

# Safe Babies Foster Parent Training Program

## Module 3: The impact of substance use during pregnancy

# Learning outcomes:

- Understand the pharmacological action of commonly used substances
- Describe the physical effects of the substance on the biological systems of the adult body
- Describe the effects of the substance on the developing fetus and the infant
- List the benefits of methadone maintenance programs during pregnancy

# Factors to consider for effects on mother:

- Her general health
- Her ability to access prenatal care
- Adequate nutrition
- Safe and adequate housing
- Other substances also being used
- Individual genetics and metabolism

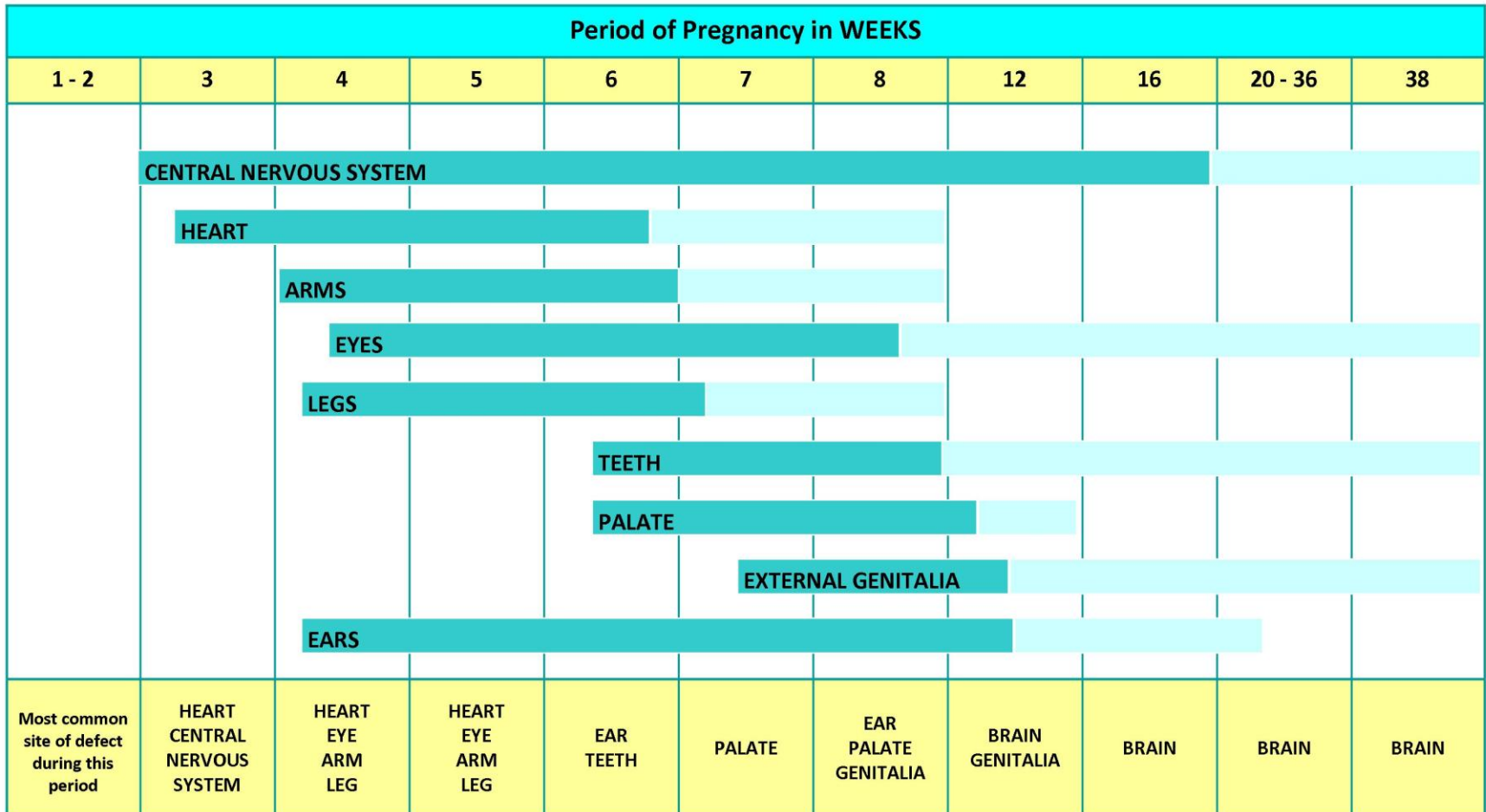


# Factors to consider for effects on baby

- Other substances used by mom
- The amounts of drugs used
- Timing during pregnancy and before birth of drug use
- Individual genetics and metabolism of the infant



# Timing of substance use..



# Caffeine:

- Most commonly used stimulant in world (coffee, tea, chocolate)
- Recommendation is less than 150 mg per day during pregnancy
- Higher consumption is associated slightly with low birth weight and miscarriage
- Very high use (more than 500 mg) – withdrawal symptoms in baby – cardiac arrhythmias, fine tremors, fast breathing



# Tobacco/nicotine:

- Fetal development – IUGR, prematurity, SIDS, low birth weight
- Leading cause of low birth weight
- Withdrawal – sleep disturbances, irritability, tremors
- Long term – second hand smoke effects, learning difficulties, ADHD



# Over the counter medications



- Medications for common health conditions (ie. colds and coughs, acne, constipation, allergies, diet pills)
- Herbal products and natural medicines



# Prescriptions:

- May be used legally or illegally
- Pain medications (Tylenol #3, demerol, oxycontin, morphine, dilautid)
- Antidepressants (fluoxetine, paroxetine)
- Anxiolytics/sedatives (zopiclone, buspiratone)
- Benzodiazepines (xanax, valium, serax)
- Antipsychotics (ex. chlorpromazine, clozapine, loxapine)
- Other types (need to check with doctor)



# Alcohol:

- “Teratogen”
- No known safe threshold for use
- Use is accepted in our society



# Alcohol effects on the pregnant woman:

- Loss of appetite, lower weight gain
- Anemia and tiredness
- Increased risk of miscarriage
- Rapid labour (hard for the baby)
- Premature labour



# Effects of alcohol on fetus and newborn

- Alcohol crosses placenta and reaches fetus at levels similar to mother
- Exposure in first trimester – physical problems in baby
- Exposure in third trimester – slows growth of baby
- Brain - develops through pregnancy, affected at any time
- Withdrawal – jittery, crying more than normal, feeding challenges, problems sleeping, floppy muscle tone, sensitive to touch and noise

# Marijuana:

- Risks similar to smoking – slightly lower birth weight
- Possibly mild withdrawal symptoms if heavy use, similar to smoking – excessive crying, tremors
- Long term effects - unclear

# Cocaine:

- Taken from the leaves of the coca shrub
- Developed in the 1880s and considered a wonder drug
- Was an ingredient in Coca Cola as late as 1900
- Used as an anesthetic until people began taking it as a mood altering drug

# Effects during pregnancy for mother:

- Vasoconstrictor – increased narrowing of blood vessels, increased blood pressure
- Increased chance of miscarriage
- Increased risk of placental separation and sudden delivery
- Poor appetite
- Cocaine use is a “red flag” for the presence of other social factors that are just as influential on outcomes (ie. housing, poverty)

# Effects for fetus and newborn:

- Receives decreased oxygen
- At risk of lower birth weight, preterm delivery, smaller head size, bleeding in brain, SIDS
- Direct effect on developing CNS – tremors, poor feeding, irritability (exposure versus withdrawal)
- “Red flag” for other influencing factors (like poverty, poor nutrition)
- Long term –not well-known – may be delays in some developmental domains



# Opioids:

- One of the most important medical plants known
- Includes heroin, codeine, morphine, methadone
- All forms have potential for abuse
- Can be inhaled, smoked or injected
- Opiates decrease pain, alter brain activity, cause drowsiness, depress breathing, and slow digestive functioning

# Effects of opioids on mother:

- Important to not stop suddenly – this is a stress on the fetus
- Increased risk of stillbirth or pregnancy loss
- Higher risk of separation of the placenta
- Risks associated with needle use – HIV, Hepatitis C
- Methadone replacement can be helpful

# How can methadone be helpful?

- Assists women in staying heroin-free
- Leads to more consistent prenatal care
- Lessens possibility of fetal death
- Improves growth of the fetus
- Reduces risk of HIV infection
- Enables mother to breastfeed her infant

# Effect of opioids on fetus and newborn:

- 60-70% of babies will experience withdrawal (this number is less when babies are cared for with their mothers)
- Signs of withdrawal include irritability, excessive crying, feeding challenges, poor sleeping, jitteriness
- May have smaller birth weights
- Long term effects - depends on other related factors and environment after birth, may have developmental delays, learning difficulties

# Amphetamines:

- Stimulants, can be ingested, snorted, smoked or injected
- Legal form used for ADHD – Ritalin (also may be abused)
- Includes crystal meth
- Infant – may be premature, low birth weight, have feeding problems, sleeping problems
- Very little research available, some larger long term studies are underway

# Club drugs:

- Rohypnol, ecstasy, ketamine
- Popular with young adults
- Little information available on the safety of these drugs, effects during pregnancy, or effects on the fetus and newborn

# Hallucinogens:

- Includes LSD, PCP, Angel Dust
- Can be smoked, swallowed or ingested
- Effects on pregnancy – increased blood pressure, low birth weight, prematurity, placental separation, possible withdrawal symptoms
- Drug has been difficult to study

# Inhalants:

- May be occupational (working near chemicals) or social (household items such as glue, gasoline, paint thinner)
- Low birth weight, kidney problems, small head
- May experience alcohol-like withdrawal symptoms
- “Toluene Embryopathy Syndrome”?
- In Canada – reported more on the Prairies



# Reflection

**Do you have any questions or comments that you would like to share with the group?**



*Thank you for  
participating.*



*Please remember to complete  
your Evaluation form.*