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# Before The Beginning: Can We Protect Our Future Generations From Environmental Hazards?



**C**ontamination of the environment with chemicals, which persist as they degrade, has been found in soil, drinking water, food, consumer products, and household dust. More than 80,000 such chemicals have been registered and many have been detected in almost all pregnant women!

All this pollution, affects human health. In women wanting to conceive and in early pregnancy, these environmental stressors can seriously harm the highly sensitive eggs, sperms, and developing embryos. Science has proved that exposure of the baby to such toxins whilst it is in the mother's womb, contributes to the onset of diabetes, obesity, and heart disease in its adult life. This theory was proposed way back in 1990, and has resulted in various global professional organizations making recommendations that assist pregnant patients with

preventing or minimizing such exposure.

Various products were studied including chemicals, pesticides, plastics, metals, tobacco, and alcohol. An analysis of the National Health and Nutrition Examination Survey data from 2003-2004 found that virtually every pregnant woman in the United States is exposed to at least 43 different chemicals. Chemicals in pregnant women can cross the placenta, resulting in prenatal exposure that is linked to various adverse health consequences. For example, prenatal exposure to certain pesticides has been documented to increase the risk of cancer in childhood; adult male exposure to pesticides is linked to altered semen quality, sterility, and prostate cancer; and post-birth exposure to some pesticides can interfere with all developmental stages of reproductive function in adult females, including puberty, menstruation and ovulation, fertility, and menopause.

A group of chemicals called Endocrine Disrupting Chemicals (EDC) has been shown to interfere with the function of certain hormones, and developmental processes. These EDC's are used in pesticides, plastics, industrial chemicals, and fuels. Research has clearly shown their ill effects on humans. As we do not currently have a strict regulatory structure, as occurs with pharmaceuticals, most environmental chemicals have entered the marketplace without any information regarding their long-term toxic effects. Some of the examples of such toxins are listed below.

It is therefore possible for every mother to protect her baby from adult onset disease in the future, by protecting herself and her baby from day to day environmental hazards now.



<p><b>Chemical:</b> Mercury  <b>Health risks:</b> Harmful to the nervous system, lower IQ, poor language and motor development.  <b>Recommendations:</b> Avoid eating shark, swordfish, king mackerel, and big eye tuna which are rich in mercury. Seafood low in mercury, could be consumed instead.</p>	<p><b>Chemical:</b> Lead  <b>Health risks:</b> Harmful to the nervous system, and high blood pressure in pregnancy.  <b>Recommendations:</b> Avoid jobs which may have lead exposure.  <b>Chemical:</b> Pesticides  <b>Health risks:</b> Birth defects, reduced birth weight, childhood</p>	<p>cancers, lower IQ.  <b>Recommendations:</b> Wash veggies and fruits before consuming food, and buy organic. Remove shoes outside the home.  <b>Chemical:</b> Endocrine disrupting chemicals  <b>Health risks:</b> <b>Bisphenol A:</b> Obesity, poor egg quality.</p>	<p><b>Phthalates:</b> Pregnancy loss and earlier delivery, abnormal semen parameters, earlier puberty in girls, premature delivery, still birth, impaired neurodevelopment, and thyroid dysfunction.  <b>Recommendations:</b> Reduce eating processed and canned foods.</p>	<p><b>Chemical:</b> Air pollution  <b>Health risks:</b> Miscarriage, low birth weight, premature delivery and stillbirth.  <b>Recommendations:</b> Avoid outdoor activities when air quality is poor, use a HEPA air purifier at home to reduce chemical exposure, and avoid inhaling tobacco smoke through passive smoking.</p>
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