

The uterus moves the embryos for their correct implantation

- **New images allow us to see how the endometrium moves in order to keep the embryo in the uterine cavity and prevent its expulsion or inadequate implantation.**
- **This finding reveals that it isn't necessary to keep rest after an embryo transfer and allows to change the medical guidelines given to the patients after the procedure.**

Barcelona, April 26th

A new study presented this Saturday by [Institut Marquès](#) at the [Alpha Conference](#) in London shows the uterine activity after receiving the embryos from an In Vitro Fertilization. In the images, we observe how the movements that take place in the endometrium (the inner membrane of the uterus) allow the embryos to settle, regardless of the spot in which the gynecologist places them initially.

According to Dr. Marisa López-Teijón, Head of the Assisted Reproduction Service at Institut Marquès and author of the study, “this shows that the spot in the uterine cavity in which we lay the embryos isn't as important as we thought; the uterus makes sure they get placed in the most adequate area.”

For this study, several videos of ecographies were recorded both during and after embryo transfer on 18 patients who had undergone an In Vitro Fertilization cycle. These videos were repeated, in all cases, every hour during the four hours following embryo transfer.

In the first images, we observe how the culture medium microdrop containing the embryos exits the catheter and is placed gently by the gynecologist 1, 2 or 3 cm away from the bottom of the uterus.

Next, we observe what happens during the following scans, done after the patient's mobilization: the microdrop containing the embryos moves along the endometrial cavity following different motion patterns: undulating, vibratory, slow, fast, and with rest lapses.

In all cases, an hour later, the microdrop containing the embryos has changed its position in relation to the distance from its initial placement, regardless of whether it was 1, 2 or 3 cm away.

“Many centers still encourage their patients to keep absolute rest during the first hours after embryo transfer and medium rest the following hours. They live that time with anxiety,

fearing even to go to the bathroom as they believe they'll expel the embryo and feel partly responsible for keeping them in the uterus. This finding allows us a change in the medical guidelines, and subsequently a reduction in the stress the process generates on our patients," adds Dr. Marisa López-Teijón.

The endometrial waves cradle the embryo

The endometrial waves, as described by Dr. Van Gestel in *Fertility and Sterility* journal in 2007, are peristaltic movements that are initiated in the subendometrial myometrium.

Its function probably is to keep the embryo in the endometrial cavity and place it in the most adequate spot, preventing its expulsion from the uterus or its implantation in the isthmus (part of the uterus connecting its body and cervix) or in the cervix, as the implantation of an embryo outside the endometrium entails a very high risk.

These endometrial waves are also generated when a woman gets pregnant naturally, when the embryos travel from one of the fallopian tubes on to the uterus.