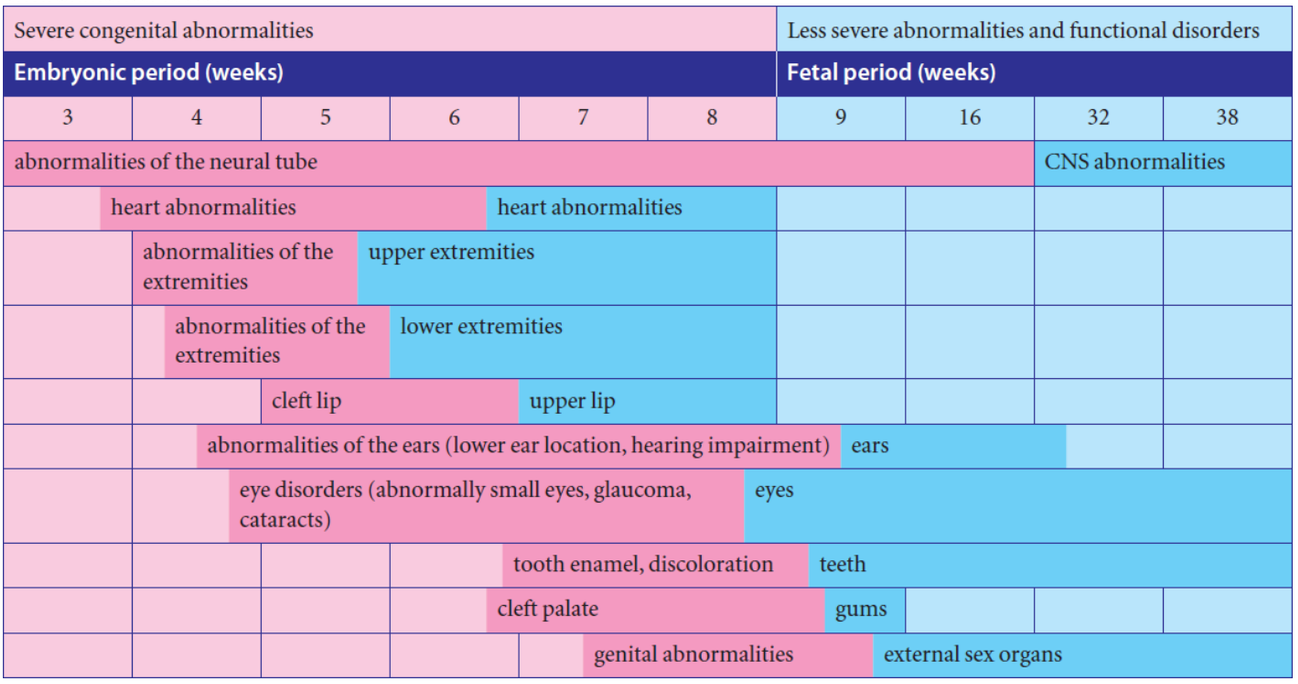
In addition to the nutrients and other beneficial substances that a mother transfers to the embryo and fetus, she can transfer harmful substances. This is especially significant during the first nine weeks, when developing organs are highly sensitive to environmental factors.



Legend: highly sensitive phase less sensitive phase

This graph above shows the critical phases of prenatal development. The darker portions correspond to periods when organs are most sensitive to teratogens.

Expectant mothers can control exposure to many teratogens, such as cigarette smoke and alcohol. However, this is not always the case. The fetus may be exposed to teratogenic agents due to the mother's health issues. For example, for women with phenylketonuria, the high levels of phenylalanine that can develop if they do not maintain a strict diet can be teratogenic. Rubella (German measles) and varicella (chicken pox) infections can have a teratogenic effect. Also, some people may need to stay on potentially teratogenic drugs for their health and well-being.

In addition, people in many northern Aboriginal communities rely heavily on fish and wildlife in their traditional diet. The presence of environmental contaminants in the food chain is a great concern for those who rely solely or partly on traditional foods.

Cetirizine: no studies have been completed to show effects on fetal development.

Paroxetine: Studies have suggested that paroxetine has increased risks of miscarriage and respiratory defects.

Phenytoin: there is approximately a 5 to 10 percent chance that the baby could be born with a combination of birth defects known as the Fetal Hydantoin Syndrome. Birth defects such as a flat, broad bridge of the nose; a short nose; eyes that are farther apart from each other than usual; crossed eyes; eyelids that droop; a large, wide mouth and malformed ears may occur

1.) A 32-year-old woman and her partner wish to have a child. She is a non-smoker but is exposed to second-hand smoke at work. She exercises regularly and is a healthy weight. She is currently taking a vitamin D supplement each morning. Daily medications include cetirizine for allergies, paroxetine for depression, and phenytoin for epilepsy.

a) How can the woman reduce her exposure to teratogens during her pregnancy?

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b) Should the woman stop taking cetirizine? If so why?

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