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PSY 460 Topics in Prenatal Psychology

November 10, 2020

Chapter 9 Maret- Essay Questions

1. **Select and discuss one general type of teratogen. What are the mechanisms and factors which make this teratogen problematic?**

A general teratogen that many pregnant women may not consider a threat to their developing fetus is caffeine. Many may be accustomed to starting the day with a fresh cup of "Joe", others may get their caffeine fix by delighting in chocolates or relaxing with a cup of hot tea. Seems pretty harmless, right? Not necessarily. While low to moderate caffeine consumption (let's say 3 cups of coffee a day) may be considered safe during pregnancy, research reveal a correlation between increased intake of caffeine during pregnancy and increased risk of miscarriage and low birth weight (Maret 129).

One of the greatest problems with eliminating one's intake of caffeine is that it is naturally found in many of the foods we eat. Sure drinking a can of Pepsi is an obvious source, but a not so obvious source might be energy drinks, certain ice creams and frozen yogurts, fruit flavored drinks, lemon-lime drinks, hot cocoa, and certain cereals and puddings (Sleep.org). Because caffeine also functions as a diuretic, it also can flush the body of fluid and calcium, which are essential to fetal growth and placenta functioning.

2. **Select and discuss another general type of teratogen. What are the mechanisms and factors which make this teratogen problematic?**

Other general teratogens are Amphetamines. Amphetamines are addictive stimulants, when legally prescribed the drug Dextroamphetamine is used to treat ADHD and can also be used as an appetite suppressant. An illegal version of Dextroamphetamine, having a similar chemical compound is methamphetamine. Methamphetamine can be snorted, swallowed or smoked and is dangerous because it cannot be controlled or regulated. Use of either during pregnancy has adverse effects in the newborn that can include addiction and withdrawal, as well as long-term breathing visual, auditory and learning problems. Amphetamine use is known to result in prematurity and low birth weight, and is also correlated with neonatal death and Sudden Infant Death Syndrome (SIDS).

3. **Select and discuss third general type of teratogen. What are the mechanisms and factors which make this teratogen problematic?**

By far, the most dangerous teratogen to the prenatal baby is the one that mom may not even consider she is pre-exposed to, her own environment. Expectant mom's exposed to chemicals and pollutants increase the risk of their unborn babies being adversely affected. For example, air pollution has been correlated with prematurity and low birth weight in babies, while exposure to other chemical toxins have been linked to childhood brain cancers (Maret 2009). From pesticides like Atrazine which contaminants ground water, drinking water, and rain water, to baby powders, hair dyes, and skin care creams we use on a regular basis, contaminants with the ability to cause long-term damage to the growing fetus seem to be everywhere. Two teratogens of which we understand the greatest impact on the unborn are mercury and lead.

Methylmercury can be found in air, water, and soil, and usually find its way into the human body through consumption of contaminated seafood. Methylmercury poisoning harms

the foetus' developing brain and can result in mental retardation, microencephaly, cerebral palsy and/or seizures. While exposure to the harmful effects of methylmercury can generally be avoided by reducing one's intake of fish and seafood during pregnancy, lead is still used industrially in the production of products like batteries, dyes, wood preservatives and construction materials. Lead is present in polluted air, water and soil, and is associated with increased rates of miscarriage and prematurity. Lead is also correlated with cognitive and learning problems (Maret 2009).