Kombucha and Pregnancy: Answers to Your Brewing Questions

Kombucha: fizzy, fermented, and full of probiotics. Some people drink kombucha for its fun effervescence and wide range of fruity flavors. Others, for its alleged health benefits ranging from improved digestion to lowered blood sugar. The increasing popularity of kombucha has not surprisingly led to an increased number of inquiries to MotherToBaby about the safety of drinking it during pregnancy. Carly, a recent visitor to our online chat service, explained that she had been drinking kombucha for years, but now that she was trying to get pregnant was it okay to keep drinking it? Great question! I'll share here what I talked about with Carly.

But first, what is kombucha? Kombucha is a sweetened green or black tea fermented with a symbiotic colony of bacteria and yeast, otherwise known as a SCOBY. Symbiotic means that the bacteria and yeast work together in balance. If you've never seen a scoby, let me give you a visual: a pale, rubbery, gelatinous disk vaguely resembling some sort of extraterrestrial organ. Not something most people would find appetizing from the get-go! But once the scoby is added to sweetened tea and left to ferment for a period of weeks, the result is a tangy, bubbly beverage that is slightly alcoholic, which brings me to the first consideration I discussed with Carly about drinking kombucha in pregnancy.

Kombucha and Pregnancy

Alcohol

Kombucha contains alcohol as a natural by-product of the fermentation process. In the United States, beverages containing 0.5% or more alcohol by volume (ABV) are required to have a label that includes a health warning for pregnant women. Varieties with lower alcohol content (less than 0.5 % ABV) are not required to have the label. Nevertheless, the non-labeled varieties still contain alcohol. For non-pregnant women, these small amounts of alcohol do not have a known risk; but in pregnancy, the advice of major medical organizations is to avoid alcohol altogether. Especially since the alcohol content of kombucha is not always clear-cut.

Most of the time, the manufacturing process can stabilize kombucha after it is bottled. However, kombucha has been pulled from shelves in the past after it was discovered that fermentation in the bottle did not stop, increasing the alcohol content above the amount that would require the pregnancy-warning label. And determining the alcohol content of homebrewed kombucha is difficult. Homebrews can reach as high as 3% or more depending on the type of yeast used in the scoby, how long and at what temperature the tea ferments, and other factors.

The best way to avoid unnecessary alcohol exposure in pregnancy is to not drink kombucha for those 9 months. And what about during breastfeeding? If you do enjoy an "alcohol-free" kombucha from time to time, the small amount of alcohol it might contain is unlikely to have a negative effect on your infant. Yet waiting a couple of hours after drinking the kombucha before nursing again will allow time for your body to metabolize the alcohol from your blood and breast milk.

Bacteria

Another concern about drinking kombucha in pregnancy is the possibility of bacterial contamination. Using proper sterile techniques can reduce harmful bacteria in the product, but the best way to eliminate any bacteria that might grow during the long fermentation process is to pasteurize the beverage with a quick heat treatment before bottling. Kombucha purists may argue that pasteurization destroys the probiotics responsible for the health benefits that kombucha may provide. However, unpasteurized products are not recommended in pregnancy due to an increased chance of foodborne bacteria such as listeria and salmonella, which can cause pregnancy complications. Unpasteurized products to avoid include certain milk and dairy products, and yes, fermented foods and beverages such as kombucha.

Homemade fermented foods carry an even greater risk of growing foodborne bacteria since the sterilization methods used at commercial facilities are not available in one's own kitchen. So when it comes to fermented products in pregnancy, store-bought selections that are pasteurized are the safest way to go. This means avoiding "raw" or unpasteurized kombucha, as well as homebrewed varieties.

Caffeine

A final consideration I discussed with Carly was caffeine. The general recommendation in pregnancy is to limit caffeine to about 200 milligrams (mg) per day. The caffeine content of kombucha can vary based on the type of tea used to brew it, and may fall somewhere in the 15-130 mg range. When calculating how much caffeine you're taking in, consider all potential sources including coffee, tea, soft drinks, and chocolate. The MotherToBaby fact sheet on caffeine lists the amounts found in some common products, and can be helpful for tallying up your daily intake (be sure to also check your product labels). For example, if you already drink a cup or two of regular coffee in the morning, a bottle of kombucha might put you over the recommended amount of caffeine for the day.

If breastfeeding, keep in mind that caffeine passes into the breast milk and can cause some babies to be irritable or have trouble sleeping. While you might not need to avoid caffeine altogether while breastfeeding, limiting the amount you take in can up the chances of a good night's sleep for both you and baby.

In the end, Carly decided that foregoing her beloved brew for the duration of her future pregnancy would be in the best interest of her developing baby. In the meantime, she'll opt instead for water to stay well-hydrated, and for carbonated fruit spritzers and juices when she gets a craving for the uplifting fizz that kombucha provides. Cheers to that, Carly!

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Kombucha and Pregnancy: Answers to Your Brewing Questions

By Men-Jean Lee, MD, a maternal-fetal medicine physician and member of MotherToBaby's sister society, the Society for Maternal-Fetal Medicine

From gender reveal parties to pregnancy photoshoots and prenatal massage, pregnancies are being celebrated in new and sometimes extravagant ways. The travel trend of "babymoons" continues to grow in popularity and most go off without a hitch. Unfortunately, as a maternal-fetal medicine physician in Hawaii, I've seen my fair share of trips that do not go according to plan. If pregnant, consult your doctor or midwife, especially when flying or traveling far from home. Also keep these tips in mind if you are a considering a babymoon.

Women with high-risk pregnancy issues should consult their local maternal-fetal medicine physician to discuss any medical and obstetrical issues before putting a deposit down for babymoon. And what do you do if you end up being grounded? Save the money for a really fabulous push present!

Men-Jean Lee, MD, is a maternal-fetal medicine physician and associate professor at the John A. Burns School of Medicine at the University of Hawaii at Manoa practicing at the Kapiolani Medical Center for Women and Children. She is a member of MotherToBaby's sister society, the Society for Maternal-Fetal Medicine, the only national, professional organization specifically devoted to reducing high-risk pregnancy complications. Dr. Lee's research interests include maternal stress during pregnancy, diabetes, immigrant healthcare, and placental biology.

- **Bring Your Medications…And Use Them**
  Do you need medications that you can only get in the U.S.? Certain life-saving medications cannot be obtained in other parts of the world. Or maybe you are supposed to be checking your blood sugars if you are pregnant and have diabetes? Just because you are on holiday, doesn't mean you can let yourself go! Stick to your carb-controlled diet and your insulin, so that you don't end up in a hospital where there is not a medical intensive care unit.
- **Is Your Pregnancy "High Risk"?**
  Are you pregnant with twins or triplets? Did you deliver any of your older children earlier than 37 weeks? If so, you are at increased risk of preterm birth. Be aware that if you go into preterm labor on the beaches of Hawaii, you might get stranded and hospitalized in paradise until the babies are born! And if they are born "premie" or prior to 36 weeks, you might need to book a hotel to stay there until the babies are big enough to fly home.
- **Don't Fly After 36 weeks…and for Some women, Don't Fly at All**
  Are you at the end of your pregnancy? Experts recommend that most pregnant women stop flying once they've reached 36 weeks gestation. Air travel is not recommended at any time during pregnancy for women who have medical or obstetric conditions that may be exacerbated by a flight or that could require emergency care (e.g. a history of DVT [blood clot in a vein] or a pulmonary embolus [blood clot in the lung], stroke, heart attack, uterine cramping, leakage of fluid from the vagina, shortened cervix, or vaginal bleeding). If you have one of these conditions or if your doctor told you it's not safe, stay close to your OB care provider and the hospital where you plan to deliver.

- **Be Mindful of Zika "Hot Spots"**
  The Zika virus poses serious threats to your developing baby (for more info, see MotherToBaby's Zika Virus Fact Sheet). If your idea of the perfect babymoon is a tropical getaway, check to see if your destination has Zika-bearing mosquitoes. Parts of Mexico, South America, and most Caribbean islands are still on the Zika watch list. Unless you and your partner are committed to trading in your sunscreen for insect repellant or staying indoors with the windows closed, you might want to book a trip to picturesque Prince Edward Island!
- **Skip the Glass of Wine**
  While in vacation mode, you may be tempted to indulge in a glass of wine, a beer, or a margarita, but don't do it. There is no known safe level of alcohol consumption during pregnancy. Prenatal exposure to alcohol is the leading preventable cause of birth defects and developmental disabilities. Check out MotherToBaby's Alcohol Fact Sheet for more info.

Women with high-risk pregnancy issues should consult their local maternal-fetal medicine physician to discuss any medical and obstetrical issues before putting a deposit down for babymoon. And what do you do if you end up being grounded? Save the money for a really fabulous push present!

Society for Maternal•Fetal Medicine
High-risk pregnancy experts

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Kombucha and Pregnancy: Answers to Your Brewing Questions

By Lori Wolfe, Certified Genetic Counselor and Teratogen Information Specialist, MotherToBaby North Texas

Have you ever had a pregnant friend tell you, “it is OK to have just one glass of wine now and then, that’s what my doctor said,” or “my mother drank beer when she was pregnant with me, and I turned out fine.” As a Teratogen Counselor (a birth defects expert), I hear these statements more than you would imagine. You may think it is common knowledge that there is no safe level of alcohol use during pregnancy, and that any use of alcohol while pregnant has the potential to harm the baby. Yet that message is not getting out there to everyone. Studies have long shown that heavy use of alcohol during pregnancy can cause Fetal Alcohol Syndrome, while more recent studies suggest that moderate use (and possibly even light use) can cause long term developmental problems in an exposed child. In fact, Fetal Alcohol Spectrum Disorder is thought to be the leading cause of developmental delays in children. Despite this, studies also show that 1 in 10 to 1 in 13 women continue light drinking of alcohol, even after they know they are pregnant. So I started thinking… Why do some woman continue to drink alcohol during pregnancy?

1. You Didn’t Know You Were Pregnant
Most women find out they’re pregnant when they are 4-6 weeks along – and many may not recognize the signs of pregnancy for quite a few months. So unless you are planning your pregnancy (50% of all pregnancies today are unplanned!), you may indulge in alcoholic beverages before you even know you are pregnant. Thankfully, the majority of women will stop using alcohol once they find out they are pregnant. But unfortunately, the damage could already be done. Harmful exposures (like alcohol) during those first critical weeks of pregnancy have the greatest risk of causing major birth defects. This is why experts at the Centers for Disease Control and Prevention (CDC) recommend that women avoid alcohol not only if they are pregnant or trying to become pregnant, but also if they are sexually active and not using an effective method of birth control.

2. Mixed Messages
It’s not uncommon for pregnant women to receive mixed messages from people they trust about how safe alcohol may be in pregnancy. Even her own doctor may tell her that an occasional glass of alcohol won’t harm her baby. There’s a lot of misinformation out there, even among healthcare providers! It’s important for you and your healthcare provider to keep in mind that the experts at the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics (among many others) advise that women avoid alcohol entirely while pregnant, because no amount of alcohol – even light-to-moderate amounts – can be considered safe for a developing baby.

3. It’s A Social Thing
Social pressure from family or friends can be strong. If a woman is used to going out on weekends with her friends and everyone has a glass of wine, she may feel that she needs to drink too, just to fit in. Plus many women feel that the risk of having just a little alcohol during pregnancy is low. These same woman may be doing everything else that they can to remove all other risks to their pregnancy, but they still continue to use alcohol. At MotherToBaby, we understand that the use of alcohol during pregnancy may have perceived benefits to a woman. But we also know that alcohol provides ZERO benefit for a developing baby, and, in fact, can only harm the baby. And because the exact amount of alcohol that could harm a baby is unknown at this point (and does vary woman-to-woman and even pregnancy-to-pregnancy), our philosophy is: WHY TAKE THE RISK?

4. It Helps Me Relax, De-Stress, and Just Deal with Everyday Life
Recently a 35 year old caller told me that she continued to enjoy a half glass of wine every weekend as a treat to herself. “Susan” (not her real name) knew that she was not supposed to drink alcohol, and she even said she got a lot of negative feedback from family and friends, yet she continued to drink throughout her pregnancy. Without realizing it, Susan and other women may be using alcohol to help deal with other unrecognized issues in their lives, such as depression and anxiety, high levels of stress, or little outside support for the pregnancy. At MotherToBaby, it is our job

to help women understand how fragile and vulnerable a pregnancy can be to certain exposures; alcohol is one of the dangerous ones. While it may seem a hardship to give up alcohol entirely while pregnant, think about it this way: Pregnancy is only 9 months long (less if you base it on when a woman learns she is pregnant). If a woman is strong enough to survive childbirth, courageous enough to take on the toughest job on earth (parenthood), and resilient enough to survive that job, then abstaining from alcohol for the duration of a pregnancy is nothing. And if it means giving your baby a chance at the best possible start in life, then not drinking alcohol while pregnant is everything.

What Do We Know? There is not a known safe level of alcohol use during pregnancy.
We have known about Fetal Alcohol Syndrome for over 40 years now. Dr. Kenneth Jones, the doctor who first named Fetal Alcohol Syndrome in 1973 states: "When talking about the prenatal effects of alcohol, we usually think exclusively about the dose, the strength, and the timing of alcohol exposure. However, perhaps even more important are factors involving the mother – her genetic background and nutritional status to name just two. Without knowing those genetic and nutritional factors that are critically involved with the way a woman metabolizes alcohol, it is not possible to make any generalizations about a "safe" amount of alcohol during pregnancy." Studies have shown moderate use, and possibly even light use, of alcohol during pregnancy can cause long term developmental problems in the exposed children. In fact, Fetal Alcohol Spectrum Disorder is thought to be the leading cause of developmental delays in children. Scientists are continuing to study how and why alcohol affects the developing baby, and in future years we will know more about this. But for now we do know there are always risks with drinking alcohol during pregnancy.

Lori Wolfe is a board certified Genetic Counselor and the Director of MotherToBaby's North Texas affiliate. MotherToBaby aims to educate women about medications and more during pregnancy and breastfeeding. Along with answering women's and health professionals' questions regarding exposures during pregnancy/breastfeeding via MotherToBaby's toll-free number and by email, Wolfe also teaches at the University of North Texas, provides educational talks regarding pregnancy health in community clinics and high schools, and counsels adoptive parents.

MotherToBaby is a service of OTIS, a suggested resource by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about viruses, alcohol, medications, vaccines, diseases, or other exposures, call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's new text information service by texting questions to (855) 999-3525. You can also visit MotherToBaby.org to browse a library of fact sheets, email an expert or chat live.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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Kombucha and Pregnancy: Answers to Your Brewing Questions

By Chris Colón, Certified Genetic Counselor at MotherToBaby Arizona

During pregnancy, many women make changes in their lives in order to have the best chance to have a healthy baby. I know I did during both of my pregnancies. These changes can involve their diet, exercise habits and other lifestyle factors. After birth, new moms may consider adding back some of the things they cut out over the last 9 months, including drinking alcohol. But is adding it back in that simple? During September's Fetal Alcohol Spectrum Disorders (FASD) Awareness month, I thought I'd examine the topic of alcohol in breastmilk a little more closely for you. It's a question I get frequently from the women who contact our service. As you probably know, for years, experts have been saying there is no known safe amount of alcohol use during pregnancy, but does alcohol affect a breastfeeding baby?

Before you raise your glass of favorite vino, here's what research says…

Studies have shown that alcohol passes into the breast milk. The concentration of alcohol in the breast milk is close to the concentration of alcohol in the woman's bloodstream. Alcohol can pass back and forth from the bloodstream into the breast milk. It's a common myth that pumping and discarding breast milk will remove the alcohol from breast milk. Even if you discard pumped breast milk after drinking, alcohol still remains in your blood for a period of time, depending on how much you had to drink. The only way to get rid of alcohol from your system is to wait for your body to break it down and get rid of it. It takes about 2 to 2.5 hours for each standard drink to clear from breast milk. (A standard serving is considered to be 12 ounces of beer, 4-5 ounces of wine, or 1.5 ounces of hard liquor.) For each additional drink, a woman must wait another 2-2.5 hours per drink. Pumping and discarding, drinking water, taking caffeine, or exercising do not help your body get rid of the alcohol faster, because only time can reduce the amount of alcohol in the breast milk.

More misconceptions…

Another common misconception is that drinking during breastfeeding is recommended to help produce more breast milk. It used to be believed that beer raised levels of prolactin, a hormone in the body that plays a role in making breast milk. However, alcohol may actually reduce the amount of milk you produce. It is now known that alcohol lowers the release of another hormone called oxytocin. Lower oxytocin levels can affect the amount of milk that is released from the breast, meaning a baby may get less milk.

Alcohol's known effect on baby

Many people wonder if alcohol affects a growing baby. Effects on infants from alcohol in breast milk are not well studied. There are some reports that babies whose mothers drink alcohol while breastfeeding may eat less and/or experience changes in their sleeping patterns. One study suggested problems with motor development following exposure to alcohol in breast milk, but other studies did not show the same results. There are many factors that can play a role in how alcohol can possibly affect a developing baby. Differences in genetics and metabolism of alcohol by both the mother and the baby may result in a wide range of risk. The risk may be different even in different babies from the same mother. At this time, it's not clear how alcohol in breast milk can affect a developing baby.

Depending on the amount of alcohol you drink and the frequency with which you drink, you may not need to stop breastfeeding if you drink alcohol. You can speak with your health care provider as well as the baby's pediatrician about how much alcohol you are drinking as well as all your choices for breastfeeding. You can also contact a MotherToBaby counselor at (866) 626-6847 to talk about alcohol and other exposures during breastfeeding.

Chris Colón is a certified genetic counselor based in Tucson, Arizona and proud mother of two. She currently works for The University of Arizona as a Teratogen Information Specialist at MotherToBaby Arizona, formerly known as the Arizona Pregnancy Riskline. Her counseling experience includes prenatal and cardiac genetics, and she has served as MotherToBaby's Education Committee Co-chair since 2012.

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