

Children conceived after fertility treatments are at increased risk for pediatric cancers

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Ben-Gurion University of the Negev (BGU) researchers have found that babies born from mothers who underwent fertility treatments are at increased risk of developing many types of pediatric cancers and tumors (neoplasms).

According to the American Cancer Society, the most common pediatric neoplasms are leukemia, brain and spinal cord tumors, neuroblastomas, Wilms tumors, and lymphoma, including both Hodgkin and non-Hodgkin.

The study, published in the March issue of the *American Journal of Obstetrics & Gynecology*, was a population-based cohort analysis of babies born between 1991 and 2013 at Soroka University Medical Center in Beer-Sheva, Israel, with follow-up to age 18.

"In Israel, all fertility interventions, which include in vitro fertilization (IVF) and ovulation induction (OI), are fully covered by insurance, enabling citizens of all backgrounds access to these treatments," says Prof. Eyal Sheiner, M.D., Ph.D., vice dean of the BGU Faculty of Health Sciences (FOHS), member of its Department of Obstetrics and Gynecology, and a physician at Soroka.

Of the 242,187 newborn infants in the study, 237,863 (98.3 percent) were conceived spontaneously; 2,603 (1.1 percent) were conceived after in vitro fertilization, and 1,721 (0.7 percent) were conceived after ovulation induction treatments.

During the follow-up period of approximately 10.6 years, 1,498 neoplasms (0.6 percent) were diagnosed. The incidence rate for neoplasms was highest among children either after IVF (1.5/1000) and somewhat lower for OI births (1.0/1000) as compared to that of naturally conceived children (.59/1000).

"The research concludes that the association

between IVF and total pediatric neoplasms and malignancies is significant," Prof. Sheiner says. "With increasing numbers of offspring conceived after fertility treatments, it is important to follow up on their health."

More information: Tamar Wainstock et al, Fertility treatments and pediatric neoplasms of the offspring: results of a population-based cohort with a median follow-up of 10 years, *American Journal of Obstetrics and Gynecology* (2017). [DOI: 10.1016/j.ajog.2017.01.015](https://doi.org/10.1016/j.ajog.2017.01.015)

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