

Is it all right for women to drink small amounts of alcohol in pregnancy?

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YES Until May of this year, the Department of Health advised pregnant women in England not to drink "more than one to two units of alcohol once or twice a week." Since then, both the department and the British Medical Association have changed their stance^{1,2}; pregnant women are now told to avoid alcohol completely. There is no new evidence so why the change?

Fetal alcohol syndrome is a serious condition and is clearly a consequence of heavy alcohol intake during pregnancy.³ Although rare (128 cases in England in 2002-3), it is the leading cause of non-genetic intellectual disability in the Western world. The incidence of the broader range of fetal alcohol spectrum disorders is more difficult to determine, for various reasons, including difficulty in diagnosis, under-reporting, and confounding.⁴

State of evidence

Nevertheless, there is still no evidence that low to moderate alcohol intake in pregnancy has any long term adverse effects. But don't take my word for it. Last year the Royal College of Obstetricians and Gynaecologists concluded a comprehensive analysis with the view that "There is

no evidence of harm from low levels of alcohol consumption, defined as no more than one or two units of alcohol once or twice a week."⁵ In 2003, the Midwife Information and Resource Service updated their evidence based advice: "Women can be reassured that light infrequent drinking constitutes no risk to their baby." The Medical Council on Alcohol reached a similar conclusion,⁶ and a report in 2006 from the National Perinatal Epidemiology Unit in Oxford found "no consistent evidence of adverse health effects from low-to-moderate prenatal alcohol exposure," but it did add that the current evidence is not robust enough to rule out the possibility completely.³ The most recent review, published in September 2007 in draft form by the National Institute for Health and Clinical Excellence advises that, based on current evidence "pregnant women should limit their alcohol intake

to less than one standard drink (1.5 UK units or 12 g of alcohol) per day and if possible avoid alcohol in the first three months of pregnancy. It would appear that drinking no more than 1.5 units per day is not associated with harm to the baby."⁷

So, no evidence of harm from low levels of intake in pregnancy, but we can't completely exclude the possibility. But in a sense, all of this is of secondary importance. I'm not trying to argue that low levels of alcohol are definitely safe. What I am arguing is that we should respect the autonomy of pregnant women. We have a duty to be open and honest with the people we advise. Women are entitled to decide for themselves (and their babies); some are more risk averse than others and will wish to abstain completely. Indeed, even with the previous advice, around half of all women abstained during pregnancy.

So why has the stance of the government and the BMA changed when the evidence has not? Quite rightly, there is widespread concern about the rise in heavy drinking by young people, particularly women, in Britain over the past decade.² Over a third of women in their 20s have engaged in binge drinking. The BMA believes that "this will lead to an increased risk of heavy drinking during pregnancy and subsequently an increased risk of having a baby

who is affected by prenatal alcohol exposure."² The Department of Health disagrees, stating recently that "most women do actually stop drinking or drink very little in pregnancy." But the department found that 9% of pregnant women drank more than the recommended limit—clearly a cause for concern. The reasons given for the changed advice are that there is confusion, the advice is unclear, and people don't understand what is meant by a unit of alcohol.

Ban is unhelpful

I disagree with the solution. If we in the medical and midwifery professions have failed to communicate clearly to women the meaning of safe limits, then we need to put this right—not take the easy option (for us) and ban alcohol completely. Where is the evidence that this new advice will change the behaviour of the 9% who currently drink more than the recommended safe limit? In fact, in the US, where

the surgeon general has since 1981 advised the complete avoidance of alcohol in pregnancy, and all alcohol containing products carry a health warning, the incidence of frequent drinking in pregnancy rose from 0.9% in 1991 to 3.5% in 1999.

Are there any potential disadvantages to a complete ban? Firstly, the strong advice not to drink implies a certainty and confidence in the evidence that simply does not exist. There is a danger that our stance is perceived as paternalistic and will lead to a loss of confidence in medical advice. Secondly, I have already seen how it has frightened women who followed the safe limit advice earlier in their pregnancy or in a previous pregnancy, only to be told now that this was potentially harmful. Thirdly, it is also likely to increase under-reporting of alcohol consumption in pregnancy. As the BMA points out: "monitoring maternal alcohol consumption is already complicated by the fact that women feel afraid and embarrassed to admit they are drinking during pregnancy."² This fear and embarrassment can only increase as a result of this new advice.

So, I reject not just the motion, but also its premise. It is not our role, having acknowledged our lack of evidence in this area, to make a value judgment (for that is what it is—not a medical judgment) on behalf of our patients, let alone healthy pregnant women.

On the basis of the evidence we provide, many women will choose abstinence as the safest option. But that choice is the right of each individual woman.

Competing interests: During her pregnancy, POB's mother occasionally (on medical advice) drank a glass of Guinness.



The National Institute for Health and Clinical Excellence draft guidance on drinking during pregnancy has added to confusion about safety because it's at odds with other official guidance. **Pat O'Brien** believes that telling women to abstain is overly paternalistic on current evidence, but **Vivienne Nathanson** and **colleagues** argue that this is the safest message

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NO The latest government advice in England says that pregnant women and women trying to conceive should avoid alcohol. A new BMA report, *Fetal alcohol spectrum disorders*, agrees, recommending that abstinence is the only safe policy for women who are pregnant or planning a pregnancy.¹ This view is shared by the Royal College of Obstetricians and Gynaecologists² and the World Health Organization.³ In the United States, the surgeon general recommends that women who are pregnant or who may become pregnant should abstain from consuming alcohol.⁴

Damage from alcohol

Alcohol can adversely affect the reproductive process in several ways, including infertility, miscarriage, preterm deliveries, stillbirth, and low birthweight babies.⁵⁻⁷ Alcohol is teratogenic and readily crosses the placenta. Because the fetus does not have a developed blood filtration system, it is unprotected

from alcohol in the bloodstream. The damage caused by alcohol depends on the level of maternal alcohol consumption, the pattern of alcohol exposure, and the stage of pregnancy.⁸ Other risk factors include the genetic makeup of the mother and the fetus, the nutritional status of the mother, hormonal interactions, use of other drugs (including tobacco), general health of the mother, stress, maternal age, and low socio-economic status.⁹⁻¹⁰

Human and animal studies provide robust and consistent evidence that heavy maternal alcohol use is associated with fetal alcohol syndrome.¹¹⁻¹² Research has identified vulnerable periods of neonatal development that can be adversely affected by exposure to heavy doses of alcohol.^{8,9,11,12} Evidence from animal experiments suggests these critical periods of exposure occur during the first and third trimesters in humans.¹³

There is, however, considerable debate about the adverse effects of low to moderate maternal alcohol consumption. This may be explained by the variability in the definitions of consumption levels, differences in the way drinking behaviour is characterised, and methodological problems in the design and analysis of relevant studies and in determining the relative effect of confounding factors including genetic predisposition. There is currently no consensus on the level of risk or whether there is a clear threshold below which alcohol is non-teratogenic. Because there is no conclusive evidence that one to two units of alcohol a week is harmful to the developing fetus,^{5,10,11} the guidance has until recently recommended an upper limit of this amount.

Evidence is continuing to emerge on the possible risks of prenatal alcohol exposure at low to moderate levels.^{10,14-16} Animal experiments suggest that damage to the central nervous system may occur at low levels of alcohol exposure.^{9,17,18} A prospective study of 501 mother-child dyads found that the child's behaviour at age 6-7 years was adversely related to low to moderate levels of prenatal alcohol exposure.¹⁴ A

dose-response relation between the alcohol consumed and behaviour was also found.¹⁴ Studies examining the effects of alcohol on the fetus have shown that acute exposure to one to two units of alcohol causes a rapid decrease in fetal breathing.^{19,20} Studies examining the effects of chronic consumption indicate that low to moderate levels of exposure (two to five units a week) delay the development of the fetus's nervous system and may have a permanent effect.¹⁵ It is not clear what effect changes in behaviour have on fetal development. A recent large prospective study has found that occasional low to moderate drinking during the first trimester may have a negative and persistent effect on children's mental health.¹⁶

Confusion about consumption

Countries such as the US, Canada, France, New Zealand, and Australia have adopted the abstinence message. Current guidelines on sensible drinking in the UK can be misinterpreted as people may not clearly understand what units or "standard drinks" are.²¹ This is compounded by variation in the alcoholic concentration of

different types of drink, variation in serving size (such as different sizes of wine glass), and the difference between the standard measures used in bars and restaurants as well as measures poured

in the home.²¹ Many women will not know they are pregnant during the early part of the first trimester, during which time they may continue to drink in their pre-pregnancy fashion with no awareness of the risk to their unborn child. Given the current uncertainty regarding the level of risk to the developing fetus, the lack of clear guidelines, and the confusion about consumption levels, the only sensible message for women who are pregnant or planning a pregnancy must be complete abstinence from alcohol.

Competing interests: None declared.
All references are on bmj.com

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