

Calcium Activation (GM508 CultActive)

In order for fertilization to occur the oocyte must be activated by the spermatozoa. In most cases this is triggered when the spermatozoa penetrates the oocyte which results in a dramatic increase in intracellular calcium concentration followed by short high frequency calcium oscillations. Without this calcium influx the oocyte will fail to fertilise.

Studies have shown that the fertilisation rate can be improved by mimicking this calcium influx via the addition of calcium ionophore to the oocyte culture media.

At Ballarat IVF we can use a calcium ionophore called GM508 CultActive to improve the IVF cycle outcomes of certain patients and couples.

The use of GM508 CultActive has been proven to be safe and effective in numerous studies resulting in improved fertilization and the birth of many healthy babies.

Who this may help:

- Couples with complete failed fertilization in the past
- Couples with reduced fertilization (< 50% fertilisation)
- Couples with severe male factor infertility
- Couples with surgically collected sperm (epididymal (PESA) or testicular collected sperm)
- Couples with previous poor embryo development and embryo arrest (i.e., no progression to blastocyst stage)

The Calcium Activation process

Following your oocyte collection, all of your mature oocytes will be injected with the sperm. Shortly after injection the oocytes are moved to culture media containing a high concentration of calcium ionophore. The oocytes are incubated in this media for a short period before being transferred to our usual culture media where they remain overnight. The following morning the oocytes are checked for signs of fertilization and routinely cultured until they are ready for either embryo transfer or freezing (vitrification).

References

Ebner, T. Reproductive BioMedicine Online (2015)

Ebner, T. Fertility and Sterility (2011)

Nicopoulos, J. J Assist Reprod Genet (2015)

If you have any further questions regarding the use of Calcium in your next cycle, please discuss this with your Fertility Specialist or IVF Nurse.