


Interventions to reduce alcohol consumption during pregnancy

January 2017

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This paper should be cited as: Scobie G and Woodman K. *Evidence briefing on interventions to reduce alcohol use during pregnancy*. Edinburgh: NHS Health Scotland; 2016.

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Published by NHS Health Scotland

1 South Gyle Crescent
Edinburgh EH12 9EB

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About this briefing

This briefing aims to provide an update of the best available evidence from systematic reviews* or reviews of effective interventions to reduce alcohol consumption among pregnant women. It is based on a review of the evidence undertaken in 2015 and early 2016.

Key points

- Psychological and educational interventions (e.g. alcohol brief intervention and motivational interviewing) show promise in that they may reduce alcohol consumption during pregnancy. However, evidence is lacking about the impact of these interventions on maternal and/or infant health, with current findings remaining inconsistent. They show no significant difference between the intervention and non-intervention groups.
- Other interventions such as telephone support, ultrasound feedback, public health interventions and home visits did not show any change in alcohol consumption during pregnancy among women who engage in regular heavy drinking.
- Evidence is lacking about the effectiveness of psychosocial and/or pharmacological interventions in response to alcohol dependent pregnant women.
- Due to there being little evidence about the effectiveness of interventions, all of these areas warrant further investigation.

* A systematic review is a complex and time-consuming approach for summarising the results of several carefully designed studies (i.e. controlled trials). As the authors pool together numerical data about the effects of interventions through a process called meta-analyses these reviews are extremely valuable. They also consider the evidence about the benefits and/or harm arising from specific interventions. In this way, systematic reviews summarise the existing research on a topic and the findings are often used to inform recommendations for healthcare policy and practice.

Background

New UK Chief Medical Officers (CMO) guidelines about alcohol consumption¹ recommend an upper limit of 14 units of alcohol per week for both men and women. The report also highlights the fact that any alcohol is a health risk and, in relation to providing a health benefit (e.g. reducing heart disease), it clearly states that 'there is no justification for recommending drinking on health grounds, nor for starting drinking for health reasons'.

In Scotland, Alcohol Brief Interventions (ABI) are commonly used as an intervention to reduce problem drinking. ABIs are typically a short, evidence-based, structured conversation about alcohol consumption with a patient/client that seeks to motivate and support the individual to think about and/or plan a change in their drinking behaviours in order to reduce their consumption and/or their risk of harm².

Although most of the evidence of effectiveness comes from ABIs delivered in primary care^{3, 4, 5} similar interventions have also been evaluated in the antenatal setting.

Alcohol and pregnancy

The health risks of drinking excessive alcohol while pregnant are well documented. Binge drinking (i.e. more than five units on one occasion) and heavier regular drinking during pregnancy can increase the risk of miscarriage, pre-term birth and low birth weight.^{6, 7, 8, 9, 10, 11} In addition, higher levels of alcohol consumption are associated with an increased risk of a wide range of child developmental issues and physical disabilities, including fetal alcohol spectrum disorder (FASD)¹².

The impact of lighter alcohol consumption during pregnancy is less clear. Nonetheless, the new CMO alcohol guidelines¹ recommend that pregnant women or those who think they could become pregnant do not consume any alcohol.

Alcohol consumption during pregnancy

In 2010, around 40% (two out of five) of pregnant women in the UK consumed alcohol during pregnancy, which was fewer than in 2005 (54%)¹³. In Scotland the available figures vary between 20%¹⁴ and 35%¹³ for those reporting drinking during pregnancy.

Among mothers who drank during pregnancy, consumption levels were low. In Scotland, only 4% of all mothers consumed two or more units of alcohol per week on average¹³.

Survey data also shows that it is women from more affluent areas and those from higher socio-economic positions who are more likely to drink during pregnancy^{13, 15}.

However, the data on the proportions of women who drink while pregnant are likely to be an underestimate. This is because alcohol consumption during pregnancy is often derived from self-reported data, which is adversely affected by poor recollection and estimation⁹. Taking this into account alongside the social stigma associated with drinking while pregnant^{6, 9} means that survey data is likely to misrepresent the scale of problem drinking in pregnancy.

Evidence quality

The reader should note that a limited number of primary studies were identified in the reviews: most were USA based, suffered from some aspects of potential bias, and may have limited transferability to the UK setting.

Effective evidence summary

Evidence of effectiveness

Two systematic reviews report some evidence of the effectiveness of psychological and educational interventions, often referred to as 'brief interventions' in reducing alcohol consumption during pregnancy^{6, 16}.

Interventions ranged from a 10-minute education session and the provision of a self-help manual through to an hour-long motivational interview with reinforcement at each prenatal visit. The main primary outcomes measured included abstinence from alcohol and a reduction in alcohol consumption during pregnancy.

Both these systematic reviews showed no significant difference between the intervention and control groups in relation to either alcohol abstinence or the reduction in alcohol consumption.

Individual studies about abstaining or reducing alcohol consumption during pregnancy showed mixed results. However, some showed promise and suggest that psychological and educational interventions may encourage women to abstain from alcohol in pregnancy⁶. There was little follow-up information provided about the effects of these interventions on the health of mothers and their babies (i.e. secondary outcomes). No studies reported an increase in alcohol consumption among the intervention group.

No evidence of effectiveness

Currently we do not have evidence to show the effectiveness of promising interventions (see Appendix 1). However, this lack of evidence is **not** the same as having evidence that shows that an intervention as being ineffective.

Where there is little or no evidence but a need to take immediate action to inform future activities, it is useful to draw on approaches such as that used

by NHS Health Scotland, whereby plausible theory and ethical principles are used to guide decision-making, in combination with the best available evidence¹⁷.

Such potentially promising interventions include psychosocial and pharmacological interventions in response to alcohol dependent mothers. Feedback during ultrasound, home visits, telephone support and other public health interventions show promise in response to regular heavy drinkers. Further details about these interventions can be found in Appendix 1.

Despite the limited evidence supporting ABIs in the antenatal setting, there is significant plausible theory as to why ABIs should be delivered in this setting. With reference to ethical principles, ABIs can do good, not only to the mother but also to the developing fetus. They are equitable, in that every pregnant woman can be screened and offered an ABI, and they are sustainable because of their quick delivery and low implementation costs after the initial training has been completed¹⁷.

Inequality and equality

Some existing data highlights the differences in drinking patterns between different population groups. For example, more affluent mothers tend to consume alcohol more frequently than mothers from disadvantaged backgrounds and, because of their cultural and/or religious beliefs, women from different ethnic groups consume less alcohol than the general population.

While there is limited evidence about the effectiveness of interventions in response to these different populations groups, their specific needs should be routinely considered as part of best practice.

Conclusion

There is limited evidence about what works to reduce alcohol consumption during pregnancy. Currently, psychological and educational interventions such as brief advice and motivational-based techniques show most promise. The inconsistency in results, the paucity of studies, the number of participants, the high risk of study bias and the complexity of interventions limit the ability to determine the type of intervention that would be most effective in increasing abstinence from, or reducing the consumption of alcohol among pregnant women. These limitations highlight the need for further robust studies in this area.

Scottish policy links

Changing Scotland's Relationship with Alcohol: A Framework for Action (Scottish Government, 2009). See: www.gov.scot/Resource/Doc/262905/0078610.pdf and [progress report](#).

Changing Scotland's relationship with alcohol: a discussion paper on our strategic approach (Scottish Government, 2008). See: www.gov.scot/resource/doc/227785/0061677.pdf

Alcohol Guidelines Review – report from the Guidelines development group to the UK Chief Medical Officers 2016. See: www.gov.uk/government/uploads/system/uploads/attachment_data/file/489797/CMO_Alcohol_Report.pdf

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Citation

This report should be cited as: Scobie G and Woodman K. *Evidence briefing on interventions to reduce alcohol use during pregnancy*. Edinburgh: NHS Health Scotland; 2016.

Appendix 1: Promising interventions

Promising interventions requiring further investigation.

- 1 Psychosocial interventions for women enrolled in alcohol treatment during pregnancy.⁷

Comment: No articles met the inclusion criteria so no inference can be made regarding intervention effectiveness.

- 2 Pharmacological interventions for women enrolled in alcohol treatment during pregnancy.⁸

Comment: No articles met the inclusion criteria so no inference can be made regarding intervention effectiveness.

- 3 High feedback versus low feedback of prenatal ultrasound for reducing maternal anxiety and improving maternal health behaviour in pregnancy.¹⁸

Comment: There is insufficient evidence to support either high or low feedback during a prenatal ultrasound to reduce maternal anxiety and promote health behaviour. It is important to note that in one trial, women who had a high feedback during ultrasound were more likely to avoid alcohol during pregnancy. However, the intervention did not relate specifically to alcohol use in pregnancy.

- 4 Home visits during pregnancy and after birth for women with an alcohol or drug problem.¹⁹

Comment: There is insufficient evidence to recommend the routine use of home visits for pregnant or postpartum women with a drug or alcohol problem. It should be noted that most visits were conducted in the postpartum period.

- 5** Telephone support for women during pregnancy and the first six weeks postpartum.²⁰

Comment: No significant difference was identified between the intervention and control group in relation to the number of women who reported that they had not consumed any alcohol in the last month.

- 6** A critical review of public health interventions aimed at reducing alcohol consumption and/or increasing knowledge among pregnant women.²¹

Comment: Due to the paucity of studies utilising a public health intervention (e.g. media campaigns and education interventions) no inference can be made regarding intervention effectiveness.

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