

Alcohol and Breastfeeding

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KEY MESSAGES

New mothers and health care providers need accurate information about the effects of alcohol intake while breastfeeding. This issue paper summarizes what is known about the effects of alcohol use on lactation, as well as the impact of alcohol use while breastfeeding on infant and child health.

Issue:

Prenatal alcohol exposure can result in a range of complex physical, mental, and behavioural disabilities, collectively known as Fetal Alcohol Spectrum Disorder (FASD) [1-4]. Although alcohol exposure through the consumption of breast milk does not cause FASD, there is some evidence to indicate that it can negatively affect infant and child development [5, 6].

The purpose of this issue paper is to summarize the available evidence on the potential risks of alcohol use while breastfeeding on infant and child health.

Background:

Historically, alcohol consumption was encouraged during breastfeeding as it was seen to help women relax, promote lactation (i.e., the secretion of milk) and letdown (i.e., the release of milk from the breast), as well as enhance infant sleep. However, in recent years, the advice about alcohol use when breastfeeding has changed because of the increased understanding regarding how alcohol passes into breast milk, as well as concern for potential adverse effects on infant and child development [6-8].

However, research on alcohol use while breastfeeding is still limited. Existing research has focused on both the effects of alcohol on lactation, and on the short- and long-term effects of alcohol exposure via breastmilk on the infant.

This issue paper has been updated from a previous version entitled "Breastfeeding and Fetal Alcohol Spectrum Disorder."

The authors would like to thank Dr. Kelly Harding, Audrey McFarlane, and Dr. Jocelynn Cook for reviewing this work.

1. Impact of alcohol use on milk production

Breastfeeding is controlled by the two pituitary hormones, prolactin and oxytocin [7, 8]. Prolactin stimulates the production of breast milk and oxytocin causes the smooth muscle cells surrounding the mammary tissue to contract, resulting in the ejection of milk stores [9-11]. However, recent evidence has shown that alcohol can disrupt the release of oxytocin and prolactin, leading to a decrease in milk production and availability [5, 7, 8, 11]. While further research is needed to determine the impact of temporary or episodic decreases in milk production, it is possible that long-term reduction in milk production could result in infants receiving less milk than they need to achieve optimal growth, or requiring supplementation with an infant formula.


2. Impact of alcohol use when breastfeeding on infant and child health

The timing of alcohol use in relation to breastfeeding can impact infants' alcohol exposure, as breastfeeding infants are exposed to alcohol ingested by the mother at the same concentration as in maternal blood via the breast milk [7, 12, 13]. However, because infants cannot metabolize alcohol in the same way as adults, they are at potential risk of alcohol-related harm. Some studies have shown that these harms may include effects on growth, motor development, sleep patterns, and short term cognitive development [6, 8]. Other studies have not demonstrated the same negative effects in these areas. Rather, these studies found that low level drinking during breastfeeding was not linked to shorter breastfeeding duration or adverse outcomes in infants up to 12 months of age; including effects on infant feeding and sleeping behaviour, and developmental outcomes [12]. Given the known limitations to research on the metabolization of alcohol by infants and the lack of certainty of the possible adverse effects on infant development, it is recommended that women who are breastfeeding drink very moderately and plan ahead to consume alcohol immediately after, and not before, breastfeeding. In this way, infants are exposed to the very least amount of alcohol. Moreover, further research is needed to determine the short- and long-term effects of postnatal alcohol exposure via breast milk.

Recommendations:

- Primary health care providers need to discuss with women what is known (and not known) about the effects of consuming alcohol during the lactation period to enable women to make informed decisions about their alcohol use during this time. Lactation consultants, public health nurses, midwives, and family physicians can all provide information and support for new mothers on this issue.
- Given the lack of evidence about the potential health effects, it is safest not to drink alcohol when breastfeeding. If women choose to drink in the period when they are breastfeeding, they need to be cautious about both the amount they drink and the timing, so that infants are exposed to the least amount of alcohol possible.
- Women are advised to follow the evidence-based recommendations in Canada's Low Risk Alcohol Drinking Guidelines [14], when not pregnant, pregnant, or in the lactation period, for their own health as well as for fetal and child health.

Recommended Resources:

	<p>Mixing Alcohol and Breastfeeding (2020) This brochure for new parents provides information and tips about the risks of alcohol use while breastfeeding.</p> <p>https://resources.beststart.org/product/a21e-mixing-alcohol-and-breastfeeding-brochure/</p>
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Conclusion:

We cannot definitely say what are the effects of alcohol consumption when breastfeeding. Even with further research, it will always be difficult to assign health outcomes to exposure to alcohol via breastmilk, due to multiple confounding factors. For women and health care providers, the clearest messages that can be offered based on the available evidence are: a) it is safest not to drink alcohol when breastfeeding, and b) if you do choose to drink alcohol when breastfeeding, practice harm reduction measures as described in the recommendations.

References:

1. Cook, J.L., et al., *Fetal alcohol spectrum disorder: A guideline for diagnosis across the lifespan*. CMAJ 2016. **188**(3): p. 191 - 197.
2. Chudley, A.E., et al., *Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis*. CMAJ: Canadian Medical Association Journal, 2005. **172**(5 Suppl): p. S1 - S21.
3. Guerri, C., A. Bazinet, and E.P. Riley, *Foetal Alcohol Spectrum Disorders and alterations in brain and behaviour*. Alcohol Alcohol, 2009. **44**(2): p. 108 - 114.
4. Carson, G., et al., *Alcohol use and pregnancy consensus clinical guidelines*. Journal of Obstetrics & Gynaecology Canada: JOGC, 2010. **32**(8): p. s1 - s31.
5. Mennella, J.A., *Regulation of milk intake after exposure to alcohol in mothers' milk*. Alcoholism: Clinical & Experimental Research, 2001. **25**(4): p. 590 - 593v.
6. Gibson, L. and M. Porter, *Drinking or smoking while breastfeeding and later cognition in children* Pediatrics, 2018. **142**(2).
7. Hastrup, M.B., A. Pottgard, and P. Damkier, *Alcohol and breastfeeding*. Basic and Clinical Pharmacology and Toxicology, 2014. **114**: p. 168 - 173.
8. Giglia, R. and C.W. Binns, *Alcohol and lactation: A systematic review*. Nutrition and Dietetics, 2006. **63**: p. 103 - 116.
9. Mennella, J.A., *Alcohol's effect on lactation*. Alcohol Research and Health, 2001. **25**(3): p. 230 - 234.
10. de Oliveira Rocha, B., et al., *Risk factors for delayed onset of lactogenesis II among primiparous mothers from a Brazilian baby-friendly hospital*. Journal of Human Lactation, 2020. **36**(1): p. 146 - 156.
11. Mennella, J.A. and M.Y. Pepino, *Breastfeeding and prolactin levels in lactating women with a family history of alcoholism*. Pediatrics, 2010. **125**(5): p. e1162 - e1170.
12. Yang Tay, R., et al., *Alcohol consumption by breastfeeding mothers: Frequency, correlates, and infant outcomes*. Drug and Alcohol Review, 2017. **36**: p. 667 - 676.
13. Giglia, R.C., et al., *The effect of alcohol intake on breastfeeding duration in Australian women*. Acta Paediatrica, 2008. **97**(5): p. 624-629.
14. Butt, P.B., Doug; Gliksman, Louis; Paradis, Catherine; Stockwell, Tim, *Alcohol and Health in Canada: A Summary of Evidence and Guidelines for Low-Risk Drinking*. 2011, Canadian Centre on Substance Abuse: Ottawa, ON.