

## Breastfeeding and Fetal Alcohol Spectrum Disorder

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### Issue

While the harmful effects of consuming alcohol during pregnancy are well established <sup>i,ii,iii,iv,v,vi</sup>, the adverse consequences of alcohol intake while breastfeeding have not been fully evaluated. Prenatal alcohol exposure can cause Fetal Alcohol Spectrum Disorder (FASD), which describes the range of complex physical, mental, and behavioural disabilities that can occur. Although alcohol exposure through the consumption of breast milk does not cause FASD, it can impact central nervous system development <sup>vii</sup>.

### Background

Historically, alcohol consumption was encouraged during breastfeeding as a way to help women relax, promote lactation and letdown, as well as enhancing infant sleep. In recent years, most doctors have adopted a more conservative approach, recommending abstinence while breastfeeding since it is now known that alcohol passes easily from the bloodstream of the mother into her breast milk <sup>viii</sup>. Research on alcohol use during lactation has focused on three broad areas: the effect of alcohol on lactation; the excretion of alcohol into milk; and the short- and long-term effects of alcohol on the nursing infant.

### Breastfeeding and Alcohol

Breastfeeding is controlled by the two pituitary hormones prolactin and oxytocin. Prolactin stimulates the production of breast milk and oxytocin causes contraction of the smooth muscle cells surrounding the mammary tissue, causing ejection of milk stores<sup>ix</sup>. Research has shown that alcohol can disrupt the release of oxytocin and prolactin leading to a decrease in milk production and availability <sup>x</sup>. After consuming alcohol, women took longer to eject the first drop of milk and produced less milk overall compared to women who did not consume alcohol<sup>13</sup>. While further research is needed to determine the impact (if any) of temporary or episodic decreases in milk production, it is possible that long-term reduction in milk

production may result in infants receiving less milk than they need to achieve optimal growth, or requiring supplementation with an infant formula.

Alcohol has been shown to adversely affect brain structures and function across the lifespan. Breastfeeding infants are exposed to a fraction of the alcohol ingested by the mother, via breast milk. However, they metabolize alcohol at a much slower rate compared to adults<sup>xi,xii</sup>, thereby placing them at increased risk of alcohol-related harm. Though FASD, by definition, can only be caused by prenatal alcohol exposure, research has shown a number of adverse consequences following postnatal exposure to moderate levels of alcohol. In particular, babies brains continue to undergo a rapid period of growth during the first three years of life, and the neurotoxic effects of alcohol exposure during this period introduce risks to central serves system development. Research suggests that these include compromised motor development<sup>xiii</sup> and changes in sleep patterns<sup>xiv</sup>. In addition, animal studies have shown that animals born at normal birth weights who are exposed to alcohol during the lactation period exhibit growth deficits, possibly attributed to a decrease in milk consumption following prenatal alcohol exposure and/or exposure to alcohol through breast milk<sup>xv</sup>. More research is needed to determine and define the extent to which these findings are applicable to humans, and to elucidate the long-term effects of alcohol exposure through breast milk on infant development.

## Recommendations

- Primary health care providers and public health professionals need to educate women about the known and unknown risks associated with consuming alcohol during the lactation period to enable them to make informed decisions about their alcohol use during this time.
- There is no evidence available to support a recommendation of absolute abstinence from alcohol for the duration of breastfeeding. However, women should be cautious about their consumption of alcohol while breastfeeding, should they choose to consume alcohol. The Motherisk program has produced an algorithm to help breastfeeding mothers and their health care providers determine the length of time needed to completely eliminate alcohol from breast milk, thus ensuring that their infants are not exposed:  
([http://www.motherisk.org/women/updatesDetail.jsp?content\\_id=347#table1](http://www.motherisk.org/women/updatesDetail.jsp?content_id=347#table1))<sup>xvi</sup>. All women are advised to follow the evidence-based recommendations described in Canada's Low Risk Drinking Guidelines<sup>xvii</sup> Lcation consultants, public health nurses, your midwife, or your family doctor can all provide information and support for nursing mothers on this issue.
- **More research is needed to determine the short and long term effects of postnatal alcohol exposure via breast milk on developing infants.**

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