

Tobacco, Women, Pregnancy & Baby

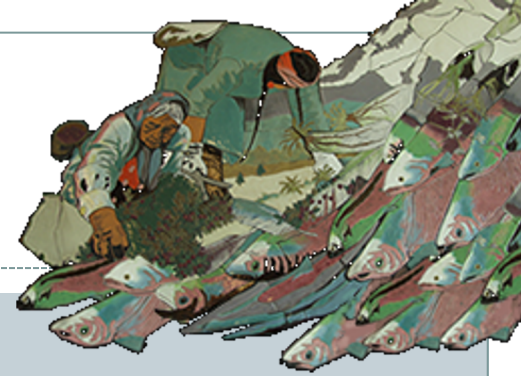


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**NOVEMBER 19, 2020
MCH ECHO**



Why we care



- Children are our future
- Breastfeeding is an important cultural practice and one of the first traditional foods
- Wide disparities exist by race/ethnicity for smoking during pregnancy
- AI/AN smoking rates



Nicotine/Tobacco is highly addictive

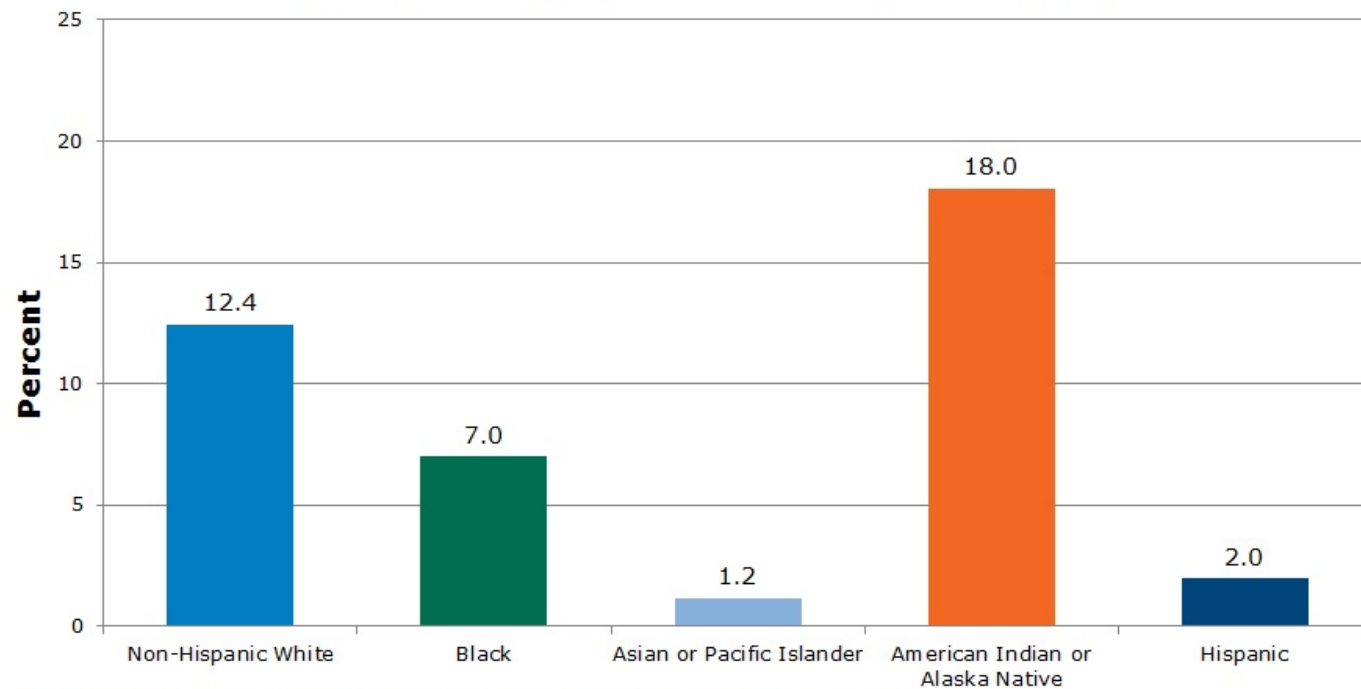
- It is a dopamine – relaxes you
- It is a stimulant – you get a jolt
- It needs to be addressed as a chronic disease
- We need to remove the stigma



Why is it a Concern?

Figure 2

Percentage of Births Which Were to Mothers Who Smoked During Pregnancy, by Race and Hispanic Origin, 2013**



**Data are based on the 41 States using the 2003 revision of the standard birth certificate, representing 87 percent of all births

Source: National Center for Health Statistics, CDC WONDER online tool. <http://wonder.cdc.gov/nativity-current.html>

Source: National Center for Health Statistics, National Vital Statistics System. Selected Risk Factors, 2010. Accessed 10/24/2012. <http://205.207.175.93/VitalStats/ReportFolders/ReportFolders.aspx>

Child Trends
DATABANK



Prenatal Smoking Cessation

**WE LOVE OUR BABIES, AND
WANT THEM HEALTHY!**

Smoking cessation in early pregnancy decreases prevalence of negative health outcomes related to tobacco use.



Connected Risk to Infants and Children

- Sudden Infant Death Syndrome SIDS
- Infantile colic (extreme crying)
- Asthma
- Bronchitis
- Pneumonia
- Ear infection
- Childhood obesity
- Decreased physical and mental development
- Altered response to stimuli
- Attention deficits and hyperactivity
- Brain abnormalities
- pattern of angry/irritable mood, argumentative/defiant behavior
- Gas exchanges of oxygen and carbon dioxide can be off balance causing respiratory problems (after birth)



Smoking and Birthweight

- **1st trimester**, quitting before 2nd trimester resulted in normal birthweight
- **2nd trimester**, babies were born with shorter femurs.
- **3rd trimester**, babies born with lowest birthweight and head circumference.

If a pregnant mother smokes 11 or more cigarettes per day in 3rd trimester there was an average 27 grams reduction in birthweight.



- 11 ciggs a day= **0.96 ounces less**
- 15 ciggs a day= **14 ounces less**
- 1 pack a day =**1.2 pounds less**
- 1.5 packs a day =**1.7 pounds less**



Breast Feeding

Chemicals in cigarettes enter breast milk and may cause:

- Colic
- Insufficient iodine –causing thyroid dysfunction, decreasing brain development
- Vomiting and Diarrhea
- Increased heart rate
- Decrease the supply of breast milk
- Decrease Vitamin C found in breast milk
- Decreased sleeping hours (average 30 min less)

Waiting to breastfeed up to 90 min after smoking will decrease nicotine levels in breastmilk by 50%



Sudden Infant Death Syndrome (SIDS)

SIDS is the leading cause of death in otherwise healthy infants.

- Infants who are exposed to secondhand smoke after birth are at greater risk for SIDS.
- Chemicals in secondhand smoke appear to affect the brain in ways that interfere with its regulation of infants' breathing.
- Infants who die from SIDS have higher concentrations of nicotine in their lungs and higher levels of cotinine (a biological marker for secondhand smoke exposure) than infants who die from other causes.



Treatment: NRT

- Does not “cure” tobacco dependence
- Assists withdrawal by suppressing symptoms
- Optimal dose of NRT for **women** is less successful than for men
- Higher doses of gum are needed to suppress withdraws
- **Women need more** NRT to get the same benefit as men



1. Fiore MC, et al. *Treating Tobacco Use and Dependence: 2008 Update*. USDHHS, PHS. 2008; 2. Aveyard P and Raw M. *Tob Control*. 2012;21:252-257; 3. Hollands GJ, et al. *Cochrane Database of Systematic Reviews*. 2015, Issue 2. Art. No.:CD009164. DOI:10.1002/14651858.CD009164.pub2



You can be prescribed NRT or over the counter

- Patches
- Gum
- Lozenges



- Work with tribal clinic for prescriptions



Marijuana and Pregnancy

- When marijuana is smoked or ingested by a pregnant woman, pot and THC cross the placenta and enter a fetus' bloodstream, so you're essentially sharing the drug with your baby
- CBD oil also is not considered safe
- Babies are underweight at birth, born prematurely, and/or have smaller heads and increase the risk of stillbirth
- Can alter the fetus brain
- Brain development and behavior over time



CBD and Breastfeeding

- Chemicals from marijuana can be passed through breast milk
- THC stored in body fat, so releases over time causing more exposure for a longer period of time
- To limit potential risk, breastfeeding mothers should reduce or avoid use



COVID and Smoking

- As a precautionary measure, the government has classed pregnant women as a group at risk of severe illness with COVID-19
- COVID-19 is a respiratory infection which can cause life threatening pulmonary and cardiovascular complications
- If you smoke, you generally have an increased risk of contracting respiratory infection and of more severe symptoms once infected. COVID-19 symptoms may, therefore, be more severe if you smoke



Intervention Success?

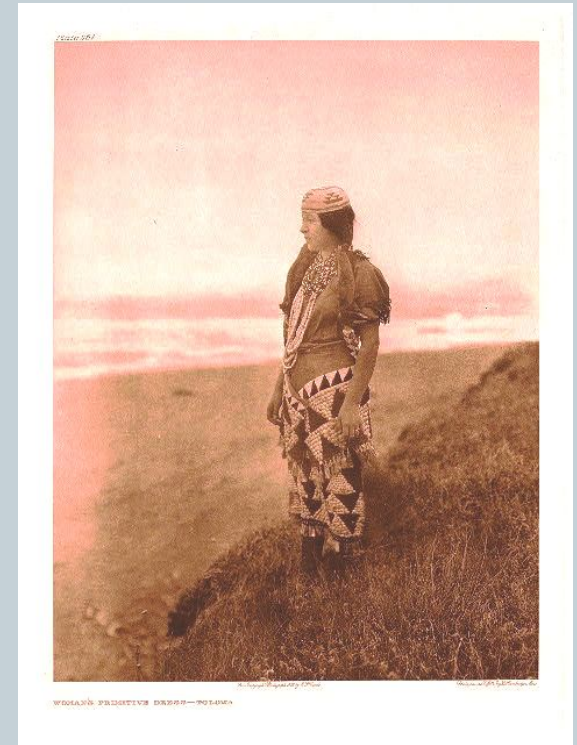
- Tobacco/Nicotine dependence is complex
 - Biological, environmental, psychological
- Rarely were single interventions effective at preventing long term/lifelong cessation.
- Abstinence nearly **doubles** when combined with multiple treatments, not just medication alone.
 - Health education and coping strategies
 - Counseling
 - Quitline
- **Relapse is normal and expected**

1. Fiore MC, et al. *Treating Tobacco Use and Dependence: 2008 Update*. USDHHS. PHS. 2008.



Curriculum / Resources

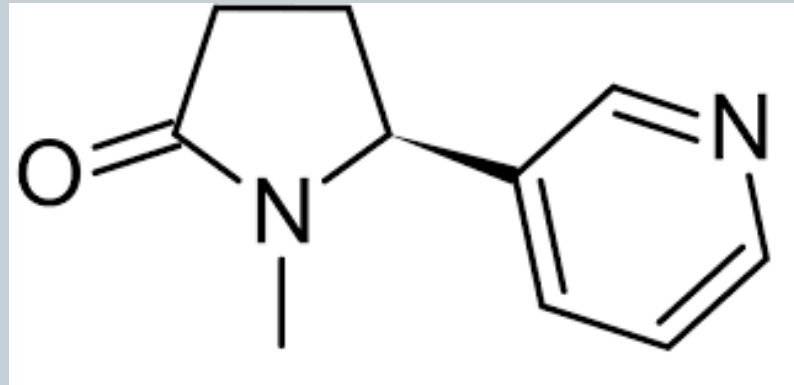
- Second Wind, First Breath – Second Wind
- Script
- AI/AN Basic tobacco intervention skills
 - Maternal and Child Health Companion Guide
- Diabetes and tobacco cessation
- NW tribal comprehensive cancer project



Cotinine

Cotinine is used to **measures exposure** of Environmental Tobacco Smoke (ETS) for both smokers and non-smokers.

Absorbed by the body, enzymes in the liver break down most of the nicotine -- about 80 percent; here it becomes the metabolite cotinine.



https://www.cdc.gov/biomonitoring/Cotinine_FactSheet.html



Pregnancy & Metabolizing Nicotine & Cotinine

Study Showed....

- **54%** increase of nicotine metabolism in pregnant women compared to nonpregnant women

Clearance of cotinine

- During pregnancy half-life nearly 50% shorter than in nonpregnant women

Cotinine found in blood

- Pregnant **119ng/ml**
- Nonpregnant **202ng/ml**

Benowitz NL, Lessov-Schlaggar CN, Swan GE, Jacob P. Female sex and oral contraceptive use accelerate nicotine metabolism.



Hormones & Metabolizing Nicotine

- Female sex hormone **ESTROGEN** in birth control metabolize nicotine at faster rates.
- Premenopausal women burn nicotine and cotinine faster than men.
- Postmenopausal women burn nicotine at the same rate as men.
- **Progesterone** only birth control had no effect.

..... **Even when**

daily average cigarette use between men and Oral Contraceptive users was nearly the same.



Benowitz NL, Lessov-Schlaggar CN, Swan GE, Jacob P. Female sex and oral contraceptive use accelerate nicotine metabolism.



Vitamin C & Tobacco Use During Pregnancy (OHSU Study)

Pregnant moms smoking given 1; 500mg crushed Vitamin C/day

After birth, baby is tested for

- Pulmonary function
- Clinical respiratory and occurrence of wheezing and use of medication for wheezing of the infants through 1 year

What Happened?

- Vitamin C (500 mg/d) in pregnant smokers **improved** the newborn Pulmonary Function
- Significant **decrease** in wheezing through age 1 year

McEvoy CT, Schilling D, Clay N, Jackson K, Go MD, Spitale P, et al. Vitamin C supplementation for pregnant smoking women and pulmonary function in their newborn infants: A randomized clinical trial. JAMA - J Am Med Assoc. 2014;311(20):2074-82.



Tribal Policies

- Smoke-free Tribal Housing
- Smoke-free School Campus
- Promote smoke-free homes
- Commercial Tobacco Resolution

Remember, tobacco restrictions don't take away the right to smoke.



**WE BREATHE
HAPPY!**

**In Our Tobacco Smoke Free Home
Thanks to YOU!**

A tobacco smoke free home protects our children. It helps them be healthier as they grow up. If you smoke tobacco, do it outside your home and car, or get help to quit. Call 1-800-QUIT-NOW (1-800-784-8669) or your Tribal or Indian Health Service clinic.



Take Aways

- **Treat the whole family in the home, not just mom**
- **Multiple tobacco cessation treatment modalities, not just one**
- **Create tribal community policies**
- **Health education on nicotine levels in breastmilk and dangers of second-hand smoke**



Quit lines

- Oregon Native Quit line
- 1-800-784-8669 press 7

- Washington Quit line
- 1-800-784-8669

- Idaho Quit line
- 1-800-Quit Now

- Tribal clinic resources always



References

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Thanks to Ryan Sealy for your
research on this topic.