

Probiotics during Pregnancy to Prevent Infant Allergy

If you are pregnant, you are likely doing all you can to have a healthy baby. This handout will tell you about taking probiotics while you are pregnant to help prevent allergies or sensitivities in your child.

What is atopy?

Atopy (pronounced at'-eh-pee) is a condition that makes it more likely that a person will develop allergies or react to common things like pollen or food. If a family member has atopy, a child may be more likely to have it too. More children have been developing atopy recently.¹

What are the symptoms of atopy?

A person with atopy may develop one or more of the following:

- eczema (red, itchy skin rash that may come and go over time and can last into adulthood)
- hay fever
- asthma
- reactions to certain foods.

What are probiotics?

Probiotics are live, helpful bacteria that are in some foods or products. Our intestines (gut) contain trillions of bacteria.² Many of these bacteria are helpful and protect us. We need to keep a balance between the helpful and harmful bacteria in our bodies. If our bodies do not have enough helpful bacteria, they will not work properly. Harmful bacteria can then take over, leading to illness. Taking a probiotic may help restore health. Some things that can decrease the helpful bacteria in our gut are³

- antibiotics (medicines used to treat infections)
- unhealthy food choices
- stress, both physical and emotional
- taking antacid medicines long term (proton pump inhibitors, *e.g.*, *Omeprazole* or H2 blockers *such as Zantac or Pepcid*).

How can probiotics help prevent atopy?

Before a baby is born, her or his gut is sterile.³ Bacteria enter the baby's gut at birth. A baby picks up bacteria as he or she passes through the mother's birth canal. One study has shown that the babies of mothers who had cesarean sections (C-sections), added bacteria to their guts more slowly.⁴ The long-term effects of this may be that more calories will be absorbed, which can lead to obesity, over the child's lifetime.⁵ Bacteria also enter the baby's gut by breast-feeding. There are three ways a baby might not pick up as many helpful bacteria:¹

- if a baby is born through caesarean section
- if the mother takes antibiotics around the time of the baby's birth
- if the baby is bottle-fed, rather than breast-fed.

Taking probiotics before the birth can help increase the number of helpful bacteria. And it may reduce the risk of the baby developing an allergy in the airway⁶ (*e.g.*, to pollen) or to the protein in cow's milk.⁷



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Who should take probiotics during pregnancy?

Consider taking probiotics if you or the baby's father have allergies or eczema or if other members of your families have had these conditions.

What are some foods that contain probiotics?

Some probiotic foods include the following:

- good quality yogurts that contain live bacteria (Not all yogurts have live bacteria. Look at the label on the back.)
- kefir (a drink made from fermented milk)
- fermented milk

Are some probiotics better than others?

Watch for the following when you choose probiotics:

- Purchase foods that contain live cultures.
- Make sure the food is not past the expiration date printed on the container.
- Try to use products that are refrigerated, as they often contain live, healthier cultures of bacteria.
- Protect probiotics from direct light.

Many types of bacteria are probiotics. Probiotics with a name starting with "lactobacillus" are the most likely to prevent eczema in infants who are at risk for allergies. *Lactobacillus rhamnosus* has reduced the number of children who develop skin allergies.⁸⁻¹⁰ The benefits from this probiotic are long-lasting. It helps lactobacillus grow in the birth canal. A baby then picks up the bacteria while moving through the birth canal.

For more information on probiotics, see our handout [Probiotics and Prebiotics](#).

When should I take probiotics?

Start taking a probiotic two to four weeks before your due date. If you breastfeed your baby, continue taking them two weeks to six months after your baby is born.

What amount should I take?

Probiotics are dosed as a number of colony-forming units (CFU). If you are pregnant, take 10^{10} (ten billion) CFUs of lactobacillus a day for two to four weeks before the baby's due date. To make this easier, consider eating/drinking one serving per day of high quality, organic yogurt or kefir with live, active cultures.

What can I do if my baby is bottle-fed?

If your baby is bottle-fed, a probiotic can be added to the formula. Do not do this if your baby was premature or does not have a healthy immune system (the body's ability to fight disease). One-half capsule of a probiotic containing a billion (10^9) colony forming units can be used.



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What are the side effects of probiotics? Can anyone take them?

Probiotics tend to be very safe. Because of the live bacteria, it may be best to avoid taking them if you have any of the following conditions:

- your immune system is weak
- you currently have a medical device in place, such as a port or catheter
- you have severe pancreatitis (inflammation of the pancreas—an organ that helps digest your food).

Do not give foods containing probiotics to premature babies born before 34 weeks.

Best wishes for a healthy baby!

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The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote the health of your baby and yourself.

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