

Pregnancy and Substance Use

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Objectives:

1. Participants will be able to identify the prevalence of substance use in pregnancy and for women in their childbearing years.
2. Participants will be able to list the effects that opiates and alcohol have on the developing baby.
3. Participants will be able to identify effective strategies to help pregnant women abstain from or reduce substance use in pregnancy.
4. Participants will identify the role of the nurse in prevention and treatment of substance use in pregnancy.

Substance Use for Women in Their Childbearing Years

- Important to understand prevalence of substance use prior to pregnancy
- Once patterns of substance use are established it is more difficult for women to stop substance use when they become pregnant
- Risky use of substances before pregnancy puts a woman at higher risk of use in pregnancy
- Public Health Agency of Canada estimates the rate of unplanned pregnancy to be 40% (Some populations may be as high as 50%)



Substance Use–Childbearing Women/Pregnancy

Women of Childbearing Age

- ▶ Alcohol 76.7%
- ▶ Tobacco 17.7% ≥12 years
(Canadian Community Health Survey 2009)
- ▶ Cannabis 11%
- ▶ Illicit Drug Use 2.1% (cocaine, ecstasy, speed, hallucinogens and heroin)
- ▶ Canadian Alcohol & Drug Use Monitoring Survey (2011)
- ▶ Women, 15–44 years of age

Pregnancy

- ▶ Alcohol – 11%
- ▶ Tobacco – 13%
- ▶ Illicit Drug Use – 5%
- ▶ Use of substances is underreported
- ▶ Likely more of an issue in pregnancy
- ▶ Assume if illicit drug use also alcohol use

Substance Use for Women in Childbearing Years – Canada

- ▶ 20% of women of childbearing age consume ≥5 drinks at a time once/month or more – 3x's rate from a decade ago
- ▶ Canada's Low Risk Drinking Guidelines recommends no more than 3 drinks/occasion for women to reduce their risk of injury and chronic disease
(Canadian Centre on Substance Abuse, 2013)

Canada's Low Risk Drinking Guidelines

What Is a Standard Drink?

Beer	341 ml, 12 oz, 5% alcohol
Wine	142ml, 5 oz, 12% alcohol
Liquor or Spirits	43 ml, 1.5 oz, 40% alcohol

- ▶ Women –2/day, 10 /week
- ▶ Men – 3/day,15/week
- ▶ Non–drinking days every week to avoid developing a habit
- ▶ Special Occasions – reduce your risk of injury and harm by drinking no more than 3 drinks (for women)



Pregnant? Zero Is Safest
If you are pregnant or planning to become pregnant, or about to breastfeed, the safest choice is to drink no alcohol at all.

<http://www.ccsa.ca>

National Institute on Alcohol Abuse & Alcoholism

12 fl oz of regular beer  about 5% alcohol	=	8-9 fl oz of malt liquor (served in a 12 oz glass)  about 7% alcohol	=	5 fl oz of table wine  about 12% alcohol	=	1.5 fl oz shot of 80-proof spirits ("hard liquor"—whiskey, gin, rum, vodka, tequila, etc.)  about 40% alcohol
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▶ Women – 7/week , 3/day
▶ Men – 14/week, 4/day

**Pregnant?
Women who are pregnant or intending to become pregnant – None**

<http://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

Target Groups

All Women in their Childbearing Years



- ▶ Women struggling with Social Determinants of Health (lack of income, lack of education, lack of appropriate social support, in violent relationships, women with mental health issues, women who have had past trauma)
- ▶ Women who are working and have waited until their career was more established to begin a family

Risk Factors for Alcohol and Substance Use in Pregnancy

- Women who drink above the low risk drinking guidelines before pregnancy – 2/day,10/week (Can), 3/day,7/week (U.S.)
- Pre-pregnancy binge drinking – defined as 4+ drinks in 2 hours for an average sized female (LRDG – 3+)
- Women using birth control unreliably
- Women ≥35 years who work and drink socially

Risk Factors for Alcohol/Substance Use in Pregnancy

- Having a partner (male or female) who drinks/uses substances
- Low socioeconomic status – low income, low paying job, lower education, unstable housing, low social support
- Mother with cognitive impairments – consider she may have undiagnosed FASD

Risk Factors for Alcohol/Substance Use in Pregnancy

- Mental Health Issues
- Mothers using tobacco or other substances more at risk of alcohol and substance exposed fetus
- Having a previous child who was exposed to alcohol in pregnancy



Alcohol, Tobacco and Drug Use

- Effect a developing fetus, alcohol/tobacco have the most research
- Alcohol/tobacco are legal, heavily marketed to females
- Will not discuss tobacco today–most commonly used substance in pregnancy
- Illicit drug use is less common, but is increasingly becoming a problem – will cover opioids later in presentation
- FASD – is the most common preventable developmental disorder in Canada and North America

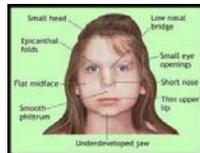
Effects of Alcohol on the Developing Fetus



- Alcohol freely crosses the placenta
- Most damage occurs to the brain and developing central nervous system – these develop throughout pregnancy
- Fetus exposed for longer period – slower alcohol metabolism, smaller liver
- Alcohol found in amniotic fluid after mother consumes alcohol
- The impact or severity of FASD varies depending on: when alcohol is consumed in pregnancy; how much consumed; and how often consumed
- Depends on age, nutrition, determinants of health and genetic factors

What is FASD?

- Fetal Alcohol Spectrum Disorder (FASD) – umbrella term to describe range of disabilities that result from drinking alcohol in pregnancy
- Invisible disability – most people with FASD appear normal physically
- Cannot be cured and provides lifelong effects to the individual, their family and cost to society
- Many have excellent verbal skills and can parrot advice. People mistake this as non compliance as they appear to understand but cannot follow through



What Does FASD Look Like?

- Difficulties with attention and memory – poor historian
- Trouble filtering sensory information making emotion regulation difficult
- Problems with planning/initiating activities
- Often have normal intelligence
- Have difficulty using the information they have in an organized fashion
- Do not learn/generalize from past mistakes – will likely need an external influence their entire life to make good decisions

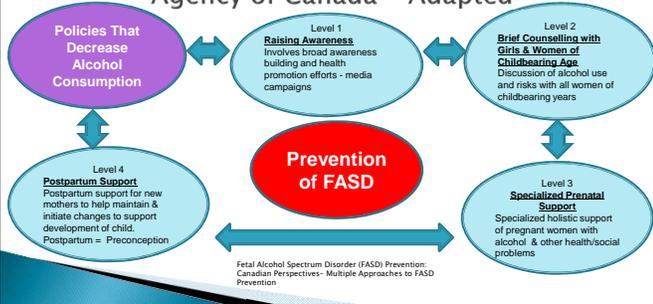


FASD – What is the Cost to Society?

- FASD affects 1% of the Canadian population, similar in the U.S.
- Many experts feel the prevalence of FASD is higher due to a lack of awareness about FASD in the medical community and a shortage of diagnostic services
- 5.3–7.6 billion dollars spent annually to support those with FASD (birth to 53)
- 800,000–1.4 million dollars/individual–estimated lifetime cost to support FASD
- FASD 10 times higher in Canada's prisons than the general population
- If we spend \$150,000 to prevent FASD – save \$1.6 million (CanFASD, 2013)



Four Levels of Prevention – Public Health Agency of Canada – Adapted



Level 1 – Raising Awareness

- Provincial and local campaigns done since 2004 and before
- Awareness strategies are important component of prevention – on own are not enough – combine with other strategies to have an impact
- Awareness campaigns based on mistaken assumption
If people were aware of need for behaviour change they would change their behaviour



Level 2: Brief Counselling with Girls and Women of Childbearing Age

Brief Counselling with Women of Childbearing Age – Discussion of alcohol use and related risks with all women of childbearing age/support networks

- 2nd level of prevention – least work has been done – might be a strategy that will show the greatest reduction in alcohol exposed pregnancies
- Health and social service providers are seen as one of the most credible sources of information – more likely to lead to behaviour change
- Ontario women – childbearing age report a low level of receiving info. about alcohol use from health providers even in pregnancy



Level 2: Brief Counselling with Girls and Women of Childbearing Age

- Brief Interventions do make a difference
- Brief interventions with women of childbearing age by physicians – saw decrease in number of drinks/day, more women report drinking within the safe drinking guidelines, 6–12 months after the B.I. still see a ↓ in risky drinking



Level 2: Brief Counselling with Women of Childbearing Age

Project CHOICES
Program designed by Centre for Disease Control, U.S., adapted program in Manitoba right now

- Used Motivational Interviewing (MI) to discuss drinking behaviour and contraceptive use over a series of visits
- 69% of women who were part of the program were at lower risk of having an alcohol-exposed pregnancy at 9 months follow-up
- Most women chose to use effective contraception and approximately 44% reduced their alcohol use and were using effective contraception at 9 months post intervention

Level 3 – Specialized Prenatal Support

Specialized holistic support of pregnant women with alcohol and other health/social problems (housing, income, food support)

- Addictions Services –Early Childhood Development Addiction Initiative (MOHLTC) 18 programs across the province
- Canadian Prenatal Nutrition Programs (CPNP) (WIC) are available throughout Canada/U.S. – support some of the determinants of health so women can focus on decreasing/eliminating substance use – Breaking the Cycle in Toronto is designed to provide many supports to pregnant women who have addictions
- Ontario’s Healthy Babies, Healthy Children Program (MOCYS)– for pregnant women and families with children up to age 6 – supports, screens and assesses, links women and their children to community services – helps children to get a healthy start in life

Level 4 – Postpartum Support

Postpartum support for new mothers assisting them to maintain changes they made in pregnancy

- Postpartum women are considered to be preconception and at risk of future alcohol or substance exposed pregnancies
- Relapse prevention, support and parenting programs



Prevention and Harm Reduction What is Your Role?

Women of Childbearing Age:

- Screen for alcohol/substance use with all women of childbearing age.
Example – Prescribing birth control, well woman visit, preconception counselling, other health issues, use every opportunity to educate about substance use
- T-ACE is the tool that has proven to be most effective in pregnancy but CAGE and TWEAK very similar, just find an approach that works
- Let every woman know that if she is planning a pregnancy, **suspects she is pregnant**, or she is pregnant the safest choice is “no alcohol”
- Discuss Canada’s Low Risk Drinking Guidelines
<http://www.rethinkyourdrinking.ca/>

Screening Process – Ask

Normalizing Screening for Substance Use

- Discuss alcohol use after you have asked and assessed for other things, locate it in the middle of an assessment
- Begin by explaining that you talk with all women about alcohol use because alcohol use is common in our society (and substance)
- To be more open ended you may begin with: "Many women drink alcohol socially and some women may drink to relax on the weekend then ask "Do you ever drink alcohol?" proceed with screen

Universal Screening Questions for Substance Use Disorders – RNAO



1. Have you ever had any problems related to your use of alcohol or other drugs? (Yes/no)

2. Has a relative, friend, doctor or other health worker been concerned about your drinking or other drug use or suggested cutting down? (Yes/no)

3. Have you ever said to another person "No, I don't have [an alcohol or drug] problem, when around the same time, you questioned yourself and FELT, "Maybe I do have a problem?" (Yes/no)

Scoring: A positive response to any one question should indicate the need for further investigation using a validated assessment tool.
(Health Canada, 2002) 48

T-ACE Screening Tool

T Tolerance	How many drinks does it take to make you feel high?
A Annoyance	Have people annoyed you by criticizing your drinking?
C Cut Down	Have you ever felt you need to 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?

Score 1 point for each Yes
High Risk Score: 2 or more points (maximum 5 points)

www.beststart.org/resources/alc_reduction/pdf/DR_alcohol.08.pdf
www.caphc.org – search Maternal Drinking Guide

Screening Process – Ask, Advise

Ask and Advise :

- Woman Reports No Alcohol Use

Advise that no alcohol is the safest choice when planning a pregnancy, pregnancy is suspected, or if a woman is pregnant

If a woman tells you she has consumed no alcohol in pregnancy use this as a teaching moment and say, "That's great as alcohol causes brain damage so I am glad you have not had any alcohol"
- Woman Reports Drinking Alcohol
 - Administer Screening tool (Universal Screening Questions for Substance Use Disorders, T-ACE, CAGE, or TWEAK – use what works for you)
 - In a typical week, how many days do you drink?
 - On those days how many drinks do you usually have?

Women in Their Childbearing Years

- Encourage women to use a reliable form of birth control that they have control over every time they have sex to prevent an unplanned alcohol/substance exposed pregnancy
- Encourage all women of childbearing age to take a multivitamin each day
- Acknowledge that some women may use alcohol to cope with mental health issues or past traumas such as a loss, abuse or violence
- Research has shown that many people under report alcohol/substance use
- How you ask helps - "When you do drink, how many drinks do you have, 2 or 10? In an average week how many times do you drink?"

Pregnant Women

- Ask/advise all women multiple times about alcohol use in pregnancy
- Encourage all women to avoid alcohol use throughout pregnancy
- Approach in a non-judgemental gentle way-may be the first time they have shared alcohol/substance use with anyone
- Discuss the effects of alcohol on the developing baby with all women
- Refer to Motherisk if more information is needed
1-877-327-4636



Pregnant Women

- Acknowledge - many pregnancies are unplanned and some women may have had alcohol/substance use prior to knowing they were pregnant
- Emphasize can't change the past but she does have control over her future
- Meet the woman where she is ready to begin (may be harm reduction)
- Offer to provide further support/referrals if the woman chooses- be patient
- Support can take many forms - addiction counselling, someone to listen, developing a trusting relationship, help with determinants of health (give prenatal vitamins), relationship counselling - assess for abuse
- Let her know that: She and her baby are important; She can choose her path; and There is Help and Understanding!

Pregnant Women

- Sometimes role may be harm reduction – alcohol is the substance that we are aware of that causes the most harm to the developing baby
- If a women has consumed alcohol or substances in pregnancy, document in her file **after she leaves**
Why? – Must be confirmed alcohol use to diagnose FASD in the future
- Thank her for sharing with you and encourage her to come back and talk again if she has other questions or needs help



Opiate Dependence in Pregnancy

Prevalence of Opiate Use in Pregnancy

- 5% – CCSA – 2008 data
- Due to under reporting of illicit drug use, this number may be grossly under reported
- Women report higher rates then men of prescription drug use with 25% of it being opiates



Target groups

- ▶ All women childbearing age regardless race/economic status
- ▶ Thunder Bay has approx. 1 500 births/year, 300 are infants born opiate exposed, rural communities do have access to opiates
- ▶ Many live in poverty, are abused or suffer from mental illness
- ▶ Many First Nations remote communities in north western Ontario have seen an epidemic with up to 70% of community members dependent on opiates



Risk Factors for Substance Use in Pregnancy

- ▶ 2/3 of women with substance abuse have co-occurring mental health problems
- ▶ Victims of physical abuse and sexual assault
- ▶ Untreated mental health and substance dependence leads to poor maternal bonding, poor parenting and child neglect

Opiate Exposure – Pregnancy, Fetal Effects

- ▶ Bind to opiate receptors in brain, produce a pleasurable sensation
- ▶ Abuse can quickly turn into dependency
- ▶ Crosses placenta – infant exposed to same effects as mother
- ▶ ↑ risk of congenital heart defects from codeine use
- ▶ Prescription Opiates – No known increase risk of birth defects
- ▶ No studies done showing increase risk of birth defects from methadone or buprenorphine – need more research
- ▶ Heroin use – ↑ risk of fetal growth restriction, abruptio placenta, fetal death and meconium exposure



Treatment Options in Pregnancy

- ▶ Tapering not recommended in the first trimester due to increase risk of spontaneous abortion
- ▶ Detoxing not recommended due to high risk of relapse
- ▶ Methadone- full opiate agonist
- ▶ Methadone – has shown improvement in prenatal care, longer gestation, higher birth weight
- ▶ Methadone – Infants show smaller head circumference and ↓ birth weight then non-exposed infants, catch up to peers as age



Treatment Options

- ▶ Buprenorphine-partial agonist with a ceiling effect
- ▶ Buprenorphine(Can.) is Suboxone (buprenorphine & naloxone)
- ▶ Limited information on safety of naloxone in pregnancy
- ▶ Single agent of **Subutex** is recommended for pregnancy
- ▶ Subutex has ↓ risk of overdose, less sedation then methadone
- ▶ Limited data to show buprenorphine/Subutex has less NAS effects then methadone
- ▶ Women using opiates – chronic pain? Recommend ↓ dose in controlled release formula

Neonatal Abstinence Syndrome

- ▶ All substances will present with CNS irritability, and feeding difficulty
- ▶ Occurs in 60-80% of newborns born to opiate dependent moms
- ▶ Opiate withdrawal presents after 24 hours on average, methadone and subutex can be later



Neonatal Abstinence Syndrome

- ▶ Methadone exposed infants can show NAS up to 1 month after birth
- ▶ NAS may present as poor feeding, irritability in heart rate, respiratory rate and temperature, poor sleep, high pitched cries, hyperactivity, sensitivity to light/sound and poor wt. gain
- ▶ Mothers need to be encouraged to be honest about opiate use in pregnancy/delivery to help alleviate NAS symptoms for the child and ↓ risk of seizure due to withdrawal



Comprehensive Care

- ▶ Treatment modalities shown to be effective include integrated treatment programs that provide services that help with daily stressors in life (housing, food, income supports, addictions, relationships, violence)
- ▶ These include pre and post natal care that incorporates physical, social, mental health and substance dependence needs while offering child centered services in the community and in clinic settings

Prevention

- ▶ Health Teaching
- ▶ Health Teaching
- ▶ Health Teaching
- ▶ Health Teaching



Screening Tools

- ▶ Antenatal Psychosocial Health Assessment
<http://www.cmaj.ca/content/159/6/677.full.pdf>
- ▶ Screens for risk factors such as family factors, maternal factors, substance use, family violence
- ▶ RNAO – Universal Screening Questions for Substance Use Disorder
<http://rnao.ca/bpg/guidelines?items=75>

Harm Reduction

- ▶ Nurses/ health care professionals are in ideal positions to intervene with women of child bearing age – assessment, education, support
- ▶ Harm reduction mistaken as supporting drug use in patients
- ▶ Harm reduction is **health teaching, support with social determinants of health**
- ▶ Ask, Advise, Assist
- ▶ Educate women **at risk** of substance use about the effects on the fetus at every visit
- ▶ Women dependent on substances, offer birth control at every visit

Women in Childbearing Years

- ▶ Every women – even those not using substances – need to know the effects of alcohol/opiates/other substances on their health and the health of a future baby
- ▶ **Screen women of every social and economic background for substance use often**
- ▶ **Discuss the risks of substance use during pregnancy with all women of childbearing age**



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