

Can Moms Who Had a Transplant Breastfeed While Taking Tacrolimus?

By LauraAnne Hirschler, BS, OMS4 with help from Casey Rosen-Carole, MD, MPH, MEd, FABM and Rogelio Perez-D'Gregorio, MD, MS

As an infant, I received the gift of life in the form of a liver transplant. Growing up, I remember taking a multitude of medications that just became part of my daily life. As the years went on, my immune system became stronger, the transplant check-ups became farther and farther in between. As the years went by, I found myself taking an extremely low dose of one immunosuppressant called tacrolimus. Inspired by my personal journey as a transplant patient, I went to medical school with a passion to care for patients as my healthcare providers had cared for me. During my training as a physician, I began to become interested in how the medicines that a person needs to take can impact pregnancy and breastfeeding.

With this interest in women's health, I pursued a rotation in Breastfeeding and Lactation Medicine. I worked alongside an amazing team of lactation specialists to help patients achieve their breastfeeding goals. I reviewed the medications that new moms were prescribed to make sure that they would address the medical needs of the mom and also have the lowest risk of impacting their developing baby. With a desire for a family of my own, I wanted to learn more about taking tacrolimus while breastfeeding. I saw firsthand how beneficial breastfeeding was and wondered if taking this medication multiple times per day would pose any risk for my developing baby. Would I ever be able to breastfeed?

Tacrolimus (Prograf®, Envarsus®, Astagraf®) is a medicine used by people who have had a transplant, like liver, kidney, or heart transplants. It helps prevent the body from rejecting the new organ. It's usually taken as a pill, but it can also be taken as an IV, as a liquid, or applied to the skin for conditions like eczema.

I found that research studies have shown promising evidence that breastfeeding while taking tacrolimus is most likely not of concern for breastfed children. One study looked at a mom who took tacrolimus twice a day. After one dose, scientists checked her breast milk and found a very small amount of tacrolimus in the milk. The amount was much lower than what is given directly to babies who need the medication.

One study involved a breastfeeding heart transplant patient who took tacrolimus throughout her pregnancy and after birth. When her baby turned one month old, tacrolimus blood levels were measured in both mom and baby. This baby's tacrolimus levels were extremely low.

Another study examined three exclusively breastfed infants and one partially breastfed infant whose mothers took oral tacrolimus. Researchers measured tacrolimus amounts in these infants between age of 15-27 days of life. None of the babies had detectable tacrolimus levels in their blood.

One of the largest studies was performed by the National Transplantation Pregnancy Registry. It looked at 68 mothers who had liver or kidney transplants. The study followed 83 babies, some for as long as 16 years. None of the babies had medical problems related to their mother's use of tacrolimus.

Tacrolimus is also used in cream form for conditions like eczema. The good news is that the risk of this cream affecting a breastfeeding baby is very low because only a small amount of the cream enters the mom's body. However, if the

cream is applied to the nipple, it should be cleaned off before the baby nurses. If a topical nipple treatment is needed, some experts recommend pimecrolimus cream over tacrolimus because it does not contain paraffin. Other treatments such as hydrocortisone ointments are better studied and are usually used first.

Breastfeeding while taking tacrolimus has been shown to be a low risk for breastfed babies. Since breast milk has many health benefits for babies, healthcare providers recommend moms who are taking tacrolimus breastfeed their babies. As with any health condition, a discussion with your healthcare provider is needed to weigh risks and benefits to determine the right choice for your family.

After learning more about the safety of breastfeeding while taking tacrolimus, I feel empowered and encouraged to breastfeed my future children, especially since breastmilk is so healthy and nourishing for babies.

References/Resources

- <https://www.ncbi.nlm.nih.gov/books/NBK544318/#:~:text=Tacrolimus%20is%20a%20medication%20used,calcineurin%20inhibitor%20class%20of%20medications>
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Atopic dermatitis, commonly known as eczema, is a condition that makes the skin itchy and inflamed and can cause red or darker colored patches during a flare-up. Symptoms can be mild, moderate, or severe and can come and go. If you are one of the many people who are pregnant and dealing with this itchy, inflamed skin issue, you are not alone. Atopic dermatitis is common in pregnancy. Over half of people with eczema develop symptoms for the first time during their pregnancy. Hormonal changes in pregnancy can make symptoms worse.

There are many ways your healthcare providers may treat your atopic dermatitis during pregnancy. Treatment may be topical (used on the skin) such as moisturizers and creams or systemic (medication taken by mouth or by injection). Information on specific medications can be found in our fact sheets at <https://mothertobaby.org/fact-sheets/> or by contacting a MotherToBaby specialist at 866.626.6847.

Generally, the first line of treatment in pregnancy is topical because of the route of exposure. The developing baby is exposed to things in a pregnant woman's blood. When you take a medication by mouth or swallow something, we know that is very likely to enter the bloodstream, where it can then potentially cross the placenta and reach the baby. With most topical products, the skin serves as a good barrier, so it is not expected that a significant amount of the product would be able to enter the pregnant woman's blood where it can then reach the baby. This is especially true when the topical product is used on small areas of the body, used infrequently, or used on healthy (non-broken) skin.

If topical treatment is not working for you, fear not, there may be a glimmer of hope – light therapy.

Understanding Light Therapy:

Light therapy, also known as phototherapy, is a treatment option for atopic dermatitis that involves exposing the skin to ultraviolet (UV) light under controlled conditions. There are various types of light therapy including: narrowband (NBUVB), broadband (BBUVB), UVA, UVA1, full-spectrum light, saltwater bath plus UVB (balneophototherapy), psoralen plus UVA (PUVA), and other forms of phototherapy. UV light is the same light that comes from the sun, and it is not radiation. This therapy aims to reduce inflammation and itchiness, ultimately improving the overall condition of the skin.

Light Therapy During Pregnancy:

While there's limited research on light therapy during pregnancy, it is not expected to increase the chance of pregnancy complications. Most of the types of light are not expected to be absorbed through the skin and reach the developing baby. However, while NBUVB and BBUVB phototherapy can be used during pregnancy, they may reduce folic acid levels. Folic acid is very important for baby's development especially in the first trimester of pregnancy. Make sure you talk with your healthcare provider about folic acid supplementation and monitoring folic acid levels if

you do need to get phototherapy in the first trimester. You may find our factsheet on folic acid helpful here: <https://mothertobaby.org/fact-sheets/folic-acid/>. Additionally, psoralen plus ultraviolet A (PUVA) light therapy should be avoided during pregnancy due to increased chance of low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth).

In order to learn more about how atopic dermatitis and light therapy may affect pregnancy, MotherToBaby is currently enrolling people who are pregnant in the Eczema & Pregnancy Study. You can make an impact on the health of future families today by joining the study. Learn more about the study here: <https://mothertobaby.org/ongoing-study/eczema-moderate-to-severe-atopic-dermatitis/>

Protecting the Skin:

Your healthcare provider may recommend using sunscreen for additional skin protection after light therapy. Sunscreen ingredients such as avobenzone, homosalate, octisalate, and octocrylene may be absorbed through the skin in small amounts with regular use, especially if they are used on large areas of the body. However, there is no proven increased risk to a pregnancy from using these ingredients. Mineral sunscreens contain zinc or titanium which are physical blocking agents and stay on top of the skin. That means they are not absorbed through the skin and are not expected to reach the developing baby. More information is available on our blog: <https://mothertobaby.org/baby-blog/screening-your-sunscreen-during-pregnancy/>

As with any medical treatment during pregnancy, it's essential to weigh the potential risks and benefits with your healthcare provider.

Things to Consider:

Before diving into light therapy, here are a few things to consider:

- 1. Consult Your Healthcare Provider:** Always consult with your healthcare provider before starting any new treatment, especially during pregnancy. Your healthcare provider can help you assess potential risks and determine if light therapy, and what type of light therapy, is right for you.
- 2. Alternative Treatments:** If light therapy isn't suitable for you during pregnancy, don't worry! There may be other treatment options available that can help manage your symptoms. Information on specific medications can be found in our fact sheets at <https://mothertobaby.org/fact-sheets/> or by contacting a MotherToBaby specialist at 866.626.6847.
- 3. Consider Joining the MotherToBaby Eczema & Pregnancy Study:** Are you interested in joining our community of expecting parents who are sharing their pregnancy journey with our study team? If you would like more information, visit <https://mothertobaby.org/ongoing-study/eczema-moderate-to-severe-atopic-dermatitis/> or call 877-311-8972.

In Conclusion:

Atopic dermatitis can be challenging to manage, especially during pregnancy. However, light therapy offers a ray of hope for many people who are pregnant and struggling with this skin condition. Remember to always consult with your healthcare provider to determine the best course of action for you and your baby. You've got this!

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