The Society of Obstetricians and Gynaecologists aims to review the content 5 years after publication, at which time the document may be re-affirmed or revised to reflect new research, incorporate new evidence, and identify changes in practices.

No. 405, September 2020 (Replaces No. 245, August 2010)

Guideline No. 405: Screening and Counselling for Alcohol Consumption During Pregnancy

(En français : Dépistage et conseils en matière de consommation d'alcool pendant la grossesse)

The English document is the original version. In the event of any discrepancy between the English and French content, the English version prevails.

This Clinical Practice Guideline was prepared by the authors and overseen by the SOGC Clinical Practice Obstetrics Committee. It was reviewed by the SOGC Maternal–Fetal Medicine Committee, Indigenous Women's Health Initiatives Committee and Guideline Management and Oversight Committee and approved by the SOGC Board of Directors.

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Recommended Changes in Practice

1. All pregnant women should be asked about alcohol use using evidence-based screening and brief intervention approaches.
2. If maternal alcohol use disorder is identified, it should be documented in the infant's medical record with the full knowledge of the mother.
3. All women of child-bearing age should be periodically screened for problematic alcohol use.

This document reflects emerging clinical and scientific advances as of the publication date and is subject to change. The information is not meant to dictate an exclusive course of treatment or procedure. Institutions are free to amend the recommendations. The SOGC suggests, however, that they adequately document any such amendments.

Informed Consent: Everyone has the right and responsibility to make informed decisions about their care together with their health care providers. In order to facilitate this, the SOGC recommends that they provide their patients with information and support that is evidence-based, culturally appropriate, and personalized.

Language and Inclusivity: This document uses gendered language in order to facilitate plain language writing but is meant to be inclusive of all individuals, including those who do not identify as a woman/female. The SOGC recognizes and respects the rights of all people for whom the information in this document may apply, including but not limited to transgender, non-binary, and intersex people. The SOGC encourages health care providers to engage in respectful conversation with their patients about their gender identity and preferred gender pronouns and to apply these guidelines in a way that is sensitive to each person's needs.

4. Brief intervention, referral, and follow-up should be used when alcohol use disorder is identified.

Key Messages

1. Abstaining from alcohol during pregnancy is the safest option.
2. Abstaining from alcohol while breastfeeding is the safest option.
3. Nonjudgmental and supportive approaches should be adopted when supporting women with problematic alcohol use.
4. Health care providers should be able to provide brief interventions and should be aware of referral pathways.

ABSTRACT

Objective: To establish national standards of care for screening and counselling pregnant women and women of child-bearing age about alcohol consumption and possible alcohol use disorder based on current best evidence.

Intended Users: Health care providers who care for pregnant women and women of child-bearing age.

Target Population: Pregnant women and women of child-bearing age and their families.

Evidence: Medline, EMBASE, and CENTRAL databases were searched for "alcohol use and pregnancy." The results were filtered for a publication date between 2010 and September 2018. The search terms were developed using Medical Subject Headings terms and keywords, including pre-pregnancy, pregnant, breastfeeding, lactation, female, women, preconception care, prenatal care, fetal alcohol spectrum disorder, prenatal alcohol exposure, drinking behavior, alcohol abstinence, alcohol drinking, binge drinking, alcohol-related disorders, alcoholism, alcohol consumption, alcohol abuse, benzodiazepines, disulfiram, naltrexane, acamprosate, ondansetron, topiramate, cyanamide, calcium carbimide, alcohol deterrents, disease management, detoxification, Alcoholics Anonymous, alcohol counselling, harm reduction, pre-pregnancy care, prenatal care, incidence, prevalence, epidemiological monitoring, and brief intervention. Evidence was included from clinical trials, observational studies, reviews, systematic reviews and meta-analyses, guidelines, and conference consensus.

Validation Methods: The content and recommendations in this guideline were drafted and agreed upon by the authors. The Board of Directors of the Society of Obstetricians and Gynaecologists of Canada approved the final draft for publication. The quality of evidence was rated using the criteria described in the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology framework.

Benefits, Harms, Costs: Implementation of the recommendations in these guidelines using validated screening tools and brief intervention approaches may increase obstetrical care provider recognition of alcohol consumption and problematic alcohol use among women of child-bearing age and those who are pregnant. It is anticipated that health care providers will become confident and competent in managing and supporting these women so they can achieve optimal health and pregnancy outcomes.

SUMMARY STATEMENTS (GRADE ratings in parentheses)

1. Alcohol is a known teratogen (high).
2. The current evidence cannot establish a safe threshold for alcohol consumption in pregnancy (high).
3. Abstaining from alcohol during pregnancy is the safest option (high).
4. Abstaining from alcohol while breastfeeding is the safest option (high).

RECOMMENDATIONS (GRADE ratings in parentheses)

1. All pregnant women should be questioned about alcohol use by asking a single question (in a nonjudgmental way) to determine use. If women consume alcohol, one of the following screening tools should be used: AUDIT-C or T-ACE, or another evidence-based screening tool available in the provincial/territorial prenatal record. If women consume alcohol, pattern of use should be established to screen for binge drinking (strong, high).
2. If screening identifies an alcohol use disorder, brief intervention should be provided at the same time screening is completed (strong, high).
3. When a maternal alcohol use disorder is diagnosed, it should be documented in the infant's medical record after delivery (strong, low). Carers should be encouraged to discuss in utero alcohol exposure with their child's health care provider (strong, low).
4. Every clinical encounter is an opportunity to discuss alcohol use. All women of child-bearing age should be periodically screened for problematic alcohol use. Screening, brief intervention, and referral to treatment can be brief or in depth depending on the context. Health care providers should incorporate screening for problematic alcohol use into routine women's health screening and information sharing and include screening, brief intervention, and referral to treatment where needed (strong, high).
5. Brief interventions and, if needed, coordinated referral and follow-up should accompany screening for alcohol use. A nonjudgmental, supportive approach is important to encourage disclosure of alcohol use and accessing of services (strong, high).
6. If a woman continues to use alcohol during pregnancy, harm reduction, treatment, and social support strategies should be encouraged (strong, high).
7. Health care providers should be knowledgeable on providing brief interventions and be aware of referral pathways (strong, moderate).
8. Women need to be able to participate in brief interventions and treatment without undue risk of loss of child custody; where universal screening and brief interventions are implemented, policies must be aligned so that support and treatment can be encouraged by providers and accessed by women without fear (appropriate attention must still be given to the safety of the child) (strong, moderate).
9. Specialized, community-based interventions need to be available and accessible to women with problematic drinking and related health and social concerns (strong, moderate).

INTRODUCTION

This clinical practice guideline provides an overview of the current state of knowledge about alcohol use during pregnancy for health care providers. This is intended to inform discussion, assessments, and guidance on interventions and treatment when appropriate.

Other issues with respect to alcohol and its effects, including population health outcomes, alcohol consumption by children, and the management of children and adults affected by maternal consumption of alcohol, are outside of the scope of this guideline. Instead, the focus of this document is to guide health care providers on best practices related to screening (tools and instruments) and interventions (counselling; pharmacologics if necessary) before and during pregnancy and in the postpartum period, including while breastfeeding.

The content and recommendations in this guideline were drafted and agreed upon by the authors. The Board of Directors of the Society of Obstetricians and Gynaecologists of Canada approved the final draft for publication. The quality of evidence was rated using the criteria described in the Grading of Recommendations Assessment, Development, and Evaluation methodology framework (see online appendix tables A1 and A2).

SUMMARY STATEMENTS 1, 2, 3

THE EPIDEMIOLOGY OF ALCOHOL CONSUMPTION DURING PREGNANCY

The population of people who consume alcohol and use substances is diverse, and any associated health issues can be complex. It is estimated that women account for approximately 40% of the population who use licit and illicit substances.[1] Women are most likely to consume alcohol or use substances during their reproductive years, especially between the ages of 18 and 29.[2] Levels of use and types of substances used by women vary according to age, ethnicity, socioeconomic status, occupational/mothering roles, and other important social determinants of health.

ABBREVIATIONS

FASD	Fetal alcohol spectrum disorder
MI	Motivational interviewing
SBIRT	Screening, brief intervention, and referral to treatment

According to the 2017 Canadian Tobacco, Alcohol, and Drugs Survey, past-year alcohol use among women increased (to 77% or 11.6 million) compared with 2015 (73% or 10.9 million).[3] In 2018, 14.8% of Canadian girls and women (aged 12 and older) reported heavy alcohol consumption (4 or more drinks on 1 occasion, at least once a month in the past year), and of those women, the highest proportion (23.8%) of heavy drinking was reported by those aged 18 to 34.[4] Clearly, women of child-bearing age consume alcohol to varying degrees, and consumption is increasing overall.

Despite the wide range of contraceptive options available to Canadian women, unintended pregnancies still occur.[5] According to data from the Maternity Experiences Survey, the overall prevalence of unintended pregnancies among Canadian women is 27%, with the highest prevalence in the Territories and Atlantic provinces.[6] Others have reported that 58% of unplanned pregnancies occur in women aged 20 to 29,[7] which overlaps with the age group of women reporting the highest rates of heavy drinking.

These data on alcohol and unintended pregnancies among Canadian women suggest that many women may be consuming alcohol without knowing they are pregnant, placing their fetuses at risk for prenatal alcohol exposure. This underscores the importance of screening and counselling for alcohol use, whether a patient is planning a pregnancy or not.

Of the women surveyed in the Canadian Maternity Experiences Survey, 62.4% reported drinking alcohol during the three months prior to pregnancy, and 10.5% consumed alcohol during pregnancy.[7] In 2018, Popova et al.[8] estimated the prevalence of alcohol consumption during pregnancy in Canada at 10% and the prevalence of binge drinking during pregnancy at 3.3%. Thus, despite prevention efforts to address the potential harms of alcohol during pregnancy, use continues, suggesting a need for more proactive interventions by health care providers as well as additional public health strategies.

Alcohol consumption during pregnancy is a particularly complex issue with many interrelated factors, including mental health issues and other social determinants of health (e.g., income, educational opportunities, occupation and employment status, access to housing, food insecurity, social support and community inclusivity, exposure to intimate partner violence, and adverse childhood experiences). Prenatal alcohol exposure is also associated with maternal history of violence, trauma, and depression.[9,10] Talking to women about these complex and sensitive issues can be

challenging, yet patients may benefit from specific approaches and clinical management. Screening tools can be useful for assessing alcohol use and provide a context for introductory conversations about alcohol consumption during pregnancy.

PRENATAL ALCOHOL EXPOSURE AND THRESHOLDS

Differences in the definition of a standard drink have made it difficult to quantify prenatal exposure and may lead to underestimates in the reported amounts of alcohol consumed. The following definitions detailed in the Low-Risk Alcohol Drinking Guidelines[11] all amount to the same quantity of alcohol consumed (17 mL of absolute alcohol) and should be adopted:

- beer/cider/cooler: 341 mL (12 oz) 5% alcohol content
- wine: 142 mL (5 oz) 12% alcohol content
- distilled alcohol: 43 mL (1.5 oz) 40% alcohol content

There is abundant evidence that alcohol in moderate to large doses[11] is teratogenic[2] and that peak blood alcohol levels in a drinking episode are a crucial factor in determining harm to the fetus.[3] Questions remain about the effects, if any, of low-dose exposure. A number of studies show no (or even positive) effects of low amounts of alcohol consumed in pregnancy,[12–16] while others show detrimental effects,[17–20] making it very difficult to establish an absolute threshold of concern for prenatal alcohol exposure. A number of confounding variables (e.g., nutritional status, socioeconomic status, body mass index, history, genetics), pharmacokinetic indices (e.g., timing, quantity, and frequency), and the tendency of some women to underestimate the amount of alcohol they actually consume add to the challenge of establishing an absolute threshold. There are no randomized trials of alcohol exposure, so it is necessary to rely on cohort studies. Studies on the long-term cognitive effects of prenatal alcohol exposure have many confounders that include the following:

- Those who consume alcohol often consume other substances, and the greater the dose of alcohol the more other substances may be consumed.
- Consumption is self-reported and may be underreported.
- Studies of behavioural outcomes of children indicate they may be affected by the environment in which they were raised.
- Social determinants of health can be challenging to dissociate from alcohol use.

Therefore, the current evidence cannot establish a safety threshold for use in pregnancy.

Establishing a threshold is important given the current rate of unintended pregnancies. A threshold would allow improved interventions tailored for those at risk. The amount most often associated with a range of adverse outcomes is 7 to 28 standard drinks per week,[21] but this definition can be hard to apply because alcohol consumption may be lower but concentrated over a shorter period.[22] Adverse neurodevelopmental effects for the fetus have been associated with binge drinking in pregnancy equivalent to 4 standard drinks per occasion[23–31] and there is evidence that even a single episode of binge drinking in pregnancy can have measurable negative neurodevelopmental effects on the fetus.[31]

Although there is some evidence of no adverse fetal outcomes below 7 standard drinks consumed per week in pregnancy, it is impossible to say with certainty that alcohol consumption below that level is completely safe. This often poses a clinical dilemma for both the woman and her health care provider, especially when the woman consumed alcohol before realizing she was pregnant. If a woman seeking care expresses concern about low-level alcohol exposure (i.e., ≤7 drinks per week and/or no more than 1 binge episode), she may be advised that the likelihood of neurodevelopmental or other adverse effects to the fetus from this alcohol consumption is very low but is not zero. There is no way to perform prenatal diagnosis for alcohol-related neurodevelopmental outcomes. It is important to provide women in these situations with the evidence and allow them to make informed decisions about their pregnancy. Abstaining from alcohol throughout pregnancy remains the safest option.

RECOMMENDATIONS 1, 2, 3

FETAL ALCOHOL SPECTRUM DISORDER

According to the Public Health Agency of Canada, fetal alcohol spectrum disorder (FASD) is the leading known cause of preventable developmental disability in Canada[32,33] with lifetime consequences resulting from prenatal exposure to alcohol. Based on current evidence, the prevalence of FASD in the general Canadian population is 4%, suggesting that FASD is not a rare condition.

Alcohol is an established teratogen, and people exposed to alcohol in utero are at greater risk of lifetime comorbid conditions, including mental health disorders[34] and

premature death,[35] than people who were not exposed. According to the Canada Fetal Alcohol Spectrum Disorder Research Network as reported in 2019, "individuals with FASD will experience some degree of challenges in their daily living, and need support with motor skills, physical health, learning, memory, attention, communication, emotional regulation, and social skills to reach their full potential."[36] FASD presents challenges for the person affected, their family, and the health care system.

It should also be noted that women living with FASD are at high risk of having a child with FASD.[10] It is therefore important to modify the following recommended approaches to screening and intervention to address the needs of these women.[37]

SCREENING FOR ALCOHOL USE DISORDER

Health care providers play a significant and influential role in promoting healthy pregnancies. In a recent survey of health care providers across Canada, 95% reported that they asked pregnant women about alcohol consumption, but only 45% used a standardized screening tool when alcohol consumption was reported (Sword et al., unpublished). Although health care providers may not report using standardized screening tools, they may still be following good practice principles through the use of brief intervention and referrals, where necessary. Survey data on health care provider knowledge of and attitudes towards FASD show potential unconscious biases: The women most likely to be missed using standard screening tools included those over 35 years of age, social drinkers, those who are highly educated, and those of high socioeconomic status.[38] Women with a history of sexual or emotional abuse are also less likely to be screened.[38] Findings from the same report indicated that less than 60% of health care providers felt prepared to care for pregnant women who were alcohol-dependent.[38] One of the recommendations that emerged from these data was the need for guidelines on alcohol consumption for non-pregnant women and for women at risk of having an unplanned pregnancy, as well as strategies and treatment for women who reported drinking during their pregnancy.

Screening for Alcohol Consumption

Prenatal visits provide an opportunity to identify a range of health concerns, including alcohol consumption in pregnancy. Ideally, screening for, and discussions about, low-risk and problematic alcohol use should start prior to pregnancy in the pre-conception and/or interconception (between successive pregnancies) period. Universal screening for alcohol and substance use is recommended for all women, regardless of socioeconomic status. Screening provides an opportunity to obtain information about and to discuss the potential impacts of alcohol and other substances on the woman's health and the developing fetus and presents an opportunity for a woman to reflect on her health and lifestyle choices.

Screening for problematic alcohol use is required only if a woman indicates that she consumes alcohol. A significant number of women do not consume alcohol for reasons related to religion, culture, preference, or circumstance (e.g., being in recovery). For those who *do* consume alcohol, determining the number of standard drinks per day and in a single episode are important when assessing the risk of prenatal alcohol exposure.

To create a safe and open environment in which to discuss alcohol consumption, it can be helpful to introduce alcohol screening with a general statement such as, "I discuss alcohol use with all women. I want to support you in your health goals, including, if you choose, having a healthy pregnancy."

Several screening tools can be used if a woman discloses alcohol use. Brief screening tools such as the T-ACE[39] and AUDIT-C[39] are good choices for the pregnant population (Table 1). Longer tools are available that have been used with pregnant women or the general population, such as TWEAK,[41] NET, AUDIT, CAGE, SMAST,[39] TACER-3,[42,43] and ASSIST.[44] Adolescents may respond better to the CRAFFT questionnaire, which identifies a number of high-risk behaviours often associated with problematic substance use, including the use of alcohol.[45] Many provincial/territorial prenatal records include a screening tool. Even a single question about binge drinking can serve as a useful way to screen for alcohol use.[46,47]

There is evidence that screening, brief intervention, and referral to treatment (SBIRT)[48] is useful in addressing dependence issues in the pregnant population. SBIRT is an evidence-based approach used to identify, reduce, and prevent the problematic use of alcohol and other substances. The use of screening tools should always be paired with brief interventions in the event that alcohol consumption is disclosed and if required for substance use disorder, with referral for treatment.[48]

When screening for alcohol use, it is important for health care providers to recognize how the woman's situation might affect her responses to questions about alcohol. Fear of losing custody of a child, shame, guilt, stigma, and lack of social supports can all be significant barriers to disclosing alcohol use.[49–52] Collaborative patient–provider

Table 1. Questionnaires that can be used to screen for alcohol consumption and/or problematic alcohol use in pregnancy

Tool	Components	Positive screening score
AUDIT-C	How often have you had a drink containing alcohol in the past year? • Never • Monthly or less • 2 to 4 times a month • 2 or 3 times a week • 4 times a week How many drinks did you have on a typical day when you were drinking in the past year? • 1 or 2 • 3 or 4 • 5 or 6 • 7 to 9 • 10+ How often did you have six or more drinks on one occasion during the past year? • Never • < monthly • Monthly • Weekly • Daily or almost daily **NOTE:** The AUDIT time frame for recall has been adapted by some to be 3 months instead of a year, and the binge consumption threshold has been adapted to be 3 or 4 drinks instead of 6 in order to be sex-specific. Both these adaptations are useful in the case of pregnant women.[40] The full AUDIT has 10 questions, including the above 3 questions and further questions to identify problem use.	3 or higher
T-ACE	**T**: **T**olerance: How many drinks does it take to make you feel high? (>2 indicates tolerance) **A**: Have people **Annoyed** you by criticizing your drinking? **C**: Have you ever felt you should **Cut** down on your drinking? **E**: **Eye-opener**: Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?	2 or higher
CRAFFT	**C**: Have you ever ridden in a **Car** driven by someone (including yourself) who was high or had been using alcohol or drugs? **R**: Have you ever used alcohol or drugs to **Relax**, feel better about yourself, or fit in? **A**: Do you ever use alcohol or drugs while you are by yourself (**Alone**)? **F**: Do you ever **Forget** things you did while using alcohol or drugs? **F**: Do your **Family** or **Friends** ever tell you that you should cut down on your drinking or drug use? **T**: Have you ever gotten into **Trouble** while you were using alcohol or drugs?	2 or higher

interactions and an environment of safety and trust are necessary to establish respectful relationships that will promote engagement in support services or treatment programs.[53] A range of studies have identified the importance of having competent and confident health care providers who can deliver brief interventions.[45,54]

RECOMMENDATIONS 4

TREATMENT

Achieving positive change for women with problematic alcohol use depends on personal circumstances and may range from achieving abstinence to achieving harm reduction by reducing the number episodes of heavy drinking. Psychosocial intervention, which involves brief intervention and individual counselling, should be the first approach; this intervention can also be useful for identifying low-risk drinkers. Some women may benefit from group treatment approaches (outpatient or residential), which have the added benefit of helping these women overcome social isolation. This form of mutual help can aid in maintaining sobriety. Treatment for alcohol dependence may be more successful with the addition of pharmacotherapy,[55] though pregnancy can further complicate this approach.

Although the intensive management of alcohol use disorder is beyond the scope of this guideline, given that health care providers may be asked for treatment recommendations, a general overview of the management of alcohol use disorder is discussed in the following sections, including with respect to the safety of drugs that may be used in pregnancy. As with all drugs used in pregnancy, the data are limited and consist of cohort series and post-marketing surveillance.

BRIEF INTERVENTION

The term "brief alcohol interventions" refers to time-limited counselling strategies or conversations designed to help people reduce or eliminate at-risk alcohol use (Table 2). Most successful brief alcohol interventions include 3 components (3 A's):

- Awareness raising (through discussion of risks) and assessment/identification of readiness for change;
- Advice (including providing written or electronic materials) and discussion of strategies for reducing or eliminating problematic alcohol use; and
- Assistance in the form of eliciting ideas about change strategies, supporting/enhancing readiness, goal-setting to reduce or eliminate alcohol use, positive reinforcement, and/or referrals to supportive services.

Brief interventions are cost effective[56,57] and can be implemented in various clinical settings by the health care provider or another member of the health care team. These interventions can vary in length, intensity, and frequency from 1 very brief session of 5 minutes or less to 1 to 4 or more sessions of 5–25 minutes.[58,59] Multi-contact interventions have been linked to greater risk reduction than single-contact interventions.[57] Effectiveness is also affected by the overall approach. Brief interventions are often achieved by using a motivational interviewing (MI) approach. MI is defined as "a collaborative, goal-oriented style of communication with particular attention to the language of change, designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion."[60] When employing MI, health care providers work collaboratively with patients and skillfully draw out reasons for change that are personally relevant and meaningful. In a 2005 systematic review of randomized controlled trials evaluating the effectiveness of MI interventions in health behaviour change, MI was shown to outperform traditional advice-giving.[61] Furthermore, physicians reported that using an MI approach was no more time-consuming than traditional advice-giving.

Evidence indicates that a harm reduction approach within brief interventions is also effective.[62] Harm reduction involves assisting women to decrease the harms associated with substance use by establishing realistic and achievable goals to reduce alcohol use as they work towards abstinence, where possible. Fundamental to a harm-reduction approach is a shift away from stigma, guilt, confrontation, and shame and towards an empowering, strengths-based approach. A respectful, nonjudgmental style from the health care provider accommodates goals of reduced use without requiring immediate abstinence.

Brief Intervention Pre-conception

There is strong evidence for the use of brief interventions that have a dual focus of reducing alcohol use and increasing use of effective contraception by women in the preconception period who are not yet pregnant.[63,64] The CHOICES* approach[65] has been effective in a range of settings with women at different levels of risk of having an alcohol-exposed pregnancy.[63,64,66,67] This brief intervention method uses the collaborative approach of MI and involves personalized feedback about the risks of alcohol exposure in pregnancy; the option to focus on alcohol use, contraception, or both; a discussion about ways to reduce risk and increase confidence; and the development of a personalized change plan.

Brief Intervention for Pregnant Women

There is some evidence that brief interventions are effective for pregnant women.[58,68] Interventions that include a support person of the woman's choosing have been shown to be particularly effective. As many studies have found an association between alcohol problems and intimate partner violence, the woman's preference for including her partner as her support person should be explored and not assumed. Overall, MI was the most common type of brief intervention reported across the studies pertaining to pregnant women and women of child-bearing age who use alcohol.[69–71]

Brief Intervention Postpartum

Research shows that most women return to previous drinking patterns postpartum.[72–75] Maintaining reduced alcohol consumption or sobriety in the postpartum period has the potential to positively affect outcomes for children and families. Brief interventions can be used in the postpartum period as well.

Linking Brief Intervention to Screening and Referral

It is important to link brief intervention to screening and, if necessary, to referral for further support or treatment.[76] This approach is referred to as SBIRT. Implementing SBIRT has been found to improve recognition of at-risk alcohol use or alcohol use disorder, facilitate awareness of and education about use, promptly address lower-level

* The CHOICES acronym stands for the Changing High-Risk Alcohol Use and Increasing Contraception Effectiveness Study. See www.cdc.gov/ncbddd/fasd/choices-program-prevent-alcohol-exposed-pregnancies.html.

Table 2. The 3 A's: assess, advise, assist

Assess	Advise	Assist and arrange	Recommended approach
All women	• Low-risk drinking guidelines[a] • Information about FASD		• Information sharing
Low risk	• Information about FASD • Low-risk drinking guidelines: ○ Pre-conception: avoid at-risk drinking ○ Pregnant: no known safe amount ○ Postnatal breastfeeding	• Drink size information and low-risk drinking guidelines • Birth control information, as required • Educational materials on risk of heavy alcohol use and FASD for woman and partner/significant others • Support for goal setting • Breastfeeding and pumping timing charts	• Brief intervention • Routine check at each prenatal or periodic health examination
Moderate to high risk	• Information about health risks of heavy alcohol use, including dependency	• Drink size information and low-risk drinking guidelines • Birth control, as required • Clear messaging and feedback about the health risks of moderate to heavy drinking • Discussion to elicit and support motivation to change • Assistance with goal-setting and reducing harms • Follow-up visit with partner or significant other, if possible • Referral to services as needed • Postnatal breastfeeding pumping and timing charts	• Multiple-contact brief interventions using motivational interviewing • Follow-up phone calls if pregnant, not using birth control, or breastfeeding
Alcohol dependent	• Information about: ○ Health risks of heavy drinking, including risk of FASD ○ Process of and supports for withdrawal ○ Treatment and support options ○ Birth control options ○ Breastfeeding options	• Birth control as required • Clear messaging and feedback about risks of heavy drinking for mother and baby • Discussion to elicit and support motivation to change • Assistance with goal-setting • Discussion of withdrawal management/treatment options • Medication recommendations, if required • Referral and support to access treatment, when ready • Follow-up visit with partner or significant other • Continue to elicit and support change • Postnatal bottle-feeding options	• Multiple brief interventions • Referral to treatment and/or other supports • Medication • Follow-up phone calls

[a] Canada's Low-Risk Alcohol Drinking Guidelines: 10 drinks a week for women, with no more than two drinks a day most days. FASD: fetal alcohol spectrum disorder.

problems, enhance the referral-to-treatment process, and decrease overall health care costs.[48]

One reason health care providers do not provide brief interventions for alcohol use is that they may not know where to refer women with alcohol problems. Table 3 provides an overview of the types of programs available in many locations across Canada.

RECOMMENDATIONS 5, 6, 7, 8, 9

SPECIFIC GROUPS OF WOMEN AND PARTNERS

Health care providers may need to tailor interventions for patients of diverse circumstances.

Women with a History of Trauma

Women who have experienced trauma are more likely to drink during pregnancy[77] and to experience more mental health issues than those who have not experienced trauma.[78] Trauma-informed services based on respect, safety, and dignity are essential when supporting women.[79] Trauma-informed approaches are not about treating the trauma, but rather about understanding how trauma may affect patient care and incorporating supports that increase safety, choice, and collaboration in care planning and decision-making.[80–82] Offering to teach self-regulation skills is also a component of trauma-informed practice.

College- and University-Age Women

Many college/university-age women are at risk for unintended pregnancy, and those who engage in heavy or binge drinking are thus at risk for having an alcohol-exposed pregnancy. Data from Canada and the United States suggest that binge drinking is particularly common among in this group and is on the rise.[83–85] These risks merit greater prevention efforts.

Women Living in Rural and Remote Communities

A study investigated the feasibility and promise of a 1-session, remote-delivered, pre-conception, MI-based alcohol-exposed pregnancy intervention (EARLY Remote) for non–treatment-seeking women living in remote communities.[86] All participants received the intervention via telephone and mail. Participants were engaged by the intervention and rated it as credible. The proportion of women

Table 3. Alcohol use disorder referral programs in Canada

Type	Names	Description	For more information
Community-based outreach	Pregnancy outreach programs	Many communities have drop-in programming for pregnant women, funded through the Canada Prenatal Nutrition Program	A directory of all the programs by province and territory can be found at cpnp-pcnp.phac-aspc.gc.ca/en
	Parent–child assistance programs and "one-stop" programs	Many communities offer mentoring and holistic programming that uses a harm-reduction approach for women at higher risk	These programs have many different program names (e.g., Healthiest Babies Possible) Many are also listed at cpnp-pcnp.phac-aspc.gc.ca/en
Substance use treatment	Outpatient counselling, day treatment, and live-in treatment	Each province and territory has an addictions treatment system of care	Online listings are available from ministries of health and regional health authorities

who drank at risky levels, used unreliable or no contraception, and/or were at risk for alcohol-exposed pregnancy in the past 90 days decreased significantly from baseline to 6 months. The researchers concluded that remote delivery was feasible and may reduce risk of alcohol-exposed pregnancy.

Indigenous Women

Researchers have worked collaboratively with Indigenous communities in Canada and the United States to codevelop culturally relevant prevention approaches that involve providing information on FASD, identifying women at risk of having a child with FASD, and support for FASD.[87–89] It is vital that health care providers offer culturally safe, strengths-based, and wellness-oriented approaches when delivering brief intervention and support for Indigenous women.[90,91]

Transgender Patients

The vast majority of pregnant patients identify as women; however, there are transgender people who become pregnant and may wish to be referred to by other gender terms. Clinicians need to be aware of transgender health issues, use desired terminology and pronouns, be sensitive to reproductive intentions, and connect patients to resources for transgender patients where required. Transgender persons may be at risk for increased alcohol use. In an Ontario sample, the estimated prevalence of binge drinking (defined as consuming 5 or more alcoholic drinks on 1 occasion at least monthly in the past year) was 33.2%, 1.5 times greater than the age-standardized population.[92] Binge drinking was particularly pronounced among transmasculine (female-to-male) transgender people. Research involving the transgender community is comprehensive and is subject to a number of methodological challenges, as detailed in a 2018 review by Gilbert et al.[93] Despite these limitations, the review reports that the prevalence of hazardous drinking among transgender persons is high. Transgender patients should be connected to alcohol-related resources specific to transgender patients.

Partners

Partners of pregnant patients may be interested in accessing information about alcohol use in pregnancy and/or in reducing their own alcohol and other drug use. The existing literature reports on male partners, and although there is a paucity of evidence to inform decisions when the partner is a woman, it is important for practitioners to be open to hearing the health concerns of, and tailoring their assistance to, patients with same-sex partners.

For patients with male partners, international studies demonstrate the usefulness of approaches that encourage men's involvement in caregiving of children, preventing violence against women, and supporting women's reproductive health.[94,95] These are called gender-transformative approaches, as they directly address gender equity as a route to improving men's and women's health. These studies recommend synchronized interventions with fathers and mothers, not couples' interventions. Such interventions must be provided with appropriate caution with respect to the possibility of domestic violence.

PHARMACOTHERAPY

Pregnancy is often a time when women are highly motivated to change their behaviour and presents as an optimal period to engage them in behavioural modification treatments, which may include pharmacological management for alcohol use disorder.[96] Evidence supports that,

with early recognition and an integrated multidisciplinary care team, women who participate in a treatment program of any kind have better outcomes than those who do not.[97] Although the mainstays of treatment for low-level alcohol use include counselling, brief intervention, MI, and cognitive behavioural therapy,[96,98–100] some women may require more intensive and multifaceted care, including pharmacotherapy. Table 4[101–117] lists the pharmacologic treatments that can be used in the management and/or prevention of alcohol withdrawal, as well as relapse prevention. Although the literature describing the use of these medications in pregnancy and lactation is sparse, this section provides health care providers with a guide for informed decision-making conversations with patients.

A combination of behaviour modification and pharmacologic management, which may be more successful in achieving and maintaining abstinence or harm reduction than behaviour modification alone, may be achieved through primary care and/or referral services. However, withdrawal from alcohol, whether voluntary or involuntary, may occur at any time, and management may rest with the current care provider. Each provider should therefore understand the multi-faceted management of alcohol withdrawal, including pharmacologic management, as presented in Table 4. Additionally, chronic alcohol overuse can lead to thiamine deficiency, which in turn can lead to significant brain damage, including Wernicke–Korsakoff syndrome.[118] Thus, it is important to consider thiamine supplementation (maintenance dose of 100 mg once daily) in all women who are identified as heavy alcohol users, regardless of their choice to engage in other treatment programs or pharmacotherapy.

RELAPSE PREVENTION

It is important to remember that the goal of treatment can be either a reduction in the amount of alcohol consumed or total abstinence. For most individuals, treatment with these medications is long term and in some cases will continue throughout their lifetime.

Women who are alcohol-dependent need specialized counselling and support in pregnancy. They also need medical support during the process of withdrawal, as well as support to access treatment. Specialized medical care should be provided for pregnant women who are alcohol-dependent. Women with alcohol problems and dependency are at risk for a wide range of other health problems that may also need attention. The health care provider making referrals should indicate that the woman is pregnant to ensure priority access to treatment.

SUMMARY STATEMENT 4

ALCOHOL USE AND LACTATION

The majority of Canadian mothers initiate breastfeeding after birth (18–34 years old: 91.2%; 35–49 years old: 92.9%).[119] Although breastfeeding decreases over time, 28.8% of Canadian women aged 18 to 34 and 36.9% of women aged 35 to 49 continue to breastfeed at 6 months.[120] Approximately half of all women in Western countries report consuming alcohol while breastfeeding.[121] Most women report drinking at or below 2 to 3 standard drinks per occasion and usually time consumption to occur after breastfeeding.[122,123] The amount of alcohol in breastmilk is equal to the blood alcohol level, and there is no accumulation of alcohol in breastmilk due to alcohol's zero-order pharmacokinetic profile. The amount of alcohol in breast milk is reduced by the passage of time since consumption. There is no other way to reduce the amount of alcohol in breast milk. To help breastfeeding mothers and their health care providers, Motherisk developed an algorithm to determine how long it takes for the body to metabolize alcohol to the point at which it will no longer be present in breast milk.[124]

Given that women may consume alcohol during lactation, health care providers need to be prepared to provide factual counselling for women to make informed choices.[125] However, the consequences of alcohol use during breastfeeding are not well established, making it difficult to provide such advice. Little evidence exists to suggest breastfed babies are adversely affected by short-term, low levels[12] of maternal alcohol use (no more than 2 standard drinks per sitting);[121,122,126] consequences of long-term exposure exceeding the recommended daily amount are largely unknown.[121–123] As a result, providing definitive advice related to alcohol and breastfeeding is not plausible. The safest advice is to abstain from alcohol while breastfeeding.[12,127,128] However, given the prevalence of alcohol consumption during breastfeeding, more practical advice may be needed. If women choose to consume alcohol, they should be counselled to drink at low levels of no more than 2 standard drinks per sitting[121,123] and should time their consumption to the period immediately following breastfeeding.[122] Given the limited data related to multiple exposures over a longer period of time and consumption exceeding more than 2 standard drinks per sitting while breastfeeding, women consuming alcohol at this level should be counselled not to breastfeed and to

Table 4. Pharmacotherapy for alcohol withdrawal and relapse prevention

Drug	Mechanism of action and effects	Pre-conception	Pregnancy	Breastfeeding	Additional considerations
			Withdrawal management		
BZDs	• Mechanism unknown; may modulate neurotransmitters in the brain, such as GABA, a major inhibitory neurotransmitter; chronic alcohol use produces insensitivity to GABA • BZDs control agitation and progression to more severe manifestations; there may also be control of withdrawal seizures	• Safe to use in an outpatient or inpatient setting • May require support for tapering before pregnancy (if appropriate)	• Generally safe for short-term use[102,103] • Recommended for management and prevention of withdrawal symptoms in moderate to heavy alcohol consumption[98,100,104–106] • Risk of BZD withdrawal in newborns if used within days of delivery[97]	• Limited data available • Short-acting BZD minimally excreted in breast milk[107] • No identified adverse effects in exposed infants[108] • Requires monitoring of infant for drowsiness, decreased feeding, and poor weight gain[109]	• Diazepam is the BZD of choice to treat and/or prevent withdrawal symptoms • Need to consider and account for any current use of BZD • Combine with supportive care, fluid replacement, and nutritional supplementation, including thiamine • If delivery will be soon, consider short-acting agents such as midazolam to reduce effects in the newborn; otherwise, diazepam is preferred • The Clinical Institute Withdrawal Assessment for Alcohol, Revised, tool recommends assessing symptom severity to guide management, including BDZ dosing
Thiamine	• Vitamin B1, an essential micronutrient required for glucose metabolism • Corrects nutritional deficiency caused by excessive alcohol use	• Women in alcohol withdrawal should receive 100 to 200 mg thiamine IV or IM once daily for at least 3 days	• Pregnant women have an increased need for dietary thiamine (1.4 mg/d); there are no known adverse effects associated with high levels of thiamine • Parenteral thiamine should be given for alcohol withdrawal	• Dietary supplementation to 1.4 mg/d is recommended. There are no known adverse effects associated with high levels of thiamine	• Parenteral thiamine 102–250 mg IV or IM once daily for 3–5 days followed by oral therapy is required for heavy alcohol use to the prevent Wernicke–Korsakoff syndrome
			Relapse prevention		
Naltrexone	• Non-selective opioid antagonist • Highest affinity for mu receptors • Reduces alcohol craving and subjective intoxication • Most effective for treating moderate to severe alcohol dependence	• Suitable for use when goal is to become alcohol-free in future pregnancies • Should be used in conjunction with reliable contraception[110]	• Limited data available • Larger studies needed • Emerging literature from opioid use disorder suggests safe in pregnancy[104,111] • Prescribe only if benefit of use outweighs risk	• Limited data available • Minimally excreted into breast milk at dosage of 50 mg once daily • Undetectable amounts and no adverse effects reported in exposed infants	• Typically used as a fixed, once-daily dosing regimen (50 mg) for 3–6 months • Long-acting injectable; can be useful for patients unable to comply with daily oral medication • May be initiated while the patient is still drinking alcohol • Check liver function at baseline (contraindicated if enzymes >4–5× normal; then consider acamprosate)

(*continued on next page*)

Table 4. (*Continued*)

Drug	Mechanism of action and effects	Pre-conception	Pregnancy	Breastfeeding	Additional considerations
Acamprosate	• GABA agonist • Alters neurotransmission of GABA and glutamine pathways • Thought to reduce cravings by normalizing the hyperglutamatergic state that occurs with prolonged exposure to high levels of alcohol[97]	• Can be safely used • Should be used in conjunction with reliable contraception	• Preliminary evidence suggests acamprosate safe in pregnancy[112] • Larger studies are needed • Prescribe only if benefit of use outweighs risk	• No data available • Prescribe with caution and only if benefit outweighs risk	• Typically initiated 5 days after alcohol detoxification • Full effectiveness after 5–8 days of treatment • Standard dosing: 666 mg 3 times per day • Excreted by the kidneys; dose reduction required for renal insufficiency • Dosing: Glomerular filtration rate 30–50 mL/min: 333 mg TID; contraindicated if estimated glomerular filtration rate is ≤30 mL/min
Disulfiram	• Inhibition of aldehyde dehydrogenase prevents metabolism of alcohol's primary metabolite, acetaldehyde • When mixed with alcohol, causes an acute reaction 10–30 minutes after ingestion (sweating, flushing, hyperventilation/dyspnea, blurred vision, headache, thirst, nausea and vomiting, vertigo, and weakness)	• Requires patient education regarding disulfiram–alcohol reactions and teratogenic effects • Given its teratogenic effects,[97] must be used in conjunction with reliable contraception • Recommend pregnancy test prior to initiation • Highly recommend discontinuing prior to conception	• Not recommended • In first trimester, risk of fetal malformations[98,105,106] • In all trimesters, risk of severe hypertension and autonomic instability if there is a disulfiram–alcohol reaction[106] • Discontinue drug if pregnancy is discovered	• No data available • Prescribe in breastfeeding mothers with caution and only if benefit outweighs risk	• Average effective dose: 250 mg/d (range 125–500 mg/d) • Treatment may be continued for months to years depending on the patient's needs • Should be discontinued once long-term alcohol abstinence is established • Prior to starting, assess baseline renal and hepatic function; if patient has history of cardiac disease, include echocardiogram
Topiramate	• Mechanism unknown • May reduce drinking • Second-line choice • Preferred if there is another indication, such as seizure disorder • Multiple adverse effects, including cognitive impairment, fatigue, dizziness, and depression, which may be intolerable for some patients	• Safe to use before conception • Should be used in conjunction with reliable contraception	• Should be avoided because it crosses the placenta • Some studies show an increased risk of oral clefts[113] and an increase in small for gestational age infants[114]	• Present in breast milk • In limited studies, no adverse effects were observed in most infants; one infant had diarrhea, which resolved on discontinuation	• May be indicated when other drugs have been ineffective or in combination with other medications
Gabapentin	• Inhibits dopamine release in parts of the central nervous system • Limited efficacy data but may be used in some patients when other options have been ineffective	• Safe to use before conception • Should be used in conjunction with reliable contraception	• Association with fetal growth impairment and developmental delay in some cases • No increased risk of malformations[115]	• Excreted in small amounts in breast milk; no adverse effects were found in exposed infants[116]	• May be used for indications other than alcohol use disorder[117] • Potential for misuse a concern for patients with substance use disorder[118]

BZD: benzodiazepines; GABA: gamma-aminobutyric acid IM: intramuscularly; IV: intravenously.

discard any expressed breast milk within the time frame suggested by Motherisk. Women should be counselled that excessive alcohol use may impair their ability to care for their infants.

CONCLUSION

This guideline is intended to facilitate the recognition by health care providers of problematic alcohol use among women of child-bearing age and pregnant women to reduce its incidence and mitigate the adverse consequences of prenatal alcohol exposure. It will help guide health care providers in caring for these women using a harm-reduction approach and by offering brief intervention and support for accessing treatment, as necessary.

SUPPLEMENTARY MATERIAL

Supplementary material can be found in the online version of this article, at https://doi.org/10.1016/j.jogc.2020.03.002.

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APPENDIX

Table A1. Key to Grading of Recommendations, Assessment, Development and Evaluation Quality of Evidence

Strength of Recommendation	Definition
Strong	High level of confidence that the desirable effects outweigh the undesirable effects (strong recommendation for) or the undesirable effects outweigh the desirable effects (strong recommendation against)
Conditional (weak)[a]	Desirable effects probably outweigh the undesirable effects (weak recommendation for) or the undesirable effects probably outweigh the desirable effects (weak recommendation against)
Quality of Evidence	**Definition**
High	High level of confidence that the true effect lies close to that of the estimate of the effect
Moderate	Moderate confidence in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low	Limited confidence in the effect estimate: The true effect may be substantially different from the estimate of the effect
Very low	Very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

[a] Do not interpret conditional (weak) recommendations to mean weak evidence or uncertainty of the recommendation.

Adapted from GRADE Handbook (2013), Table 5.1, available at gdt.gradepro.org/app/handbook/handbook.html.

Table A2. Implications of Strong and Conditional (Weak) Recommendations, by Guideline User

Perspective	Strong Recommendation • **"We recommend. . ."** • **"We recommend to not. . ."**	Conditional (Weak) Recommendation • **"We suggest. . ."** • **"We suggest to not. . ."**
Authors	The net desirable effects of a course of action outweigh the effects of the alternative course of action.	It is less clear whether the net desirable consequences of a strategy outweigh the alternative strategy.
Patients	Most individuals in the situation would want the recommended course of action, while only a small proportion would not.	The majority of individuals in the situation would want the suggested course of action, but many would not.
Clinicians	Most individuals should receive the course of action. Adherence to this recommendation according to the guideline could be used as a quality criterion or performance indicator.	Recognize that patient choices will vary by individual and that clinicians must help patients arrive at a care decision consistent with the patient's values and preferences.
Policy makers	The recommendation can be adapted as policy in most settings.	The recommendation can serve as a starting point for debate with the involvement of many stakeholders.

Adapted from GRADE Handbook (2013), Table 6.1, available at gdt.gradepro.org/app/handbook/handbook.html.