Another Vaccine In Pregnancy? Yes, and Here's Why That's Good News!

You may have heard that the Centers for Disease Control and Prevention (CDC) recently recommended a new vaccine for use in the third trimester of pregnancy. Known as Abrysvo™, the vaccine helps protect newborns against severe cases of respiratory syncytial virus (RSV). RSV is the leading cause of infant hospitalization in the United States, with anywhere from 58,000-80,000 hospitalizations occurring each year among children younger than 5. Even more upsetting is that 100-300 children under age 5 die from RSV every year. With these statistics in mind, this new RSV vaccine is exciting news for infants and their families.

Ava, 24 weeks along with her first pregnancy, contacted the MotherToBaby live chat service early one morning with some questions about the new RSV vaccine. First, she wanted to understand how vaccinating a pregnant woman could provide protection for a baby. As a Teratogen Information Specialist, I was happy to answer this question for Ava. I started by explaining that when a person gets vaccinated, their body makes antibodies. These antibodies protect the body against the actual infection if a person is exposed to the virus or bacteria later in life. During pregnancy, the antibodies that a pregnant woman makes after being vaccinated can cross the placenta and pass to the developing baby, providing the newborn with some protection against the infection during the first few months of life.

I went on to explain that although the RSV vaccine is new, the idea of getting a vaccine during pregnancy to protect the baby (called "passive immunity") has been around for some time. The Tdap vaccine, which protects against tetanus, diphtheria, and pertussis (whooping cough), has been recommended for use in pregnancy since 2011. Whooping cough is another infection that can be very serious for newborns, so having protection from birth as a result of maternal vaccination is ideal. The flu shot and COVID-19 vaccine can also pass antibodies to the developing baby during pregnancy. This is great news since newborns can't get their own flu or COVID-19 shots until 6 months of age and need to rely on passive immunity in the meantime.

Next, Ava had a question about ***when*** she should get the RSV vaccine. She had plans to get her flu shot and Tdap vaccine at her next prenatal visit at 28 weeks. She wanted to know if she could get the RSV vaccine at the same time. Although these three vaccines (along with the updated COVID-19 vaccine) can all be given on the same day, the RSV vaccine should be given during a specific timeframe in order to pass as many antibodies as possible to the baby. Experts recommend that the RSV shot be given between 32 and 36 weeks of pregnancy. This allows enough time for RSV antibodies to pass to the baby before delivery.

With this recommendation in mind, Ava decided that her prenatal appointment at 32 weeks would be the perfect time to get the RSV vaccine. She had seen firsthand just how serious RSV can be when her 1-month-old niece was hospitalized with RSV last winter, so she didn't want to take any chances with forgetting to get the RSV vaccine during her pregnancy.

Before we ended the chat, I mentioned to Ava that there is also a shot called nirsevimab (Beyfortus™) that can be given directly to babies under 8 months of age. Also known as a monoclonal antibody, this shot is another way to protect infants against severe RSV disease. Most babies do not need nirsevimab if their mom received the RSV vaccine during pregnancy. I suggested Ava talk with her healthcare provider about the pros and cons of both options.

Although having to remember to get another vaccine in pregnancy can feel like just one more thing a pregnant woman needs to add to their never-ending to do list, the decision to vaccinate can prevent serious complications from RSV, and possibly even save the baby's life. Here at MotherToBaby we are happy to go over the current recommendations

for vaccines in pregnancy and answer any questions that you may have. Don't hesitate to call, chat, text, or email with any questions about the RSV vaccine or other exposures during pregnancy. You can also check out our newest fact sheet about this vaccine here https://mothertobaby.org/fact-sheets/respiratory-syncytial-virus-rsv-vaccine-abrysvo/.

References:

Centers for Disease Control and Prevention. 2023. RSV Vaccination for Pregnant Women. Available at: https://www.cdc.gov/vaccines/vpd/rsv/public/pregnancy.html

Centers for Disease Control and Prevention. 2023. RSV Surveillance & Research. Available at: https://www.cdc.gov/rsv/research/index.html

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Let's be honest, we live in an era of perfection. Perfect hair, perfect nails, perfect teeth, perfect everything! Nowadays, it seems like almost all the celebrities, and influencers, have some type of work done on their teeth, and it looks great! Makes you want to try it out for yourself. However, these options might not be affordable or available to everyone. I know I wouldn't be able to get those treatments for myself. So, I have settled for teeth whitening products used at home. Because yes, I too want pearly white teeth!

Now, does it matter if I am pregnant or breastfeeding? Which ones are okay to use, the strips, the toothpastes, and/or

the blue light therapy? So many options to choose from, right? Before we talk about each of those ingredients, it's important to point out that every pregnancy starts out with a small chance (3-5%) of having a baby with a birth defect, we call this the background risk. Now that we have defined the background risk, when we talk about any possible increased risk for birth defects, we refer to the increased risk above that background risk. Now, let's break it down and take a look at some of these products and their ingredients.

1. Whitening strips

Most teeth whitening products contain various ingredients that are not well studied in pregnancy or lactation. Without good research it's difficult to know whether the ingredients can cause a problem for the developing baby or breastfed infant. However, when the product is used as directed on the teeth (not swallowed) it is unlikely that a significant amount would enter the pregnant woman's system or the breast milk. Let's take a closer look at some of those common ingredients:

- Carbamide peroxide breaks down into urea and hydrogen peroxide when in contact with organic compounds in living tissues.
    - Urea is a chemical formed from protein breakdown and is often used in lotions to improve hydration. Urea is also found naturally in the body and is also part of breast milk. Since the body can excrete large amounts of urea, exposure to small or moderate amounts of urea is not expected to increase the chance of birth defects or cause any adverse effects to the breastfed infant.

    - Hydrogen peroxide is added to cosmetics and personal care products as an antimicrobial ingredient to inhibit the growth of microorganisms. It also oxidizes stains on the teeth to whiten them. When in contact with your teeth, hydrogen peroxide will break down as a molecule of water and oxygen gas. Because of this, it is not likely to pose any significant chance for birth defects or problems while breastfeeding.

You may also find,

- Sodium Hydroxide. This ingredient is commonly found in industry and home-based products, such as soaps. It is toxic to tissues, and it is not meant to ingest or breathe. When used in dental preparations, they alter the acidity of the mouth for better protection of the teeth. There are no human studies done on sodium hydroxide in pregnancy or breastfeeding. However, due to potential maternal alkalosis (increase in the pH of the body), careful use should be advised in when an individual has kidney problems during pregnancy or while breastfeeding.

- Glycerin is colorless, odorless, and a sweet glycerol (sugar alcohol), used as a lubrication agent in multiple cosmetic products such as toothpaste, shaving cream, and soaps. Glycerin crosses the placenta in small amounts but there are no studies in humans looking at glycerin. However, since data in animals did not show any increase in birth defects, it is not likely that glycerin in tooth whitening would put a pregnancy or breastfed infant at increased chance for problems.

- Menthol is widely used in a variety of products in the cosmetic world as a flavoring and fragrance agent. There are no studies in humans on use of menthol in pregnancy or breastfeeding. However, animal data did not show any increase in birth defects. Therefore, when used in small amounts, it is unlikely to pose any increased chances for birth defects or any other problems during pregnancy or while breastfeeding your baby.

- Carbomer is commonly used as thickening agents and emulsifiers for pharmaceuticals and many other products. Carbomer is added to teeth whitening strips as a thickener and usually found in small amounts in some products. Because of the large molecular size of carbomer and the small amount used in these products, it would be unlikely to cause problems during pregnancy or enter the breast milk in amounts that are of concern for a breastfeeding baby.

2. Whitening toothpastes

Majority of these toothpastes contain:

- Sodium Monofluorophosphate (MFP), a sodium salt commonly used to increase the amount of fluoride incorporated into the enamel which can help prevent cavities. No research has been done during pregnancy; it is unknown if it causes problems for the baby. Sodium Monofluorophosphate can potentially cause adverse effects if ingested, its use should be monitored closely during pregnancy and while breastfeeding your baby.

- Sodium fluoride is a colorless or white powder that dissolves in liquid. Sodium fluoride is mostly used for prevention of dental cavities, to polish the teeth, and reduce oral odor. Sodium fluoride can be found in drinking water. Ingestion of these ingredients in excessive amounts during pregnancy could lead to impaired development of the baby’s teeth. Sodium fluoride gets into the breastmilk in small amounts, and it is not expected to cause adverse effects to the breast-fed infant.

3. Blue (LED) Light Therapy

This therapy is often used to treat acne and sun damage. This therapy will only work in areas where the light reaches, and it usually needs a combination of photosynthesizing drugs to activate the ingredients and help whiten the teeth. This blue (LED) light therapy is used with gels or strips containing some of the ingredients above. Some may contain ingredients we have not reviewed above. There is limited research on the use of blue light therapy during pregnancy or breastfeeding and the risk of birth defects or other pregnancy problems are unknown. However, the light itself is not expected to increase the risk of birth defects or pose any adverse effects to the breastfed infant.

4. Other ingredients commonly used:

- Herbals are not regulated by the Food and Drug Administration (FDA). Therefore, we are never sure what is in the product, and there is not enough information to evaluate possible risk to a developing baby or breastfed infant. For more information about herbals and supplements during pregnancy or breastfeeding, please refer to our fact sheet at: https://mothertobaby.org/fact-sheets/herbal-products-pregnancy/.

- Alcohol should be avoided completely during pregnancy. It has been established that there is no known amount or type of alcohol that is okay to consume during pregnancy. However, using a teeth whitener with alcohol is not expected to result in a significant amount getting in your bloodstream or the breast milk since the product is applied topically. Do not swallow or drink any of these products and use as directed on the package. If desired, you can select an alcohol-free product. To read more about alcohol during pregnancy and while breastfeeding, please refer to our Fact Sheet at: https://mothertobaby.org/fact-sheets/alcohol-pregnancy/ .

If you are interested in learning more about other products and their individual ingredients, make sure to contact the experts at MotherToBaby.

And remember, it is important to feel good in your own skin but, if you are leaning towards getting your teeth whitened, here are some tips to think about before buying any product.

- Look for non-alcohol based products.

- Use the product as directed, do not swallow it, and do not exceed the time listed on the package.

- Contact the experts at MotherToBaby.org with your questions.

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