



Alcohol:

Substances such as alcohol, tobacco, and recreational drugs such as cannabis are well known toxins to our bodies. Substance use during pregnancy and after childbirth has significant health effects on children. Avoiding these substances in the first place eliminates the risk of addiction and harm to you and your baby. If you are currently using, the earlier you quit, the greater the positive impact you will experience. When you are ready to quit, it's best to seek support from family, friends, community resources, and a primary care physician to assist in this journey. Here is information about commonly used substances, their effects on infants and young children, and strategies to get healthy.

Pregnancy/Prenatal Period:

- Alcohol is absorbed from the gut and into the mother's bloodstream. Alcohol and its toxic metabolites cross the placenta and pass to the developing fetus. One or more daily servings of alcohol can lead to preterm birth, low birth weight, miscarriage and fetal death.
- There is no 'safe' type or amount of alcohol during pregnancy.
- Higher consumption can lead to Fetal Alcohol Spectrum Disorder (FASD), which can cause slowed growth, intellectual disability, and malformed organs.

Newborn/infancy period:

- If alcohol was consumed during pregnancy, brain development can be affected. Infants may not reach developmental milestones like walking and talking on time. Sleeping and feeding may be affected.
- Alcohol is also passed to an infant via breastfeeding. Alcohol affects human milk production. It can affect a baby's sleep/wake cycle and motor development. Abstain from alcohol if you are breastfeeding.
- Alcohol use impairs one's ability to be present and engaged as it is a central nervous system depressant. You may be drowsy and unable to care for your infant or child. Alcohol use also impacts your executive function: you may make decisions differently than when you are in a sober state.

Early Childhood:

- Children exposed to alcohol in utero may have delays in learning including speech, fine motor skills, reading and arithmetic. Vision and IQ and overall academic potential may be impaired. Changes in attention

and focus increase their risk for Attention Deficit Hyperactivity Disorder (ADHD) with further impact on their learning.

- Be mindful of young children's observation of your habits. While individual families may have varying patterns of alcohol consumption, children develop a sense of acceptable alcohol use at an early age from their direct observation of caregivers even if you never speak about it.

Best practices:

- Abstinence (complete avoidance) of alcohol is ideal for both parents during pre-conception. Abstinence during pregnancy and lactation is best for optimal health of the baby.
- "Pumping and Dumping" is a myth. Dumping pumped milk does not affect the mother's rate of metabolism of alcohol. According to the AAP and ACOG, it is best to wait for at least 2 hours per drink after consuming alcohol before the next breastfeeding or pumping session.
- If you choose to drink after pregnancy and lactation stages, be mindful of your practice. Avoid bed sharing as your reflexes may be impaired. Never drink and drive.
- As children grow, consider openly discussing your family's health practices as they relate to alcohol use such as legal drinking age and the risk to one's health with alcohol use. Keep alcohol out of reach of children.
- If you or a loved one is concerned about your use of alcohol, seek help! Your primary care physician or local chapter of Alcoholics Anonymous are great resources. Alcoholics Anonymous https://www.aa.org/pages/en_US/find-aa-resources

Tobacco:

Prenatal Period:

Tobacco inhibits oxygen delivery to the placenta and developing fetus. Effects include: preterm birth, low birth weight, birth defects of the mouth and lip, and increased risk of sudden infant death syndrome (SIDS). Nicotine, found in tobacco products including e-cigarettes, can have adverse effects on the baby's brain and lungs. Mothers exposed to secondhand smoke, smoke from cigarettes and the smoke exhaled by smokers, have higher risk of low birth weight and health problems in their baby.

Newborn/Infancy period:

Children are exposed to secondhand smoke when they are in the same environment as smokers. It includes the home and car. No level of secondhand smoke exposure is safe. Smoking in a separate room, bathroom, or a different floor of the home does not eliminate this exposure as smoke travels easily through ventilation systems and around doors. Smoking in a vehicle even with windows rolled down exposes children to smoke as the smoke fills the interior of the car. Secondhand smoke exposure can affect breathing, increases risk of SIDS, increases risk of ear infections, respiratory illnesses and worsens asthma.

Thirdhand smoke: this is the smoke that is present even after a cigarette is extinguished and has over 250 chemicals. It remains in and on surfaces such as clothing, drapes, furniture, car seats, bedding, hair, and even dust. By sharing these surfaces, children are exposed to the toxins in tobacco products and have similar effects as with secondhand smoke.

Early Childhood:

Children's natural curiosity may lead to early experimentation with cigarettes, vaping, or use of other tobacco products. While they may hear your message that tobacco is unhealthy, witnessing family members smoke has the potential to diminish the impact of your advice.

A word on E-cigarettes:

They do contain nicotine, an addictive substance. Use can lead to future use of tobacco such as cigarettes. E-cigarettes

have ultrafine particles that can get inhaled deep into the lungs. The chemical flavoring is toxic to the lungs as well. They also contain volatile organic compounds and heavy metals that can cause short term effects like breathing difficulty, nausea and vomiting as well as long term consequences of organ damage.

Best practices:

- Don't start using tobacco if you don't already.
- Recognize that vapes and e-cigarettes may contain nicotine and other toxic chemicals that can lead to birth defects and maternal addiction and eventual transition to tobacco use such as cigarette smoking.
- If you do smoke:
 - Never smoke near your children, in your home, or in your car.
 - Smoke exclusively outdoors regardless of the season or temperature. Indoor fans, AC units, and windows are not effective.
 - To eliminate the most smoke as possible, wash/shower before handling your newborn/infant/child. Smoke and toxins stay in your skin, hair, and under your nails.
 - Change your clothes after smoking. Clothing absorbs smoke and exposes children to thirdhand smoke.

Thinking about quitting?

- Find social support. If your partner or other family members smoke, consider quitting together to improve everyone's health and reduce your temptation to resume the habit.
- Seek out community resources. Every state has a quit line that can provide additional free resources.
- Speak to your healthcare provider about the possibility of starting nicotine and non-nicotine replacement therapy.
- Set a quit date. This could be a special occasion like a birthday or anniversary, or maybe it's today because you are ready to make this change toward better health for you and your family.
- Recognize that it may take several attempts before you are able to quit for good. Have patience, keep at it, and again look for social support to help you reach your goal.

Cannabis:

Prenatal Period

Exposure to cannabis in the prenatal period can impact growth and cause infants to have an exaggerated startle response and difficulty adjusting to stimuli in their environment. Children and teens exposed in utero may have deficits in their executive function: memory, verbal reasoning, concentration, attention. They can also have behavioral concerns: hyperactivity, impulsivity, and aggression.

Newborn/Infancy Period:

Delta-9-tetrahydrocannabinol or Δ -9-tetrahydrocannabinol, or Δ 9-THC, (the main psychoactive ingredient in marijuana) crosses the placenta. It can increase the risk of cognitive impairment and neuropsychiatric disease, including psychosis, depression, anxiety, and sleep disorders. It can also pass to the newborn via breastmilk.

Early Childhood:

Cannabis' effect on mood and sleep can impact your ability to have sound judgement and provide optimal care for your child. Like the other substances discussed, it can also impact children's future habits by their observation of caregivers' practices.

Weigh in your current habits — tobacco, alcohol, and recreational drugs — when family planning. You may choose to defer conception until you are in control of these habits and free of all of them.

Recreational Drugs:

This category is broad and includes the abuse of prescribed medicines such as opioids and anxiolytics. It also includes illicit substances such as heroin and cocaine. Cannabis was discussed above.

Prenatal period:

Effects are varied depending upon the substance, but include premature delivery, malformation, cognitive and behavioral disorders, and fetal demise. Opioid use disorder is a growing concern. Neonatal abstinence syndrome is a disease related to the withdrawal a newborn experiences after birth.

Newborn/ Infancy period:

Like alcohol, drugs whether taken orally, inhaled, or injected have the potential to cross into breast milk. Serious effects on the heart and lungs occur due to effects on the brain. Development may be delayed. Women who use drugs should generally abstain from breastfeeding as metabolism is slow.

Early childhood:

Prescription pills and drug paraphernalia such as needles pose a direct risk to your children who may come in contact with them. Drugs may resemble candy and tempt children. Keep any and all prescriptions out of reach and in childproof containers.

Your impairment can put your children's physical and emotional health at risk. Mind-altering substances can impede your judgement, affect your temperament, behavior, and actions. Seek immediate help from family, friends, your physician, or a crisis center. Get help before it's too late. Engage in a substance treatment program early and continue into the postpartum period and beyond. Keep up with prenatal care and continue care with your primary care physician after childbirth. Community health workers and social workers can be a valuable resource in your healthcare system. State resources like Child Protective Services (CPS) are available to call upon voluntarily if needed.



Community Resources:

- Tobacco Quitline 1-800-QUIT-NOW
- American Addiction Centers 1-877-586-4220
- Alcoholics' Anonymous aa.org, pr 800-839-1686
- Al-Anon (for family of alcoholic)
- Alateen (peer support group for teens)
- Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline at 1-800-662-HELP (4357)

Citations:

<https://www.cdc.gov/ncbddd/fasd/alcohol-use.html>

<https://e-cigarettes.surgeongeneral.gov/>

<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/substance-abuse/substance-abuse-during-pregnancy.htm>

<https://www.drugabuse.gov/publications/drugfacts/marijuana>

<https://www.healthychildren.org/English/health-issues/conditions/tobacco/Pages/How-Parents-Can-Prevent-Exposure-Thirdhand-Smoke.aspx>

Nashed MG, Hardy DB, Laviolette SR. Prenatal Cannabinoid Exposure: Emerging Evidence of Physiological and Neuropsychiatric Abnormalities. *Front Psychiatry*. 2021;11:624275. Published 2021 Jan 14. doi:10.3389/fpsyt.2020.624275

Wu CS, Jew CP, Lu HC. Lasting impacts of prenatal cannabis exposure and the role of endogenous cannabinoids in the developing brain. *Future Neurol*. 2011;6(4):459-480. doi:10.2217/fnl.11.27

By Neeta B. Agarwal, MD



Family Guide to Avoiding Risky Substances

SUBSTANCE AND SIGNS OF ADDICTION	HEALTH IMPACT ON PARENT (ADULT) ¹	HEALTH IMPACT ON INFANT/CHILD ^{2,3}	HOW TO GET HELP ^{4,5, 6}
<p>ALCOHOL:</p> <ul style="list-style-type: none">• Can't stay within limits or cut back• Developing tolerance/ needing more to reach the same effect• Frequently thinking about alcohol• Effects on self-care, work, and relationships	<ul style="list-style-type: none">• Slowed thinking, reduced reflexes, impaired judgement, effect on liver (cirrhosis), pancreas (pancreatitis), brain and heart health, a weakened immune system, and increased cancer risk.• Impairment increases risk of injury related to motor vehicle crashes, firearms, drowning, falls, and burns.	<ul style="list-style-type: none">• Preterm birth, low birth weight, miscarriage, stillbirth,• Fetal Alcohol Spectrum Disorder: problems with coordination, attention, memory; delayed milestones; poor sleep and feeding habits; intellectual disability, abnormal facial features, small head size.• Neglect, child abuse, intimate partner violence (adverse childhood events)	<p>Alcoholics' Anonymous 800-839-1686,</p> <p>Al-Anon (for family of alcoholic)</p> <p>Alateen (peer support group for teens)</p> <p>Your Primary Care Physician or OB/GYN</p>
<p>TOBACCO⁷:</p> <ul style="list-style-type: none">• Strong cravings and withdrawal symptoms like irritability, shaking, sweating, racing heart, mood swings, changes in sleep and increased appetite• Smoking when under stress• Inability to quit despite decline in health• Avoidance of activities in smoke-free settings	<p>Fast heart rate, higher blood pressure, narrowed and hardened blood vessels with increased risk of heart attack, breathing difficulty, poor oral health, cancer risk</p>	<p>Preterm birth, low birth weight, birth defects of the mouth and lip, and increased risk of sudden infant death syndrome (SIDS)</p>	<p>1-800-QUITNOW</p> <p>Your Primary Care Physician or OB/GYN</p>
<p>CANNABIS:</p> <ul style="list-style-type: none">• Difficulty limiting or stopping despite effect on health and relationships• Mild withdrawal: mood changes, anxiety, insomnia, cravings, decreased appetite	<p>Impaired thinking, memory and judgement, altered sense of time and senses, hallucinations, delusions; breathing problems and faster heart rate</p>	<ul style="list-style-type: none">• Possible preterm birth• Infants: heightened startle response and difficulty adjusting to new stimuli in their environment; Children: cognitive impairment and neuropsychiatric disease• Indirect: neglect, increased risk of non-accidental injury	<p>Substance Abuse and Mental Health Services Administration (SAMHSA)</p> <p>National Helpline at 1-800-662-HELP (4357)</p> <p>Your Primary Care Physician or OB/GYN</p>

Additional Resource for Families Dealing with Substance Use: <https://www.samhsa.gov/families>

Citations:

1. <https://www.niaaa.nih.gov/alcohols-effects-health/alcohols-effects-body>
2. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/substance-abuse/substance-abuse-during-pregnancy.htm>
3. <https://www.drugabuse.gov/publications/drugfacts/marijuana>
4. <https://www.samhsa.gov/find-help/national-helpline>
5. <https://www.aa.org/>
6. https://www.cdc.gov/tobacco/quit_smoking/cessation/faq-about-1-800-quit-now/index.html
7. <https://www.drugabuse.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/nicotine-addictive>

