

Ovarian tissue and egg freezing should be made widely available to prevent

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Ovarian tissue and egg freezing to preserve fertility should no longer be reserved for cancer patients, and healthy women should also be offered these options to safeguard their future chances of conceiving a child, say world renowned fertility experts writing in a new Series on fertility preservation, published in *The Lancet*.

Over the past 10 years, researchers have restored the fertility of female cancer patients who would otherwise have been left infertile after treatment, having been offered oocyte cryopreservation. The technique enables women to freeze their eggs and use them at a later time to conceive a child. Several babies have been born to cancer patients using this technique, which is no longer classed as experimental [1].

However, the growing trend in developed countries to delay having children until later in life has resulted in [egg freezing](#) being increasingly used by healthy women as insurance against age-related infertility. "So far nearly 2000 babies have been born from eggs frozen, without an increase in the incidence of any birth defects", says author Professor Dominic Stoop, Director of the Centre for Reproductive Medicine at UZ Brussels in Belgium.

Another fertility restoring approach for young women with cancer is the freezing and transplantation of ovarian tissue. In 2004, a Belgian woman became the first to give birth to a healthy baby, 7 years after banking her frozen ovarian tissue before starting chemotherapy. This technique has gone on to result in the birth of 37 additional healthy babies to cancer

patients.

"The main advantage of ovarian tissue transplant over egg freezing is the large number of eggs that can be frozen in one procedure, without the need to delay cancer treatment because of multiple ovarian stimulation cycles needed to retrieve eggs", explains Professor Stoop.

"Replacement of the ovarian tissue requires surgery and might seem more onerous than egg retrieval, but it is a straightforward and uneventful procedure", adds co-author Dr Sherman Silber from St Luke's Hospital in St Louis, USA, who developed many of the infertility treatments in use today. "Hormonal function is restored in every case and women are able to attempt natural conception without the need for in-vitro fertilisation (IVF) or other treatment".

Using cryopreservation techniques in this way is controversial. Both the American Society for Reproductive Medicine and the European Society for Reproductive Medicine have called for more evidence on safety, cost-effectiveness, and psychological factors that might arise. However, the European Society of Human Reproduction and Embryology recommends that egg freezing should be available both for cancer patients and for the prevention of age-related infertility.

According to the authors, the success of [ovarian tissue](#) technology for [cancer patients](#) makes it viable that the procedure would work in other women who wish to postpone having children for other reasons, whilst reducing the need for third party involvement (eg, egg donors) in artificial reproductive techniques. Moreover, adds co-author Dr Ana Cobo, Head of the Cryobiology Unit at IVI Valencia in Spain, "Both these techniques could also help women to overcome future infertility and may counter the increasing need for egg donation in developed countries".

This paper is part of a Series on fertility preservation. The other two papers in the Series cover the latest [fertility preservation](#) developments in men [paper 1] and [women](#) [paper 2] with cancer, and discuss how these methods could change the reproductive options for people with cancer.

More information: [1] In 2013, the practice committees of the American Society for Reproductive Medicine (ASRM) and of the Society for Assisted Reproductive Technology removed its classification as an experimental procedure.

Paper 1: [www.thelancet.com/journals/lan ... \(14\)60495-5/abstract](http://www.thelancet.com/journals/lan... (14)60495-5/abstract)

Paper 2: [www.thelancet.com/journals/lan ... \(14\)60834-5/abstract](http://www.thelancet.com/journals/lan... (14)60834-5/abstract)

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