

Alcohol and pregnancy

Information for midwives

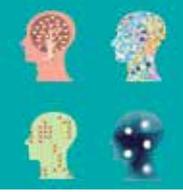
by NOFAS-UK

Reviewed by the Royal College of Midwives





Alcohol and pregnancy



Introduction

We have produced this booklet to provide midwives and healthcare professionals with evidence-based information about fetal alcohol spectrum disorder (FASD). Alcohol consumption during pregnancy is the cause of FASD.

There is no cure for FASD, but education can help prevent more children from being born with lifelong alcohol-related brain damage and disabilities.

NOFAS-UK works with midwives and educators to reduce the incidence of babies born with FASD. We also hope to increase support for and understanding of people affected by prenatal alcohol.

Thank you for taking the time to read this information.

A handwritten signature in black ink that reads "Susan Fleisher".

Susan Fleisher
Executive director
NOFAS-UK



Acknowledgements

NOFAS-UK would like to acknowledge and thank:

- The Royal College of Midwives for reviewing our materials and supporting fetal alcohol education
- The British Medical Association for their *Fetal alcohol spectrum disorders – a guide for healthcare professionals*
- The National Organisation for Fetal Alcohol Syndrome and Related Disorders (Adelaide, Australia) for contributing their Midwives FASD resources.

Thanks also to members of our international FASD Medical Advisory Panel for their contributions and invaluable medical expertise.



Medical advisory panel

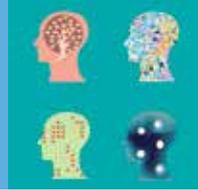
Front row: Lady Mitchell, Prof Moira Plant, Susan Fleisher, Dr Margaret Barrow.

Back row: Dr Annabelle Bundle, Prof Ilona Autti-Ramo, Prof Denis Viljoen, Prof Sterling Clarren, Dr Robert Fraser, Dr Raja Mukherjee, Prof Ed Riley, Prof Wendy Atkin, Prof Hans Spohr.

As a result of the support of Lord Mitchell and Celia Atkin, in 2004 NOFAS-UK founded the international FASD Medical Advisory Panel of FASD experts, doctors and researchers to raise awareness, increase FASD knowledge and provide evidence-based FASD information in the UK.

We would also like to thank:

- Edward Riley, medical adviser
- Elizabeth Mitchell, editorial adviser
- Joanna Buckard, FASD consultant
- Susan Fleisher, publisher
- Vandana Alimchandani, project coordinator.



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What we all need to know

It is important to give mothers-to-be and fathers-to-be balanced advice about healthy options as well as risks in pregnancy. Among the things women should avoid in pregnancy are drugs, cigarettes and alcohol. Contrary to beliefs about its benefits, alcohol is actually more harmful than class-A drugs, such as heroin, because it can permanently kill brain cells in a developing fetus. Alcohol can harm an unborn baby in different ways at different times during pregnancy. Fetal alcohol spectrum disorder (FASD) is the umbrella term for all alcohol-related birth defects.

If a woman drinks alcohol when she is pregnant, her baby is at a risk of being born with FASD. The only certain way to avoid the risk is to abstain from drinking alcohol during pregnancy. No alcohol equals no risk.

Midwives, GPs and obstetricians are the first point of medical contact for pregnant women. It is their responsibility to provide information and advice to their patients and their partners. The advice of midwives and doctors is likely to have the most powerful impact on pregnant women and help them to avoid the risks.

It is essential that the advice provided by healthcare professionals is up to date, consistent and evidence-based, in addition to the advice provided on other lifestyle choices such as drugs, smoking and nutrition.

When you suspect a pregnant woman might be drinking alcohol, early intervention is the most effective way of improving the outcome for both mother and baby. An empathetic, non-judgemental approach encourages a positive response. No matter whether a woman is newly pregnant or nearly full-term, her baby will always benefit when she stops drinking. It is also important for mothers-to-be to have the support of the father, close family members and friends. When everyone is informed about the risks, they will know not to offer alcohol to women who are pregnant.





What is FASD?

Fetal alcohol spectrum disorder (FASD) is caused by maternal alcohol consumption during pregnancy.

The term FASD describes a spectrum of structural, behavioural and neurocognitive impairments that can vary immensely between individuals.

FASD is a spectrum of lifelong conditions that are entirely preventable. If a woman abstains from alcohol throughout her pregnancy, her baby cannot be born with FASD.

FASD is an umbrella term that covers:

- fetal alcohol syndrome (FAS)
- alcohol-related neurodevelopmental disorder (ARND)
- alcohol-related birth defects (ARBD)
- fetal alcohol effects (FAE)
- partial FAS (pFAS).

Fetal alcohol syndrome is the most clinically recognisable form of FASD because it is characterised by:

- central nervous system dysfunction
- facial dysmorphism
- pre- and post-natal growth deficiency.

It is often misconstrued that fetal alcohol syndrome (FAS) is the worst outcome from prenatal alcohol exposure and that pFAS, FAE, ARBD and ARND are lesser forms of the disability.

While it is true that the other disorders in the spectrum may not have all of the characteristics of FAS, without the recognisable facial and physical features, people with other forms of FASD are often more disabled and less likely to receive a diagnosis or support.

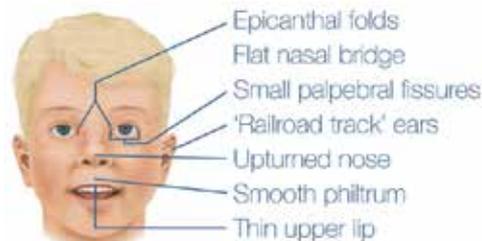




The facial features of fetal alcohol syndrome

If a pregnant woman drinks in the first trimester, when the features are forming, this may result in her child having fetal alcohol syndrome (FAS) or one of the other fetal alcohol spectrum disorders.

FAS is the only disorder of the spectrum to exhibit these facial characteristics. A child is more likely to be diagnosed if they have the visible characteristics.



To the untrained eye, these children look 'normal'. Though they may look like they come from the same family, they are not related.

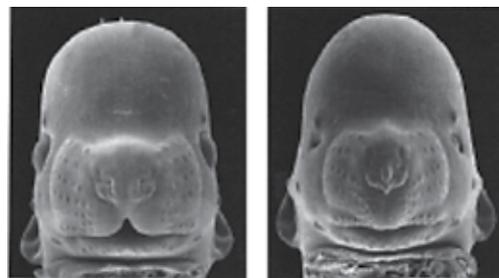
Alcohol has been identified as a teratogen* (poison).

A teratogen can be responsible for death, malformations, growth deficiency and functional deficits in a developing fetus (Bond and diGusto, 1977).

Animal studies of alcohol teratogenesis have shown the same malformations occur in the facial features of animals as in humans.

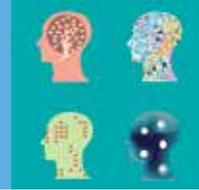
*Teratogen: any agent, including alcohol, that can disturb the development of an embryo or fetus. Teratogens can cause birth defects.

Mouse study: Alcohol teratogenesis – Sulik, 1981



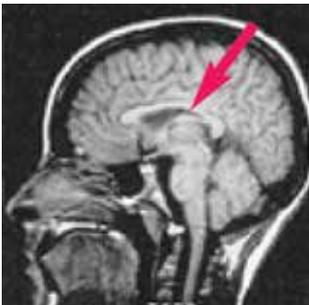
No alcohol exposure (control) (left)
Alcohol exposure (right)

NOTE: the alcohol-affected mouse has a small head circumference, small eyes and damage to the philtrum and nasal bridge compared with the control mouse.

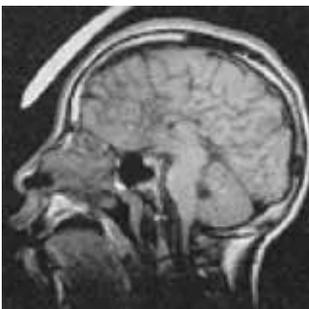


The FASD brain

It is believed that, although alcohol can affect the development of all cells and organs at different stages during pregnancy, the first trimester when organs are being formed is particularly sensitive. However, the brain is vulnerable to the effects of alcohol exposure throughout the pregnancy. The alcohol robs the brain of oxygen and destroys brain cells that can never be regenerated.

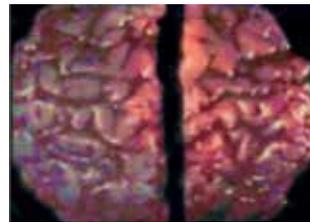


Brain scan of a 13-year-old female without FAS. The arrow points to the corpus callosum.

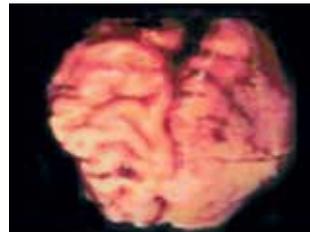


Brain scan of a 14-year-old male with FAS. The corpus callosum is absent.

Alcohol can kill brain cells, alter the ratio of white and grey matter, alter the connections between the nerves and influence the chemical neurotransmitters in the brain. Certain brain structures appear to be more affected than others (Professor Ed Riley).



Brain of baby without FAS



Brain of baby with FAS

Image courtesy of Dr Sterling Clarren

Alcohol can kill brain cells outright or make them functionless. The frontal lobes which control critical thinking, reasoning and judgement are particularly vulnerable.



How does alcohol affect the fetus?

It is believed that the fetus is affected by alcohol in two ways.

1. Ethanol, a teratogenic compound, crosses the placenta and can cause:

- disruption of cellular energy
- impairment of cell acquisition/ dysregulation of developmental timing
- altered regulation of gene expression
- disrupted cell-to-cell interaction
- interference with growth factor signalling or other cell signalling pathways
- cell damage/cell death
- secondary sources of damage.

2. Persistent change in fetal behaviour

Other adverse outcomes of maternal alcohol consumption include:

- miscarriage
- pre-term deliveries
- stillbirth
- sudden infant death syndrome (SIDS)/cot death



Studies have shown that chronic and acute consumption of alcohol at high levels disrupts normal fetal behaviour (Mulder et al, 1986).

Studies in late gestation (36 weeks) of acute low-level alcohol consumption consistently reported an immediate and rapid decrease in fetal breathing movements lasting for two hours or more (Mulder, 1998).

Studies show that even small amounts of alcohol can influence fetal behaviour.

Hepper et al (2004) found that maternal alcohol consumption during pregnancy may delay the development of spontaneous fetal startle behaviour. They examined startle behaviour longitudinally from 20 to 35 weeks' gestation. The number of spontaneous startles exhibited by fetuses of mothers who drank during pregnancy and fetuses whose mothers did not drink was recorded at 20, 25, 30 and 35 weeks' gestation during a 45-minute observation.

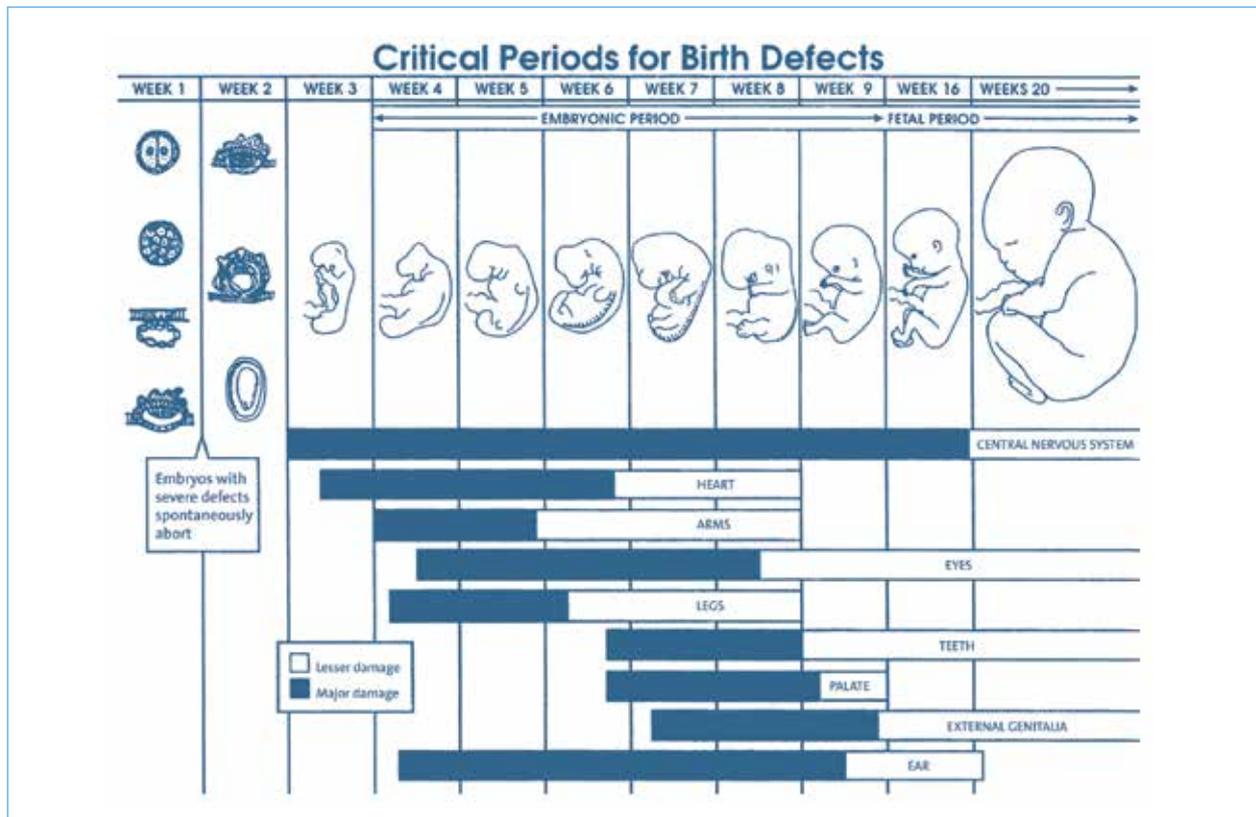
The results indicate that exposure to alcohol during pregnancy significantly increases the exhibition of spontaneous startles by the fetus, but across gestation there is significant catch-up in startle behaviour. The results suggest exposure to alcohol delays the natural maturation of spontaneous startle behaviour of the fetus but also has a smaller 'permanent' effect. It is suggested that these effects are mediated by alcohol exerting an effect on the inhibitory pathways controlling startle behaviour.

Of greatest concern was that the effects were still evident 5 months after birth. When tested in a habituation task, babies of mothers who drank performed differently from those who did not. This suggests a possible permanent long-term neurobehavioural effect of drinking.



Critical periods for alcohol-related birth defects

Fetus vulnerability to birth defects during various periods of development.



The dark portion of the bars represents the most sensitive periods of development, during which teratogenic effects on the sites listed would result in major structural abnormalities in the child. The light portion of the bars represents periods of development during which physiological defects and minor structural abnormalities could occur. (Moore, 1993)

Children and adults with FASD can have reduced intellectual abilities, central nervous system dysfunction, a distinctive pattern of facial abnormalities and damage to major organs.

Children affected are often small at birth and develop slowly. Children with FASD may have a lower IQ, have a learning disability or learning difficulties, show poor coordination, have problems with memory, attention and judgement, and exhibit hyperactivity and behavioural problems. Without an accurate diagnosis and specialised support, they may develop secondary disabilities, abuse drugs and alcohol, have behavioural, sexual and social problems, become violent and get into trouble with the law.

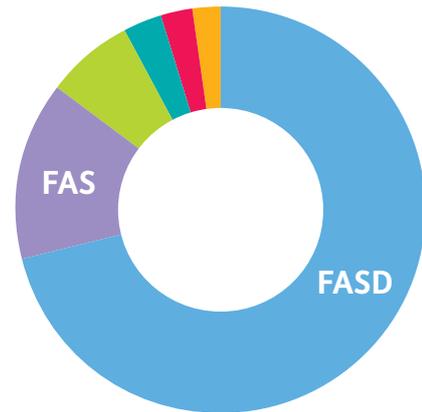


How common is FASD?

1 in 100 babies are estimated to be born with alcohol-related damage, according to the World Health Organisation, though the figure is higher in several countries.

Women report that they are concerned about disabilities in their unborn babies, often without fully understanding the statistics involved.

Based on World Health Organisation statistics and other studies, the incidences shown below have been estimated.



In every 1,000 babies born:

	0.28 in 1,000	born with muscular dystrophy (Muscular Dystrophy Association)
	0.35 in 1,000	born with spina bifida (Centre for Disease Control and Prevention)
	0.43 in 1,000	born with HIV infection (Public Laboratory Service)
	1 in 1,000	born with Down's syndrome (Down's Syndrome Association)
	2 in 1,000	born with fetal alcohol syndrome (World Health Organisation, Dec 2000)
	10 in 1,000	born with fetal alcohol spectrum disorder (1 in 100) (Teratology, Nov 1997)



When was FASD recognised?

Literature from over the centuries has alluded to the harmful effects of alcohol on infants who had been exposed prenatally:

Aristotle, 384BC-322BC “Foolish drunken or hare-brained women bring forth children like unto themselves, morose and languid”.

The Christian Bible, Judges 13:7 “Behold, thou shalt conceive, and bear a son: and now drink no wine or strong drink”.

During the notorious Gin Epidemic in England in the 1700s, it was reported that the birth weight and development of infants was compromised when they had been exposed to gin prenatally. Parliament described the result of prenatal alcohol exposure as “too often the cause of weak, feeble and distempered children, who must be instead of an advantage and strength, a charge to their country” (Abel, 1990).



Gin Lane by William Hogarth, 1697–1764

Some say the baby held upside down by her mother has the facial characteristics of fetal alcohol syndrome.

British House of Commons Report, 1834

“Children of Alcoholic Mothers have a starved, shrivelled and imperfect look”.

19th century A French physician, Dr Lanceraux, described some of the significant characteristics of FAS: “As an infant he dies of convulsions or other nervous stated disorders; if he lives, he becomes idiotic or imbecile, and in adult life bears special characteristics: the head is small... physiognomy vacant [peculiar facial features], a nervous susceptibility more or less accentuated, a state of nervousness bordering on hysteria, convulsions, epilepsy... are a sorrowful inheritance... a great number of individuals given to drink bequeath to their children” (Lanceraux, 1865, quoted by Gustafson, 1885 in Abel, 1999).

1968 In France, Dr Paul Lemoine published a study in which he described 127 children with distinctive facial features and other symptoms related to prenatal alcohol exposure, structural defects and neurological signs, including impaired fine motor skills, poor eye–hand coordination and tremors.

1973 Drs Jones and Smith diagnosed infants in a Seattle hospital who had been exposed to alcohol prenatally as having various levels of mental anomalies. These findings were published in *The Lancet* in 1973, formally using the term fetal alcohol syndrome for the first time (Cooper, 1991).



1989 The United States passed a law requiring that all alcohol containers carry a label:

Government warning: (1) According to the surgeon general, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects.

May 2007 The Department of Health for England and Wales issued new guidelines:

Avoid alcohol if pregnant or trying to conceive.

Today Britain has the highest teenage pregnancy rate in Europe with 90,000 teens getting pregnant each year (Social Exclusion Report, 1999).

Reports suggest that young people are twice as likely to have unprotected sex while drunk (Ed Balls, 2009).

Adolescents in the UK have the highest levels of alcohol use, binge-drinking and getting drunk in Europe (BMA, 2003).

At least 90% of women drink alcohol at least occasionally (Academy of Medical Sciences, 2004).

Young British women have significantly increased their drinking habits (Plant ML and Plant MA, 2006).

The figures for alcohol consumption in Britain are clearly high and cross ages and classes.

Reporting maternal alcohol consumption

Maternal alcohol consumption is normally self-reported.

This means that findings are often unreliable due to:

- poor estimation
- poor recollection
- social stigma.

There are also problems because of confusion around different drink strengths and the difference between drink measures used in bars and at home.

This can make recording a patient's history difficult.





Prevention

Research confirms that many pregnant women consume alcohol*. We recommend that you ask each woman what they know about alcohol in pregnancy. Put them at ease first. Then ask what they like to drink and then how much. Because it is a sensitive issue, the questions need to be asked during other nutrition and general health questions. If they confirm alcohol consumption, the doctor or midwife should have a suggestion for intervention.

First discuss the reasons for drinking. These can be different for every woman. Knowing the reason is important when choosing the best approach to make her aware of the risks of drinking alcohol when pregnant. There are a few main reasons why a pregnant woman might drink alcohol:

- lack of knowledge of the risks to their baby
- confusing information coming from medical professionals and media about the positive impact of alcohol on the blood or other medical benefits for pregnant women
- co-existing mental health conditions (eg depression or anxiety)
- unsupportive or absent family
- partner lifestyle where alcohol plays an integral role, excessive drinking and alcoholism

The goal for GPs and midwives is to try to reduce the incidence of entirely preventable alcohol-related birth defects.

Prevention strategies

Prevention strategies should target all women of childbearing age and include health promotion and advice, screening of pregnant women for alcohol use, and the implementation of brief interventions as appropriate. Indicated prevention strategies are targeted at women who are at high risk of having children affected by FASD and include treatment of alcohol addiction problems where present.

Recommended action

- Engage in education related to FASD with all women and their partners.
- Ask all female patients to discuss their alcohol use.
- Identify women at high risk.
- Advise women about the risks of drinking and the positive benefits of cutting out alcohol at any time during their pregnancy.
- Obtain current promotional materials on FASD and provide them to patients (leaflets are available from NOFAS-UK).
- Refer women who are using alcohol to appropriate specialists.

*NHS Information Centre statistics on alcohol (England, 2006) stated that 1% of women drink during pregnancy.



Asking difficult questions...

If a pregnant woman shows signs that she may have consumed alcohol and a health professional needs to ask about the consumption levels, ask in a caring and non-judgemental manner:

“What do you know about alcohol in pregnancy? Let’s discuss it. Is it possible you might have had some alcohol before you came here today? If you would like some support, we can refer you to a specialist service.”

While screening pregnant women, midwives should consider whether their patients could in fact have FASD themselves. A patient with FASD may present as immature for their age, vulnerable and have difficulty linking cause and effect. These are only a few of the signs. The information on secondary disabilities provides more information.

A pregnant woman who may have FASD will need significant additional support and advice. A multi-agency plan would need to be devised to ensure that the correct amount of support was implemented for both antenatal and postnatal care.

Most women will accept some help if they are not made to feel guilty and are sure it is safe to be honest. No woman will intentionally harm her baby. Every woman wants to have a healthy baby and health professionals should appeal to this natural instinct when asking questions about alcohol consumption.

Another important factor to consider is whether a woman has had any previous children with FASD. If she has, she is at

risk of having more affected children and will need extra support. She may have had other children removed in the past and fear that the next child could be taken away. She must be reassured that honesty about her alcohol consumption and getting support will help her keep her next child and have a healthy baby.

Alcohol withdrawal in pregnant women

The onset of alcohol withdrawal can occur 6–24 hours after the last drink where the woman has regularly consumed 6 or more standard drinks on average per day. Alcohol withdrawal can be medically serious and life threatening for a pregnant woman and the developing fetus.

It is important for the health professional to assess for and accurately monitor and interpret the onset of alcohol withdrawal. Appropriate treatment should commence as soon as other symptoms become evident. These symptoms may occur during labour or later in the postnatal period.

Symptoms can occur from as early as 12 hours after the last drink, up to 5 days after the last drink, due to a reduction or abrupt cessation of alcohol.

Symptoms of mild withdrawal are:

nausea, anxiety, trembling and vomiting.

Symptoms of severe withdrawal are:

seizures, hallucinations, tremors, tachycardia, confusion, fever, disorientation, dehydration, fearfulness and agitation.



The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT is a well-validated tool developed by the World Health Organisation (WHO) to assess patterns of alcohol use. The tool comprises a self-report version, an interview version for midwives to administer and a scoring sheet for interpretation.

It contains three questions on the amount and frequency of drinking, three questions relating to alcohol dependence, and four questions that ask about problems caused by alcohol, including adverse psychological reactions.

Focusing on the person's recent alcohol use (previous 12 months), it can be very easily incorporated into a general or midwifery health evaluation, providing a very fast and simple way to identify those at risk of health problems from their drinking and those who are already experiencing problems.

The completion of the 10-item questionnaire allows a brief, accurate and comprehensive assessment of a person who is drinking alcohol and of whether their level of drinking is potentially harmful or at a hazardous level (NHMRC, 2001).

Harmful or hazardous drinking is defined as drinking when there are medical consequences, psychological harm, social problems, work problems or experienced trauma (Dawe et al, 2002).

The AUDIT assessment needs to be carried out in a timely manner that is safe, respectful, confidential and in an environment that is sensitive to the

woman and, if appropriate, her family. It needs to be undertaken in a way that respects cultural identity and other associated needs such as interpretation.

The screening tool provides an opportunity for alcohol and pregnancy education, health promotion and strategies to prevent or reduce risks associated with alcohol use.

Many people who drink alcohol are unaware of their risks of harm from their level of drinking and need encouragement to help them consider ceasing or reducing their drinking (Prochaska and di Clemente, 1986).

The effectiveness of the AUDIT is dependent on how accurately the person responds to the questions. The midwife or clinician needs to explain the benefits and encourage the most accurate information. If answers do not seem congruent with the presenting medical condition, further information may be required (eg a physical assessment by a trained health professional who can interpret the presence of physical stigmata associated with chronic alcohol use).



Alcohol and pregnancy

Audit assessment

Put the number of each answer in the box.

1. How often do you have a drink containing alcohol?

- (0) Never [skip to questions 9 and 10]
- (1) Monthly or less
- (2) 2 to 4 times a month
- (3) 2 to 3 times a week
- (4) 4 or more times a week

4. How often during the last year have you found that you were not able to stop drinking once you had started?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

2. How many standard drinks containing alcohol do you have on a typical day when you are drinking?

- (0) 1 or 2
- (1) 3 or 4
- (2) 5 or 6
- (3) 7, 8 or 9
- (4) 10 or more

5. How often during the last year have you failed to do what was normally expected of you because of drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

3. How often do you have six or more standard drinks on one occasion?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

Skip to questions 9 and 10 if total score for question 2 and 3 = 0

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily



7. How often during the last year have you had a feeling of guilt or remorse after drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

- (0) No
- (2) Yes, but not in the last year
- (4) Yes, during the last year

8. How often during the last year have you been unable to remember what happened the night before because of drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

10. Has a relative, friend, doctor or other healthcare worker been concerned about your drinking or suggested you cut down?

- (0) No
- (2) Yes, but not in the last year
- (4) Yes, during the last year

Record total specific items here _____



Scoring for audit

Questions 1 to 8 are scored
0, 1, 2, 3, 4

Questions 9 and 10 are scored
0, 2, 4 only

The AUDIT elicits a score of between 0 and 40. Although a score of 8 or more (some studies suggest a score of 7 for women) indicates hazardous or harmful alcohol consumption, 13 suggests further investigations (clinical examination) are required to assess for possibility of dependence. It is not a diagnostic, but rather an interpretive and indicative tool. Although the global score itself is useful, also consider the three main areas of questioning to elicit specific information about patterns of use and potential for dependence.

The three main areas assessed are:

Questions 1–3: Quantity and frequency of use

Questions 4–6: Possible dependence on alcohol

Questions 7–10: Alcohol-related problems

The AUDIT is a quick, reliable and valuable tool for screening for hazardous or harmful patterns of use and alcohol-related problems, and complements the assessment process.

(Source: Health and Substance Dependence, World Health Organisation (WHO), Geneva)

(Reference: deCrespigny, C, Talment, J, Modystack, K, Cusack, L and Watkinson, J, 2003 *Alcohol, Tobacco and Other Drugs Guidelines for Nurses and Midwives: Clinical Guidelines*. Flinders University and Drug Alcohol Services Council, Adelaide, p164)

A guide to interpretation and intervention:

Abstainer	Low risk alcohol use	Risky or harmful alcohol use	Alcohol dependence likely
0 No further intervention necessary	<8 Reinforce safe drinking behaviour	8+ Provide evidence on the consequences of continued risky or harmful alcohol consumption	13+ Provide advice and prescribe pharmacotherapy



T-ACE alcohol screening questionnaire

The T-ACE alcohol screening questionnaire consists of four questions that take less than a minute to answer:

1. **Tolerance (T)** – how many drinks does it take to make you feel high?
2. **Annoyance (A)** – have people annoyed you by criticising your drinking?
3. **Cut down (C)** – have you ever felt you ought to cut down on your drinking?
4. **Eye-opener (E)** – have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?

A single point is given for an affirmative answer to the A, C and E questions, and two points are given when a pregnant woman indicates a tolerance of more than two drinks to feel high. A total score of two or more on the T-ACE test is suggestive of harmful drinking patterns during pregnancy.

(Source: Sokol, RJ, Martier, SS and Ager, JW (1989) 'The T-ACE questions: practical prenatal detection of risk-drinking'. *American Journal of Obstetrics and Gynaecology* 160: 863–8)

TWEAK alcohol screening questionnaire

There are two versions of the TWEAK screening questionnaire: one that is recommended for populations with high levels of binge drinking and one that is recommended for populations with low levels of binge drinking. Please note that as these questionnaires have been developed in the USA, the drinking levels stated refer to the USA levels.

The TWEAK alcohol screening questionnaire for populations with high levels of binge drinking consists of five questions:

1. **Tolerance (T)** – how many drinks does it take before the alcohol makes you fall asleep or pass out?
Record number of drinks ____
(a positive score is six or more drinks).
Or, if you never drink until you pass out, what is the largest number of drinks that you have?
Record number of drinks ____
(a positive score is six or more drinks).
2. **Worried (W)** – have your friends or relatives worried or complained about your drinking in the past year?
3. **Eye-opener (E)** – do you sometimes take a drink in the morning when you first get up?
4. **Amnesia (A)** – are there times when you drink and you can't remember what you said or did?
5. **Cut down (K)** – do you sometimes feel the need to cut down on your drinking?

For each version, positive responses to questions T and W yield two points each, and affirmative replies to questions E, A and K score one point each. A total score of two or more points on the TWEAK test is suggestive of harmful drinking patterns during pregnancy.

(Source: Chan, AWK, Pristach, EA, Welte, JW et al (1993) 'Use of the TWEAK test in screening for alcoholism/heavy drinking in three populations'. *Alcoholism: Clinical and Experimental Research* 17: 1188–92)



Brief intervention

A suitable support technique for a pregnant woman who drinks at this time is a brief intervention.

Brief intervention has been demonstrated to be a low-cost, effective alternative to treat alcohol problems. It uses short, self-help and preventive strategies to assist in reducing or ceasing alcohol consumption. Brief interventions are most helpful for non-alcohol-dependent people. If the person is alcohol-dependent, a brief intervention can be of some assistance through education and support, and may facilitate their willingness to be referred to a specialist treatment programme.

Brief interventions:

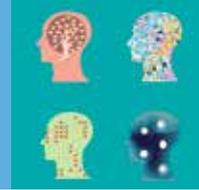
- involve a minimum of professional time in an attempt to change drug use
- are short, practical strategies that aim to convey, and have understood, advice and information about an aspect of harm minimisation; they are usually based around conversation, listening, giving advice, provoking further thought and are certainly much shorter than traditional treatment
- often include the provision of self-help materials and may extend to a brief assessment, providing advice (in a one-off session), assessment of the client's readiness to change (motivational interview), problem solving, goal setting, relapse prevention, harm reduction and follow-up (Dale and Marsh, 2000).

There are pregnant women and new mothers who drink alcohol at risky or harmful levels who may have little or minimal insight into potential problems associated with their drinking.

This is an opportunity for the midwife to support and help such women to become aware of the risks or problems associated with their drinking, and to contemplate lifestyle changes (cutting out or cutting down) to reduce social and health harms from alcohol use.

The purpose of brief intervention is to:

- provide the woman with accurate information about the effects of alcohol on her and her unborn or newborn baby
- reinforce the woman's understanding of key concepts covered in the alcohol education material provided
- enable her to talk about her alcohol use without being judged
- support the woman in identifying issues that impact on her own health, wellbeing, lifestyle and relationships due to her drinking
- empower the woman to identify and set reasonable and achievable goals for change based on her informed choices relating to her alcohol use and situation
- assist the woman to seek support and access to specialist treatment services, if appropriate.



The most important factor is the midwife's ability to be non-judgemental, approachable, accessible, empathic and helpful.

An effective strategy

Brief interventions are well researched (Rollnick, Mason and Butler, 1999) and have been found to be very effective in assisting people in the change process. They are an appropriate response to people presenting at a general health or community setting and those who are unlikely to need, seek or attend specialist treatment services.

Brief intervention is most successful when working with women who:

- are experiencing few or uncomplicated problems with their alcohol use
- have low levels of alcohol dependence
- have a short history of harmful alcohol use
- have stable social and family backgrounds or supports
- are unsure or ambivalent about changing their drinking and therefore open to advice and assistance.

Outcomes

Positive outcomes will develop for many women when the midwife or clinician can:

- build a trusting and supportive relationship and be non-judgemental
- establish personalised goals and develop the woman's skills to use suitable strategies that will lead to her successful behaviour change
- develop the woman's self-awareness to see her choices and that she can use her personal power
- work with the woman's particular needs, thoughts, feelings and behaviour in a practical, problem-solving manner (*Divert Resource Manual, 2004*).



Alcohol withdrawal in newborns

Babies born to women who are alcohol-dependent are also at risk of undergoing alcohol withdrawal during or after birth. If the mother has consumed alcohol (whether or not she was acutely intoxicated during delivery), the baby may be at risk of alcohol withdrawal up to 48 hours after delivery, depending on the time of the mother's last drink. Withdrawal in newborns can occur later than in adults due to the alcohol being more slowly metabolised by the liver.

Symptoms of alcohol withdrawal in newborns may include:

- hyper-excitability of the central nervous system (eg tremors, excessive muscle tension, irritability, increased respiratory rate, poor sleeping patterns and increased sense of hearing). Seizures may also occur accompanied by breathing cessation and arching of the back
- gastro-intestinal symptoms (eg abdominal distension and vomiting).

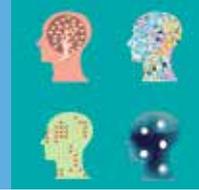
These babies require special care and nursing and may need medication to safely manage their symptoms through this period. Sedatives or tranquillisers may be used to prevent or manage serious withdrawal symptoms such as seizures and vomiting. It is important to let the parents know what medications have been prescribed and the expected outcome.

These babies can also be very unsettled, which may cause a lot of anxiety for the parents and their family or friends. A calm, quiet environment with decreased sensory stimulation is advised. Cuddling and gentle handling in a quiet, non-stimulating environment has been shown to be quite effective for some mildly affected babies and may be used instead of medication (Western, 2004). It is essential that the parents know why their baby is unsettled and what special care arrangements have been put in place.

Alcohol and breastfeeding

Alcohol readily crosses into breast milk by diffusion. This means the level of alcohol to which the baby is exposed is approximately the same as the mother's current blood alcohol level. Alcohol in very small amounts can have a serious effect on the developing brain of a baby. Research has demonstrated that the milk intake of a baby is lowered when alcohol is present in breast milk and that feeding patterns show disturbance. Evidence also showed disruptions in the sleep/wake patterns of this group of babies (Menella, 2001).

One standard drink per day (10 grams of pure alcohol) has been associated with decreased baby sucking while receiving less milk and becoming slightly sedated (Menella, 2001).



It is widely accepted that drinking alcohol when breastfeeding places the baby at risk. If a mother continues to drink alcohol when breastfeeding, harm minimisation strategies need to be recommended.

These include the following:

- Do not drink alcohol shortly before or when breastfeeding, particularly in the first 3 months.
- Consume alcohol when it will have the least effect on the breast milk (eg only after the baby has been fed and settled). This allows several hours for the level to decrease before the next feed is due.
- Try to avoid breastfeeding for at least 3 hours after consuming alcohol.
- Consume as little alcohol as possible, and no more than 1 standard drink.
- Consume low-alcohol drinks.
- Eat before and during consumption.
- Express and store alcohol-free milk for use after moderate or heavy drinking (Fisher, 2005).

Recommendations from the British Medical Association

All healthcare professionals should, as part of routine clinical care, provide ongoing advice and support to expectant mothers at every stage of pregnancy, and this should include information on the risks of maternal alcohol consumption.

All health promotion and advice should be supplemented with ‘take home’ printed information on the risks of consuming alcohol during pregnancy.

Printed information should be:

- clear and concise
- available for all healthcare professionals and primary care organisations to use
- reviewed to ensure that they are targeted at the population at risk, including difficult-to-reach groups.





Sponsors and supporters

NOFAS-UK would like to thank DIAGEO GB for sponsoring this booklet and the BABY BUNDLE Project to educate and raise awareness about FASD and alcohol in pregnancy.

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Dedicated to our children

All parents want healthy babies. The welfare and health of babies and future generations are the concern of all midwives, doctors and other medical professionals and, most of all, parents.

This booklet has been provided by NOFAS-UK and reviewed by the Royal College of Midwives as a source of information for midwives and medical professionals.

NOFAS-UK is dedicated to supporting people affected by FASD and their families. It promotes education and public awareness about the risks of alcohol consumption during pregnancy.

NOFAS-UK wishes to acknowledge the many families living with FASD who fight to protect and support their children. We are also grateful to all the professionals who dedicate their knowledge and time to help these families.

Thank you all.



Information leaflet on FASD – specially designed for pregnant women

Contact NOFAS-UK to order.



DVD 'No Alcohol No Risk – FASD information for Midwives'

A 26-min documentary explaining the risks of drinking alcohol in pregnancy while following a birth mother with a child with suspected FASD, a midwife and a pregnant woman who is drinking low levels of alcohol.

Watch the film online www.nofas-uk.org

To order DVD – contact info@nofas-uk.org



Poster for clinics

An A4 sized poster 'It's only nine months for you...'

To order please contact info@nofas-uk.org



Fact sheet for pregnant women

Download the fact sheet for pregnant women from www.nofas-uk.org

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