

# Woman has baby after womb transplant in world first (Update)

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This is Mats Brännström, Professor of Obstetrics and Gynaecology at the University of Gothenburg. Credit: University of Gothenburg

A 36-year-old Swede has become the world's first woman to give birth after receiving a womb transplant, doctors said Saturday, describing the event as a breakthrough for infertile women.

"It was breathtaking. I think all of us felt that," surgeon Liza

Johannesson said in a video supplied by her university.

"It was like having your own child, actually, it was the same feeling. No one could really believe it."

The healthy baby boy was born last month at the University of Gothenburg's hospital. Both mother and infant are doing well.

Weighing 1.775 kilos (3.9 pounds), the baby was born by Caesarean section at 31 weeks after the mother developed pre-eclampsia, a pregnancy condition, according to the medical journal *The Lancet*.

Because of a genetic condition called Rokitansky syndrome, the new mother was born without a womb, although her ovaries were intact.

The surgeons said the exploit smashes through the last major barrier of female infertility—the absence of a uterus as a result of heredity or surgical removal for medical reasons.

"Absolute uterine factor infertility is the only major type of female infertility that is still viewed as untreatable," they said in a paper published by the British journal.

The replacement organ came from a 61-year-old woman, a close family friend who had been through menopause seven years earlier. The organ was transplanted in a 10-hour operation last year.

The recipient underwent in-vitro fertilisation, in which eggs were harvested from her ovaries and fertilised using sperm from her partner, and then cryogenically preserved.

A year after the transplant, a single early-stage embryo was inserted into the transplanted womb. A pregnancy test three weeks later was positive.

The womb encountered a brief episode of rejection, but this was successfully tackled by increasing a dose of corticosteroid drugs to suppress the immune system.

## **A decade of research**

"Our success is based on more than 10 years of intensive animal research and surgical training by our team and opens up the possibility of treating many young females worldwide that suffer from uterine infertility," the Lancet quoted Professor Matts Braennstroem of the University of Gothenburg, who led the operation, as saying.

"What is more, we have demonstrated the feasibility of live-donor uterus transplantation, even from a post-menopausal donor."

Mayer-Rokitansky-Kuester-Hauser syndrome—to give it its full name—affects approximately one in 4,500 newborn girls, previous research has found.

The options open to women with this disorder, or who have had a hysterectomy, are adoption or having a baby through a surrogate mother.

But surrogacy is not allowed in many countries for ethical, legal or religious reasons.

"It gives hope to those women, and men also of course, that thought they would never have a child, that thought they were out of hope," Johannesson said.

"This project really shows that it's possible to never give up."

Yves Ville, chief of maternity at Necker, the prestigious French

children's hospital in Paris, described the event as "a wonderful advance (offering) an alternative to (using) surrogate mothers."

Speaking to AFP, he added: "The experience of this team is pretty colossal, and very well documented."

The unnamed Swede was one of nine who received a uterus from live donors under Braennstroem's programme.

Two of them had to undergo hysterectomies within a few months, either because the womb became infected or blood flow to it became clotted, the paper said.

The other seven women began menstruation during the first two to three months, and the transplanted organs remained viable during the first year after the operation.

Two other transplant attempts have been reported elsewhere, but neither resulted in a live birth.

The first, carried out in Saudi Arabia in 2000, ended in failure after three months when the uterus became necrotic and had to be removed.

The second, carried out in Turkey in 2011, entailed a uterus that was transplanted from a deceased donor, resulting in pregnancies that miscarried within six weeks.

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