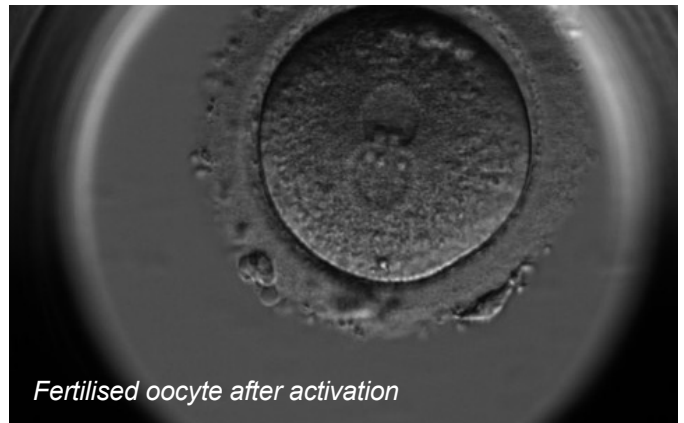


Artificial Oocyte Activation (AOA)

When the sperm meets the egg, the first thing to happen is the egg is activated and responds by releasing calcium from internal storage. In some cases, activation of the egg doesn't occur.

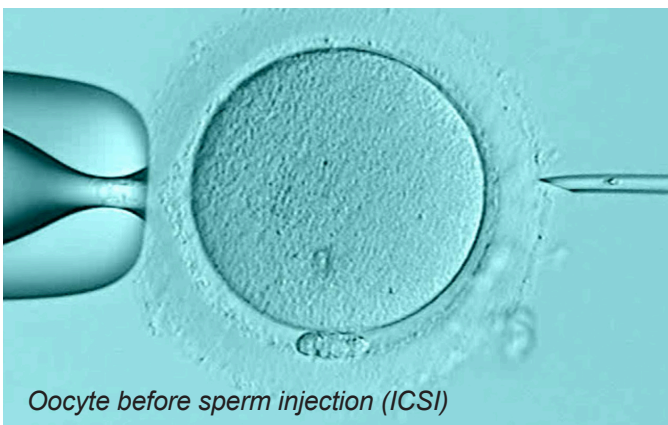
Artificial Oocyte Activation 'AOA' can help activate the egg by using a calcium ionophore which causes an increase in calcium in the egg, improving the chance of fertilisation.



Fertilised oocyte after activation

What is Artificial Oocyte Activation (AOA)?

When fertilisation occurs, a signal from the sperm causes an increase in calcium in the egg. A rise in calcium in the egg is the very beginning of fertilisation and the embryo development process.



Oocyte before sperm injection (ICSI)

AOA involves the addition of a compound called calcium ionophore into the culture media which helps transport calcium into the egg. After the eggs are injected with sperm, they are incubated for 15 minutes in the solution to increase calcium levels, then rinsed and placed into culture like a standard ICSI cycle. This increased calcium mimics the natural process that starts fertilisation.

When is AOA used?

AOA can be used in a subsequent cycle after a cycle of ICSI results in no or very low fertilisation (less than 30%) and there is no obvious egg factor that can be corrected. AOA cannot be used for the eggs after they fail to fertilise.

No fertilisation after ICSI is rare – fewer than 2% of ICSI cycles. Often no or low fertilisation is due to an egg factor which may not be seen in another ICSI cycle.

What are the risks with AOA?

- No fertilisation can still occur with AOA. Sometimes the sperm does not provide the signal or the egg does not respond to the signal. If this happens and there is no increase in calcium in the egg, failed fertilisation can still occur with AOA, due to other reasons. Please discuss with your medical team if you have any further questions.
- Reports on health of children following AOA do not show an increase in birth defects; however, the number of births reported is still fewer than 200.

What is the process?

1. Doctor consultation
 - Following an ICSI cycle with no or low fertilisation, your doctor will decide if AOA is a suitable option for a subsequent cycle.
 - If AOA is elected, the doctor will select this in your plan in the medical record and a fee for AOA will be included in your bill.
2. ICSI will be performed as usual, then the eggs will be cultured for 15 minutes in culture medium containing calcium ionophore.
3. Following AOA, the eggs are rinsed to remove the calcium ionophore and placed into fresh culture media drops for routine culture.
4. Fertilisation is assessed 16-18 hours after ICSI.

www.fertilityassociates.co.nz

0800 10 28 28



FERTILITY | *a better understanding*
associates | TE RAUHANGA O TE WHARETANGATA