

Alcohol & Lactation: *Systematic Review Findings*



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SSA Conference 2009

Why?

To protect and promote infant's health by supporting breastfeeding when safe to do so and discouraging this where the evidence strongly indicates it is unsafe.

To produce recommendations on the findings of the SR to inform breastfeeding women and clinicians.

Breastfeeding

- Optimal source of nutrition for babies.
- Reduces risk of ovarian and breast cancer.
- Current Trust guidelines only contraindicate specifically on the grounds of HIV.
- Many drugs contraindicated or caution + monitoring advised.

Current recommendations

- Clear guidance on safe alcohol levels in breastfeeding and how long a mother should wait between ingestion and feeding are lacking.
- US/ Canada advise abstinence when breastfeeding.
- Department of Health (2008) advise women to drink no more than 1-2 units per week during breastfeeding, as in pregnancy.

Maternal drinking

Current wisdom:

1. Historically regarded as a galactagogue.
2. Thought to impair mental and motor development.
3. Causes stimulation to the infant's CNS leading to disturbed sleep.
4. Shortens breastfeeding duration.

Findings:

Effect on lactation

Decreased milk intake

- Reduced milk intake by the human infant and rat pup.
- 9% reduction in milk yield after alcohol consumption.
- Compensation phenomenon.

Milk ejection or milk synthesis?

- Altered milk-ejection reflex because of inhibition of oxytocin.
- Although alcohol affects prolactin levels, effect is not pronounced or sustained.
- Prolactin and breast fullness.

Bioavailability of alcohol

- Lactation alters alcohol pharmacokinetics. Systemic availability of alcohol is reduced by 20% in lactating women (compared to nulliparous women) (Pepino et al 2007).
- Lactating women also had significantly lower BAL compared to non-lactating women.

Effects observed with maternal alcohol doses as low as 0.3g/kg.

Findings:

Effects on the infant

Blood Alcohol Levels (BAL)

- Alcohol is present in breast milk as long as mother has measurable BAL. Approx. 0.4 to 3.3% of maternal dose passes to the infant

Sleep

- Disrupted sleep-wake cycles: active sleep ↓
duration of sleep bouts ↓
- Compensation occurred when the test period extended (Mennella and Garcia-Gomez 2001).

Behaviour

Schuetze et al (2002) examined feeding interactions and infant behaviour following mothers' consumption of 0.3g/kg alcohol.

Crying ↑ Startling ↑ Also, mood changed more and babies more irritable.

Mothers behaved differently towards their babies:

- ↑ maternal non-contingency and ↑ dyadic conflict.
- demonstrated alcohol's negative effect on the mother and child's relationship.

Infant development

- Few studies exist.
- Slight but significant effect on infant's motor development when mothers drank >3.5 units/day (Little et al 1989).
- No effect on mental development.
- Study has never been replicated.
- Newly published animal research casts doubt on whether alcohol during lactation actually does cause deficits in motor function (Cebolla et al 2009).

Algorithm of alcohol clearance

Mother's weight kg	No. UK Units (Hours. Minutes)							
	1	2	3	4	5	6	7	8
43.1	1.36	3.12	4.48	6.24	8.00	9.36	11.12	12.48
45.4	1.34	3.07	4.41	6.15	7.48	9.22	10.55	12.29
47.6	1.32	3.04	4.36	6.08	7.40	9.11	10.43	12.15
49.9	1.30	3.00	4.31	6.01	7.31	9.01	10.31	12.01
52.2	1.28	2.57	4.25	5.54	7.22	8.51	10.19	11.48
54.4	1.27	2.53	4.20	5.47	7.14	8.40	10.07	11.34
56.7	1.25	2.50	4.15	5.40	7.05	8.30	9.55	11.20
59.0	1.23	2.47	4.10	5.33	6.56	8.19	9.43	11.06
61.2	1.21	2.43	4.05	5.26	6.48	8.09	9.31	10.52
63.5	1.20	2.41	4.01	5.21	6.42	8.02	9.22	10.43
65.8	1.19	2.37	3.56	5.14	6.33	7.52	9.10	10.29
68.0	1.17	2.35	3.52	5.10	6.27	7.45	9.02	10.20
70.3	1.16	2.33	3.49	5.05	6.22	7.38	8.54	10.10
72.6	1.15	2.30	3.45	5.01	6.16	7.31	8.46	10.01
74.8	1.13	2.27	3.40	4.54	6.07	6.21	8.34	9.47
77.1	1.12	2.25	3.37	4.49	6.01	7.14	8.26	9.38
79.3	1.11	2.22	3.33	4.44	5.55	7.07	8.18	9.29
81.6	1.10	2.20	3.30	4.40	5.50	7.00	8.10	9.20
83.9	1.09	2.18	3.26	4.35	5.44	6.53	8.02	9.10
86.2	1.08	2.16	3.25	4.33	5.41	6.49	7.57	9.06
88.5	1.07	2.14	3.21	4.28	5.35	6.42	7.49	8.56
90.7	1.06	2.12	3.18	4.24	5.30	6.35	7.41	8.47

Recommendations

Women require meaningful guidance so that abstinence from alcohol whilst breastfeeding does not seem an unrealistic burden.

These recommendations should inform practitioners and offer a welcome guide to parents.

Recommendations

- Counselling from health professional (GP, midwife, health visitor) about the effects of alcohol on lactation and the infant.
- Abstinence from alcohol for the first two months following delivery whilst lactation is established.
- After this, less than 0.3 g/kg alcohol per day to be consumed.
- If women do not wish to expose their baby to any alcohol which results in long periods without feeding directly from the breast, a referral to a lactation specialist/counsellor may be warranted.
- If alcohol is consumed, leave at least one hour before breastfeeding again. Preferably eat before consuming alcohol.

Recommendations

- Do not consume alcohol if planning to feed within one hour of baby's longest bout of sleep (if this is known).
- Regular (i.e. monthly) weight check for breastfed babies of chronic/regular alcohol drinkers.
- Education for practitioners and the public regarding the potential effects of alcohol on the breastfed infant. Health visitors or midwives to issue women with an alcohol clearance algorithm and alcohol units calculator.



References

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This is just a selection of the references used. For the comprehensive list, please refer to the original study held in the libraries of Leeds Metropolitan University and Leeds Addiction Unit or contact the author at: caroline.worsley@nhs.net.