals. We have to go through extensive FDA clinical trials. These are dietary supplements. Anyone can call anything a prescription prenatal provided has a certain amount of folic acid. This is huge variation in prescription prenats. And it's really extremely misleading, I think to call them a prescription product, when it's really not any better than the over the counter months.

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Yeah, see, I had no idea.

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And most women think, Oh, it's a prescription. So it must have everything I need. You know, that's a lot of assumptions that people make, right?

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Just read the label, and you'll see that what I've said is true, that they don't make any claims



about it like you would for a drug that this is intended to treat or prevent this or that disorder. Just the opposite. It says, not intended for any purpose.

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Right. And here we are something so critical as a woman who has a baby, and then we She doesn't even know what she's getting. Now, if you're looking for like a high quality prenatal, like have any specific ingredients that you recommend or any specific doses that are important to look Like how somebody's going to figure that out?

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Yeah, it's very, very complicated because we're talking about many different vitamins and many different minerals. And so the main things you want to look for is first of all, does it have all vitamins and all minerals in it? Does it have them at a high dosage? So some of them may have ingredient in it, but it may be at 1% of the RTA. They're just fooling you by putting it on the label then. Because if it's 1% of the RTA, it's basically not there. So one of the other things to look at is not just the vitamins and minerals, but also does it have DHA in it is DHS is an important omega three fatty acid. Very important for infant brain development. In fact, about 20% of the weight of an infant's brain is these special omega three fatty acids. DHA is one of the most important ones and so Roy, the best thing to do simplest thing to do is to look at a prenatal if it just one pill, it doesn't have everything that it needs in it, a high quality prenatals will be ordered four to six pills is just to get enough calcium into your prenatal would require one pill just for the calcium alone. So most prenatals, in order to squeeze everything into just one pill, they really scrimp on the amount of calcium, the amount of magnesium, the amount of coling. Those are the ones that take up a large volume. That's if you're just getting one pill, I can guarantee you're not getting.

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You're not getting enough. I mean, that makes sense that for some income in nutrition, or just the DHA, the mega threes. I'm a huge proponent of omega threes for pregnant women pretty much for everybody. But in terms of brain growth. And what about fully people make a lot of talk about fully it's like, oh, you have to have this much folate and why is that? Why are people concerned?

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Folate is really the number one ingredient that people think of for prenatal, we have the most research behind it. It's very clear that folate is very important for reducing the risk of neural tube defects, very serious brain disorders, but folate reduces the risk, but it doesn't completely eliminate the risk. So that's why other nutrients, especially ones such as vitamin B, 12, coling, and an Asa tol further help reduce the risk to essentially zero if you're taking all of them



together. So folate is the one ingredient you'll see every prenatal and generally adequate amounts. The one thing that's different though, is that most of the early research on folate is what was with a cheap artificial form called folic acid. It works well in mice, and good on mice. It worked great. The problem is that only in the last 10 years Have we realized that humans don't metabolize folic acid very well into the bioactive forms, and we shouldn't, because folic acid never existed on the planet until chemists made it. It's not a natural form. So that's why because a few women don't convert folic acid well into the needed forms. We prefer to get forms that are found in nature folinic acid, and the other one that has a big name, the abbreviation is mthfr or methyl methyl tetrahydrofolate acid. So, yeah, word mthfr or folinic acid, the two forms that we recommend, folic acid is nearly as good. But again, it's an artificial form. We'd rather go with the forms that are already active. new body doesn't have to convert

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but seems to make a lot A lot of sense, it's interesting that they took an artificial form and studied it. And that's what they use in the vitamin, as opposed to the forms that are natural and more active.

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So not just because the point that it was just to save money because it was cheap. And the animal studies showed it was effective in human studies short is effective. But it doesn't totally reduce these risks. And that's why we do want to totally reduce these risks. There are some women recently learned whose bodies just can't convert it. And these other forms are probably better for.

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Right some people hear about the mthfr. So that's some of the methylation stuff. And I always do, but vitamin B 12 with some of the full aids I think that's important. What about some other things? I know iron, we've talked about iron, but iron is definitely an important thing for in terms of pregnant women.

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Absolutely. The two the two most important things that people focus on for prenats are folate is number one, and iron is number two. Because so many women start their pregnancy with iron deficiency nine to 14%. And iron levels decrease as the pregnancy progresses, because you need iron for all the new blood red blood cells your body's producing. About halfway through the pregnancy, about 20 to 40% of women have low iron. And it's so important because iron is carrying oxygen throughout the body. The part of the body that needs oxygen the most is the brain. So if the infant's developing brain, it's so critical that they have enough iron to get enough



oxygen to them. So it's so sad that 20 to 40% of women don't have enough iron in the body to fully get enough oxygen to the infant's developing brain. It's affecting them. Their infants are not having this good intellectual development, their higher risk of intellectual problems are developing autism. So it's a big deal and it's so easy to correct Just some extra iron,

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right, but seems like there'd be so many.

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We also got vitamin D just because of our changing lifestyles. How much vitamin D would you recommend in terms of prenatal?

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Yeah, so absolutely for because so many people are not getting enough exposure to direct sun that the RDA from vitamin D is 600 values. You get only about a quarter of that from your food, and you need most of that from sun. But newer research shows that 2000 to 4000 is even better. If you have low vitamin D, it can greatly increase the risk it will double the risk of miscarriage. It can greatly increase the risk of preterm birth and many other health problems. So it's so important to take not just the RDA but newer research shows 2000 even up to 4000 IUs a day and vitamin D very safe. And very effective, helping with a lot of critical issues and influence development. So we do recommend testing iron, and testing vitamin D at the start of pregnancy and giving extra if it's low, and for iron, new special need extra iron halfway through the pregnancy. For that, a couple of the other things that are very important in prenatal is calcium, so important for bone growth. And yet, when you look at calcium supplements on the market, they'll have very small amounts of calcium because the amount of calcium you need is huge. It's the number one mineral in your body. So to get enough calcium, the for even half the RDA you need one to two pills. So again, that's why a one pill prenatal just isn't enough. The first thing they skimp on is calcium that only has five to 10% of your audio of calcium. It's not an Enough, your infant isn't getting what it needs for bone growth. What that means for the mother is the infant, your body will then be giving up your own calcium from your bones to give it to the infant. So it's so important the infant gets it, and it puts the mother at greater risk of osteoporosis. So you want to protect the infant, you want to protect the mother take extra calcium,

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right? Well, vitamin D and calcium to vitamin D is important for absorbing calcium. So obviously need to get adequate levels of both of those.



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I'm sure.

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People don't really know about choline in terms of nutritional health choline is so important for brain development and development. But you know, people are just starting to realize and about Choline, do you see Choline multivitamins routinely or prenatals? routinely?

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You're totally right that the issue with Choline is that only in the last 10 years has been recognized as an important vitamin and so much Most prenatals don't have any Choline in it. Some do. But often again, because you need hundreds of milligrams of choline, you need a whole pill just for Choline along. So some prenatals cheat and put in. They say they had Choline and it's just a few percent the RDA. So most women need to be taking three to 400 milligrams of Choline early in the pregnancy, probably up to about 600 by the third trimester. And Okay, um, you can get Choline from eggs. That's one of the best sources of the diet, but you need about an egg a day in order to get enough Choline. And so unless you're eating a large number of eggs, you're probably low and Choline, as you mentioned, Choline is so important for brain development. It helps really just eliminate the risk of neural tube defects. Believe me, you don't want a child with a neural tube defect. It's such a serious health problem.

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It's interesting because They said most people just think about full lates in terms of neural to Deepak. So it's important to know Choline and B 12, and inositol, which are all kind of forms and B vitamins that are important. So it does make sense if you're looking at prenatal and you see, like 1% 2% for a lot of the different vitamins and minerals that that can't be enough to support, you know, mom through a pregnancy. So then, no, I think you so what about recommendations? Yeah, if you've gone through a lot of the different prenatals

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we spent a lot of time researching this, I've read through over 350 articles on vitamins and minerals during pregnancy. And working within that neurological Health Foundation. We've established recommendations for the optimal level of every vitamin, and every mineral. And so based on that, we've then gone ahead and rated every one of the 250 prenatals on the market including all the prescription prenatals so you can go to our website and you can See the ratings. The bottom line is that if you average over all vitamins and all minerals, some of them are very good. They reach 90% of our recommendations. Some of them reach only 10% of our recommendations, meaning that they have iron and folate, and almost nothing else.



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That's frightening actually.

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It's really frightening. So you can go and get your \$10 prenatal that has a couple ingredients in it. And you're full you thinking you're taking the prenatal, but you're getting some important nutrients, but you're missing out on so many others. Research shows that every vitamin, every mineral is important. So we recommend people go to the neurological Health website, www.neurologicalhealth.org. And you can see our ratings every one of the 250 prenatals there.

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Okay, so that's a good reference to know that you list all the different prenatals Do you also list the amounts of each vitamin and mineral Is there a source for that to say, hey, I need this much Choline and I need this much iron.

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Right. So we also list our recommendations for the amount of each vitamin in each mineral. And so people can look at that and compare. But again, there's 30, some vitamins and minerals to compare. We don't want people agonize over it. So that's why we just make two very simple rating for them. But a good rule of thumb is that if your vitamin mineral if your prenatal supplement has just one pill, it's not nearly enough, the highest quality supplements have around four to six pills, because that's really what you need to get in all the nutrients. So that's just a simple way to screen to the few top ones. So you can look the NHF website. If you go with any one of the top five, you're in very, very good shape, right? And so we think that those are really the best ones and we hope by establishing this rating system, just like Consumer Reports does ratings for so many products. We're the first group that we know of to really do a sinespace rec rating of all prenatals out there. So we think it's very important to just go to that and look, and you can read about each one of them.

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Right? That's a significant resource. I mean, I think most women really need that information. It's great for me to know in terms of my patients and the women, I see everything about pregnancy, right? Because there's so much confusion. And it does make sense if you have one pill and you have 1% obviously, if you have 1% of full aids, that's really not going to be adequate and if you have 1% of all these vitamins, so I think those are really good, good points. So I know gummy vitamins are a big deal even now we use of gummies for kids and now we have gummies for adults. So what about a like you look like a gummy prenatal? What would you say about that?



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Well, gummy gummies have the advantage that they're yummy to eat. Yeah, unfortunately mostly gummy vitamins. So they may have some amount of vitamins in some vitamins you need just a tiny amount of like foline, but some you need much higher amounts of. So generally gummy vitamins have some vitamins, they generally have almost no minerals. And so especially with the lack of iron is a big problem. So although they're better than nothing, we don't like them. And so they're better than nothing but boy, it's so much better be taking one of these high quality prenats that are out there.

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I do know that with any kind of. It's very tricky because people look for a multivitamin. But you really need to look for a multivitamin and minerals. And you're right in the gummies your multivitamin, you're missing out a whole group of nutrients. So that's

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what calcium you need that iron. magnesium, zinc, selenium, chromium, you need it all

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right, and they don't take up a lot of volume. And I think that's partly why so a little bit deceptive. So tell me about the healthiness prenatal Tell me about the one about a different time. So that's very unique concept, and seems to make a lot of sense to me just coming from a nutritional background.

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Right. So when we had done all the research and established what we felt was the optimal levels of each vitamin in each mineral, we then realized that often for quite a few vitamins and minerals, as the pregnancy progresses, there's actually an increased need in them. So the first trimester, the infant is very small, and the extra need is not that large in some cases. But as the pregnancy progresses, need for some nutrients and iron is a great example. It goes up so what we decided to do was to develop a formulation for each trimester first, second and third trimester that's tailored to the needs for that trimester. So we're the first group to do that. Full disclosure, you know, we have licenses to a company that is now selling it under the healthy nest rubric, and they are giving a small royalty to myself into the neurological Health Foundation. But again, you can look at any one of the other prenats and the top five or so are similar to what we have what we have in composition. The difference is that this one is tailored for each trimester. One of the key differences also is it includes da chain as we discussed, that's a big part of the brain of the infant's brain. It's a big part of mother's milk. It is so important for normal brain development. And unless a woman is eating oily fish, several times a week, and by oily fish salmon is probably one of the most common and best choices but sardines,



anchovies, all sorts of good just not as common for people eat. Not a common American diet, not a common pick to eat. Salmon is one of the best oily fish to eat, because it's low and Mercury and very high nutrients, great source of protein as well. Unless you're eating about three servings of salmon a week, then probably you're not getting enough. That's why we recommend and include the VHA supplement as part of the healthiness prenatal.

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Right? I said, I'm a huge fan of DHA and mega threes. So we talked about, you know, women should start a prenatal before. So which prenatal would they start? Then if they're going to do something preconception, would that be the first trimester, prenatal or?

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That's right. So you want to start with the first trimester prenatal, and then move into the second trimester, once you reach that point. So it is very important for women to use prenatal before they start to pregnancy. We think that's very important for their health. Because again, a lot of the critical health problems occur during the first month or two of pregnancy risk of autism, spinal neural tube defects, and many other critical neurological health problems start first couple months of pregnancy if you don't want to wait, you want to start that prenatal very early on.

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Okay. I mean, that makes sense. So there was a was born and a mom's nursing I usually recommend that continuing prenatals. So they continue on the third trimester, is there anything that you recommend for breastfeeding women to take in terms of,

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so there certainly is an increased need during during breastfeeding. The challenge is that then you're no longer producing blood. So you don't need nearly as much iron. But you do need a high amount, what's in mother's milk, there's high amount of calcium, high amount of tha and other nutrients. So it is important to continue and so we need to go ahead and plan out that part as well. But the main things that you do need to continue are especially calcium, magnesium, and a great amount of vitamins and minerals.

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So then the question becomes, when should you take the prenatal, you know, women are often nauseous, you know, trying to eat, you know, if you have a couple pills in terms of capsules, when do you recommend those, like when should they take them.

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So we recommend taking the vitamin and mineral supplement the same time you normally take



your vitamins and minerals, which is part of your food. And so it's important to take your vitamin mineral supplement with food because it will help decrease the risk of stomach upset. But also it's important to split the dosage. That's a much better absorption if you split the dosage. So if you're dealing with a prenatal, let's say six pills, you take three pills with one meal three pills with another that's not very overwhelming. Even if you're taking lower quality pre natalals with just one pill. It's still better to break it in half and take half one part of the day half and the other, you'll just get better absorption that way.

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I mean, that makes sense. I also think that you have needs you have nutrition leads all the way through the day. And some of these are water soluble vitamins, it kind of makes sense to kind of spread out your intake throughout the day. And then if you think about four to six, and you split it up, it doesn't really sound like that many capsules to me. So

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yeah, minerals are very stable throughout your in your body. But some vitamins do leave your body fairly quickly. And so you're totally right. That's part of the reason to take them to split up the dosage. So you average out throughout the whole day.

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Right? So women I said, if you usually when you're pregnant, you eat multiple times a day. So you kind of think I'm gonna eat a little bit and then I can take one and it seems much less overwhelming at that point. So if a woman's going to try to find out information about these prenatalals where can they go? What's a good resource for them?

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So again, we recommend they go to our website, neurologicalhealth.org. That's the nonprofit that we found it, which we did the research we've researched 350 articles on to determine And what we think is the best level of each vitamin in each mineral based on nutritional intake women, national studies on that based on the RTA and based on hundreds of research studies, and then you can go and see our ratings for all 250 prenatalals on the market, and then make your own choice. Talk with your physician about

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right. And I just heard from somebody who's actually looked at this nutritionally, it really is a difficult area for most women to figure it out. So having all that research, I'm very impressed with all the research you've done. And putting that as a resource for women. I think that's excellent. And coming up with something that really supports pregnancy, making it much easier for women knowing that they're going to get what they need is great. So if you have any other



comments or information about prenats, but I think as I said, we've got a lot of good resources now. So which is wonderful for women?

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Yeah, I think just the bottom line is select a high quality prenatal one pill is not enough. You're going to be looking at four to six pills for the highest quality prenats. But it's so worth it to get to ensure that you're getting enough of all the major nutrients and not skimping on any one or two like calcium or magnesium. This is going to improve the woman's health is going to have much lower risk of major pregnancy complications, it's really going to reduce the risk greatly. of everything from risk of miscarriage, you don't want to lose your child to risk of preterm birth, it's going to really help the child's own health it's going to reduce the risk of anemia is going to improve their intellectual development, reduce the risk of neural tube defects and other birth defects. There's just so many benefits, and it's just so safe. That's just why prenats are so widely recommended is one of the best investments you can make. Now these higher quality prenats may cost a little bit more, but believe me it's so worthwhile to invest in preventing these health problems of the future. extra dollars, you know, one extra day in the neonatal ICU can be \$1,000. Right there. Okay. Okay, the best prenats, four to six pills. Typically you want to start at before pregnancy. Or as soon as you know you're pregnant, and you want to double check levels of iron, and vitamin D, you may need extra supplements for those. Great.

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As I said, I completely agree with everything you said, I think the prenats they think something so simple is so important to the mom. so important for complications. And as I said, as a pediatrician, long term health of kids, you know, if you want a healthy child, and to take, you know, a supplement seems like a great, a great first step. So I really appreciate your information. And thank you for doing all that work and put all the information and coming up with something that really can cover all of that for people so very much thank you for that. So I appreciate you speaking to me today.

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Thanks so much, Debby.

