

# Swedish doctors transplant wombs into nine women (Update 3)

13 January 2014, by Malin Rising



In this April 4, 2012 photo made available by the University of Goteborg in Sweden, the Swedish research team practices before the operations to transplant wombs at the Sahlgrenska Hospital in Goteborg, Sweden. Nine women in Sweden have successfully received transplanted wombs donated from relatives and will soon try to become pregnant, the doctor in charge of the pioneering project has revealed. "This is a new kind of surgery," Dr. Mats Brannstrom told The Associated Press. Brannstrom is leading the initiative at the University of Goteborg and will run workshops for other doctors on how to perform womb transplants later this year. "We have no textbook to look at," he said. (AP Photo/University of Goteborg, Johan Wingborg)

Nine women in Sweden have successfully received transplanted wombs donated from relatives in an experimental procedure that has raised some ethical concerns. The women will soon try to become pregnant with their new wombs, the doctor in charge of the pioneering project has revealed.

The women were born without a uterus or had it removed because of cervical cancer. Most are in their 30s and are part of the first major experiment to test whether it's possible to transplant wombs into women so they can give birth to their own

children.

In many European countries, including Sweden, using a surrogate to carry a pregnancy isn't allowed.

Life-saving transplants of organs such as hearts, livers and kidneys have been done for decades and doctors are increasingly transplanting hands, faces and other body parts to improve patients' quality of life. Womb transplants—the first ones intended to be temporary, just to allow childbearing—push that frontier even farther and raise some new concerns.

There have been two previous attempts to transplant a womb—in Turkey and Saudi Arabia—but both failed to produce babies. Scientists in Britain, Hungary and elsewhere are also planning similar operations but the efforts in Sweden are the most advanced.

"This is a new kind of surgery," Dr. Mats Brannstrom told The Associated Press in an interview from Goteborg. "We have no textbook to look at."

Brannstrom, chair of the obstetrics and gynecology department at the University of Gothenburg, is leading the initiative. Next month, he and colleagues will run the first-ever workshop on how to perform womb transplants and they plan to publish a scientific report on their efforts soon.

Some experts have raised concerns about whether it's ethical to use live donors for an experimental procedure that doesn't save lives. But John Harris, a bioethics expert at the University of Manchester, didn't see a problem with that as long as donors are fully informed. He said donating kidneys isn't necessarily life-saving, yet is widely promoted.

"Dialysis is available, but we have come to accept and to even encourage people to take risks to donate a kidney," he said.

Brannstrom said the nine womb recipients are doing well. Many already had their periods six weeks after the transplants, an early sign that the wombs are healthy and functioning. One woman had an infection in her newly received uterus and others had some minor rejection episodes, but none of the recipients or donors needed intensive care after the surgery, Brannstrom said. All left the hospital within days.

None of the women who donated or received wombs has been identified. The transplants began in September 2012 and the donors include mothers and other relatives of the recipients. The team had initially planned to do 10 transplants, but one woman couldn't proceed due to medical reasons, university spokesman Krister Svahn said.

The transplant operations did not connect the women's uteruses to their fallopian tubes, so they are unable to get pregnant naturally. But all who received a womb have their own ovaries and can make eggs. Before the operation, they had some removed to create embryos through in-vitro fertilization. The embryos were then frozen and doctors plan to transfer them into the new wombs, allowing the women to carry their own biological children.



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The transplants have ignited hope among women unable to have children because they lost a uterus to cancer or were born without one. About one in girl in 4,500 is born with a syndrome, known as MRKH, where she doesn't have a womb.

Lise Gimre, 35, who was born without a womb, said

she thought many women with MRKH would be interested if the operation proves to be safe and effective. Gimre runs an organization for women with the syndrome in Norway.

"If this had been possible when I was younger, no doubt I would have been interested," she said. Gimre, who has two foster children, said the only option for women like her to have biological children is via surrogacy, which is illegal in many European countries, including Norway and Sweden.

Fertility experts have hailed the project as significant but stress it's unknown whether the transplants will result in healthy babies.

The technique used in Sweden, using live donors, is somewhat controversial. In Britain, doctors are also planning to perform uterus transplants, but will only use wombs from dying or dead people. That was also the case in Turkey. Last year, Turkish doctors announced their patient got pregnant but the pregnancy failed after two months.

"Mats has done something amazing and we understand completely why he has taken this route, but we are wary of that approach," said Dr. Richard Smith, head of the U.K. charity Womb Transplant UK, which is trying to raise 500,000 pounds (\$823,000) to carry out five operations in Britain.

He said removing a womb for donation is like a radical hysterectomy but it requires taking a bigger chunk of the surrounding blood vessels to ensure adequate blood flow, raising the risk of complications for the donor. Smith said British officials don't consider it ethical to let donors take such chances for an operation that isn't considered life-saving.

Smith said the biggest question is how any pregnancies will proceed.

"The principal concern for me is if the baby will get enough nourishment from the placenta and if the blood flow is good enough," he said.

All of the women who received womb transplants will need to take anti-rejection medicines, but Smith

said data from women who have received kidney transplants doesn't suggest their babies are at any increased risk from the drugs.

Brannstrom said using live donors allowed them to ensure the donated wombs were functional and didn't have any problems like an HPV infection.

Doctors in Saudi Arabia performed the first womb transplant in 2000, using a live donor, but it had to be removed after three months because of a blood clot.

Brannstrom said he and his colleagues hope to start transferring embryos into some of their patients soon, possibly within months. The Swedish researchers and others have previously reported successful uterus transplants in animals including mice, sheep and baboons, but no offspring from the primates were produced.

After a maximum of two pregnancies, the wombs will be removed so the women can stop taking the anti-rejection drugs, which can cause high blood pressure, swelling and diabetes and may also raise the risk of some types of cancer.

Other experts said if the operations are successful, womb transplants could be an alternative for women who have few choices.

"What remains to be seen is whether this is a viable option or if this is going to be confined to research and limited experimentation," said Dr. Yacoub Khalaf, director of the Assisted Conception unit at Guy's and St. Thomas' hospital in London, who was unconnected to any of the womb transplant projects.

Brannstrom warned the transplants might not result in children but remained optimistic.

"This is a research study," he said. "It could lead to (the women) having children, but there are no guarantees ... what is certain is that they are making a contribution to science."

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APA citation: Swedish doctors transplant wombs into nine women (Update 3) (2014, January 13) retrieved 18 January 2021 from <https://medicalxpress.com/news/2014-01-swedish-doctors-transplant-wombs-women.html>

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