

1: Teratogens have different types and have effect from mild to severe. In the United State there are 8,000 legal drugs available and have increased for the past 40 years. Medications have different types and are divided to different categories named A, B, C, D, and X. The A and B categories are being said harmless to babies but C, D, and X categories are very risky for the baby. A drug may have benefit for the mother but show negative impacts to the baby, a drug may be harmless for the baby if its taken with another drug while using it alone would be risky for the health of the baby because it would stop the development of fetal organs. There are some types of drugs that can be teratogenic and are Accutane, anticonvulsants, antidepressants, benzodiazepines, and thalidomide.

Accutane is a form vitamin A and is used for the treatment of acne. A mother should stop using this drug at least one month before becoming pregnant. If it is taken in the first trimester it would case miscarriage and the risk of miscarriage would be 40% and the risk of birth defects would be as high as 35%. Anticonvulsant is using for treating of seizures in epilepsy, bipolar, and schizophrenia. This drug has different classes and the mother should stop taking of them at least several weeks before becoming pregnant. Antidepressants also has several types and are using for treatment of depression. Anxiety, obsessive-compulsive, post-traumatic stress, panic, and eating disorders. Overall impact of these drugs ae not severe but if it is taken in the third trimester the risk would be high. Benzodiazepines have several types and are using for anxiety, sleeplessness, and seizures. If these types of Benzodiazepine are taking during pregnancy there would be withdrawal symptoms. If Lithium that has different types taken in the first trimester when the heart of the baby is developing there would be risks of heart defects. Thalidomide is a drug that is associated with birth defects. If it is taken in the first trimester the risk of birth defect of would be 20% high.

2: The second type of teratogen is substance abuse drugs. Some of substance abuse drugs are legal and are being used for treatments. Fetal in the first trimester when organs are developing is very vulnerable to these drugs. If a woman uses substance abuse drugs it can cause birth defects in her baby even before the mother knows she is pregnant. Some common type of harmful substances are: Alcohol, Amphetamines, Caffeine, Cocaine, Marijuana, Narcotics, and Tobacco.

Alcohol is one of the common substances that can cause post-birth problems in children, and the third leading cause of mental retardation. The teratogenic effect of alcohol during pregnancy is divided from moderate to severe exposure. Studies show that the more a mother use alcohol the more severe would be the adverse effects. Alcohol consumption even would be risky during breast feeding because it can appear in the milk and cause the baby to have disruption and early gross motor development. Amphetamines are being used to treat ADHD and as an appetite suppressant. If it is used during the pregnancy it can cause prematurity and low birth weight. It even can cause the sudden infant death (SIDS). Caffeine can be found in beverages and foods as well as some medications. Low to moderate caffeine consumption is safe during pregnancy but higher amount would cause miscarriage and low birth weight. Cocaine can be powder, crystal that can be inhaled and smoked. If it is taken by pregnant woman it will pass the placenta and can cause microencephaly, prematurity, miscarriage, and birth defects of the brain. Marijuana can pass the placenta's barrier and can cause low weight and low development in fetal. Narcotics tend to depress fetal respiration, slow down growth and often result in babies born less responsive and small in birth weight. Tobacco also is associated with high risk of miscarriages, low weight, stillbirths and prematurity.

3: Infections and various disease that can happen to a pregnant mother and are known as teratogens. Infections can cause prematurity, miscarriages and long-term cognitive, sensory, neurological and

behavioral problems. If the infection happens during the first trimester it would have a profound impact and can be harmful. All diseases and infections are not problematic but there are many types such as Cytomegalovirus (CMV), Fifth Disease, Rubella, Sexually transmitted infections (STI), Bacterial infections, parasitic infections, Viral Infections, and Toxoplasmosis.

Cytomegalovirus is similar to herpes and most often contracted through sexual contact. The symptoms would be worse for the first trimester vs. later exposure. It is also present in the blood, breast milk, and vaginal secretion. Fifth disease is also called parvovirus and is a viral illness common in school age children. If a pregnant woman catches fifth disease there would be no negative outcome for her baby but, if the mother is in her first trimester then the risk is 10 % higher that she miscarry. Rubella is spread by contacting with the person who experiencing this infection for some people the symptoms would be severe and for some very mild that even the person may not know he/ she is experiencing this infection. If the pregnant mother catches rubella it would be dangerous in the first trimester and the risk would decrease to 10-20 percent when the mother is in her 10 to 16 weeks of pregnancy. Problems would be very rare between the week 16 to 20 and there would be no risk for the baby when it is the second half of the pregnancy. Sexually transmitted infections can be associated with increased rates of miscarriage, prematurity, birth defects, and neonatal death. The largest risk to babies is the process of delivery that may be contaminated with bacteria, parasites, and viruses. A parasite can cause an infection named Toxoplasmosis. Pregnant women who have never experience Toxoplasmosis are in higher risk of infection and they should avoid any kind of uncooked meats. If a pregnant mother catches this infection there are 40% chance that the baby also become infected.

4: With the advance of technology babies can be watch in womb as they are in their week 18 and they would be in this world by the week 40. Ultrasound technology allows natural observation of

babies in the womb and some of their physical and psychological capabilities. And it is being said that babies can have the same development and similarities when they are in the womb and outside of it. Further. There seems to be a regular advance in detectable development every 4 weeks in terms of “strength of responses. The degree of muscles tone and endurance more regular waking and sleeping patterns and a more definite cry. “in the week 8 the baby starts for some movements. Ultrasounds examinations have shown that the baby would have regular exercises patterns including, turning, leg kicks, flexing, and waving of arms. “Babies would also have senses to touches as they had movements. There are three different sensory capabilities and are: those of pressure, temperature and pain, most of the time a fetus would response to the tactile environment within the womb. By the second month the embryo will kick and jerk if poked at. And by the fourth month the stroking of the eyelids will result in squinting instead of violent jerking movement. Stroking the lips results in sucking behaviors. The fetus will respond with “violent movement” to a needle puncture. Also, studies have found that in the early stages of labor healthy utero will often respond to some changes for instance to some changes to various noises and sounds produced outside the intra-uterine environment. A baby can also be overwhelmed by fetal pain associated with labor, and according to this study have found that the first sleep of the baby after birth is the most profound than any subsequent sleep. Studies have found that the fetus can show response to different temperatures. Normally the fetus is located in the temperature a constant .5to 1.5 degree Celsius and when the mothers skin fell colder the fetus would respond.

5: The newborn is defined as having exceptional abilities for “different responding, discrimination learning, and conditioning, often achieved in a matter of minutes” after birth. After the birth some skills and abilities may diminish rather than increase with time. Studies have examined that communication from the mother to the fetus has positive impact on the post-natal independence,

earlier talking and better concentration. Fetus can response to vibration and auditory tones when they are in the week 23 after fertilization and it will first appear in female. Studies have shown that future cognitive abilities and skills are predictable from habituation abilities during both the fetal period and early infancy. Classical conditioning is a methods used for the demonstration of learning capabilities in fetus. More recent studies that were done on the fetuses aged 30-37 weeks. In these studies, the classical conditioning was used and the fetuses were classically conditioned with the repeated pairing of music as the UCS with the mother's relaxation as a CS. After 24 paring, fetuses stopped all movements upon hearing the music alone and when they were born after hearing the same music as early as 6 minutes after birth they stopped "clonic" movements, they stopped crying and their eyes were opened. Another category of learning was studies has examined more naturally occurring events in the fetal environment. For instance, several studies have been done on fetuses and their response to voices especially their mother's voices. And the result showed that babies alter their sucking response when they hear their mothers' voices while they showed no response with hearing their fathers' voices.

6: Whether a fetus has the same emotions as adults or not is not clear but research with both prenatates and newborns, has shown that external behaviors are associated with internal emotions. Audible crying for a fetus is rare because it requires air in the fetal trachea. It has been argued that fetal crying is not indicative of any emotional state, but is undifferentiated as the same has argued for the neonatal crying. Also, studies have found that the crying of the preterm and full-term infants are very different from each other. It is also distinguished that various cries are shown for communication and different emotional states including between birth, pain, and hunger. A study with the usage of the sonography and audio recordings have illustrated the range of communicatory cries possible with newborns. Another study with the usage of sonography has distinguished

various degrees of pleasure and displeasure in the infants age 2-10 months. In this study it was being found that infants are showed emotional expressions across the entire continuum of possible affects states, from extreme pleasure to extreme displeasure. Facial expressions are another category of external indication that an infant can show. The smiles that occurs during the first stage of the REM stages maybe showing private pleasure in dreams. Other facial expressions also have been clearly identified in newborns that indicating sadness, fear, disgust, happiness, anger, interest, distress, and shame.

7: In the begging of the video named Temperament and Genetic there is the definition for what is temperament. Temperament is defined as differences in the quality and intensity of young children's behaviors and emotions. Temperament has been present from the very early life and the temperaments are the basement of an adult's personality. Then he talked about the classical conditioning of Ivan Pavlov that he had found there are differences between each person. And he said Pavlov was the first scientist who talked about temperament through his experiment of classical conditioning. He talked about an experiment that was done on new born babies. The study had shown that the child's temperament shaped the caregiving environment. That is that caregivers' moms and dads and caregivers responded differently depending upon the type of temperament that the child had. The study highlighted nine dimensions of responding that three different types of temperaments has been derived from those nine dimensions. The difficult children that are very highly reactive children, the second type was the easy child that were the children who were normally adoptable to new situations. And the third group was slow to warm up types. Another study was done by Mary Rothbart about temperament. She defined temperament according to the two process that are reactivity and regulation. Children with having these two processes still are very different in terms of the developing of their abilities to regulate that activity.

Reactivity is a dimensional construct that you can go from an exuberant temperament that are children who enjoy interacting with other people they are highly approaching of situations, they smile most of the time. And the other kind of children that called inhibited are children who more reticent, they are more fearful, they fuss when they are placed into strange or unfamiliar situations, they are always close to their caregivers, and are difficult to approach with other children. Self-regulation are those behaviors that allow a child to manage their arousal and calm down. These children would have a long-term memory, they are long term planning, and they have attention flexibility.