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Bisphenol A and female fertility

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Recent data have raised concerns regarding the adverse effects of chronic exposure to environmental chemicals. Some of them alter the normal function of the endocrine system (endocrine disruptors) and have been linked to several diseases, including female infertility. One such endocrine disruptor is Bisphenol A (BPA), a synthetic monomer which is one of the highest volume industrial chemicals produced worldwide. Exposure to BPA is nearly ubiquitous and it has been detected in various human fluids including blood, urine and the follicular fluid, the fluid that surrounds the oocyte. According to prevailing dogma, females are born with a finite pool of oocytes, which undergoes a progressive decline during the fetal period until menopause. Exposure to environmental toxicants at the vulnerable stages of life may disrupt oocyte maturation, spindle formation and interrupt normal embryo development. Animal studies have demonstrated an association between BPA and impaired normal oocyte maturation, embryo development and implantation. In humans, while *in vitro* studies have suggested that BPA exposure interferes with the progression of oocyte maturation, clinical evidence have shown possible unfavorable effects of BPA exposure on *in vitro* fertilization (IVF) outcomes.

Biography

Ronit Machtinger has received her MD from Tel-Aviv University in 1999. She completed her residency at the Sheba Medical Center at 2006 and has been part of the physician team of the IVF unit at the center since then. She has been a research fellow at the REI division of Brigham and Women's Hospital and Harvard Medical School, Boston, MA. She has authored more than 30 papers in reputed journals and has academic appointments of lecturer in Tel-Aviv University and visiting scientist at Harvard School of Public Health. Her fields of interest include effects of the environment on female fertility.

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