MTHFR Fertility

FERTILITY CASE STUDY

MULTIPLE FAILED IVF

Hello and welcome!

I'm Carolyn Ledowsky, founder of **MTHFR Fertility and MTHFR Support Australia.**

As an MTHFR researcher, trainer and presenter, I am committed to teaching everyone I can about how and why the MTHFR genetic polymorphisms may affect your ability to fall and stay pregnant. I find it so sad that women are needlessly having multiple miscarriages and suffer the heartache that goes along with that, yet if they had known they had the MTHFR gene mutation before they started out they would have done things differently.

In honour of **National Infertility Awareness Week,** my team and I have compiled some amazing case studies and resources to share with you.

Our goal is to **support, inspire and empowe**r everyone going through this sometimes heartbreaking journey, to find the answers (and hope!) they need to turn things around.

Enjoy!

Carolyn Ledowsky

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Case Study:

Multiple Failed IVF

The following is a real-life case study of a couple who had been trying to conceive for 3 years. They had tried 5 rounds of IVF and experienced mixed results.

Ages

- Female 41
- Male 43

Presenting signs and symptoms (female)

- Infertility 3 years
- 5 miscarriages
- 2 failed embryo transfers
- 2 non-responsive IVF cycles
- 3 cycles retrieved between 2-3 eggs each, with 1-2 embryos each

Medical Diagnosis + Advice

- Age
- Keep trying IVF, no changes needed

Further Testing Revealed...

- Low hormones (both partners)
- High homocysteine (both partners)
- Low folate (both partners)
- High B12 (female)
- Fatty liver + high cholesterol (male)
- Low sperm motility and morphology

Our diagnosis:

Methylation Disturbance

MTHFR Fertility

What genes affect Methylation?

Genes We Assess for Methylation Disturbance

- Folate Genes e.g. MTHFR, MTHFD1, MTHFD1L, DHFR, SHMT, TYMS, SLC19A1
- B12 Genes e.g MTR, MTRR,TCN1, TCN2, FUT2
- Choline e.g. PEMT, BHMT, DMGDH

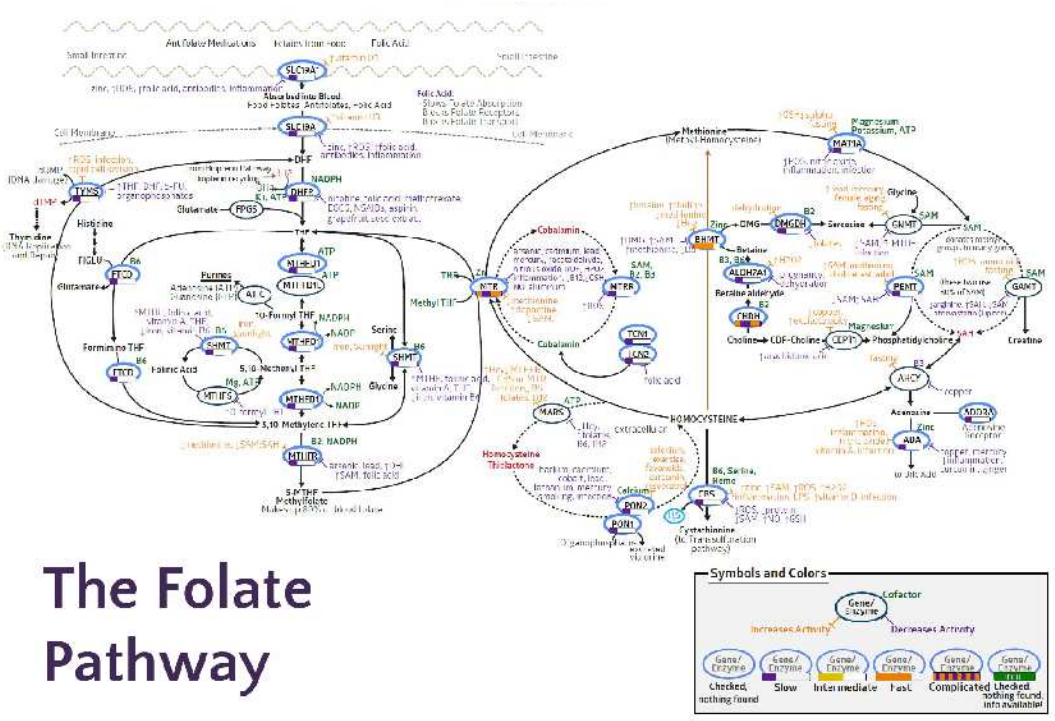
Case Study Genetics Discussion

- Folate, B12 + Methylation Pathway: C667T++ (female) A1289C ++(male)

Both partners showed a significant reduction in MTHFR activity (70%- 40% respectively). Both also presented with DHFR ++ (at the top of the folate pathway) and MTHFD1. Folate deficiency was evident in both partners.

Female also presented with a TCN2 mutation which made it hard for B12 to enter the cells and be used in methylation. This caused high B12 in the blood. Male had TCN1 and FUT2 that made B12 absorption in the gut low, leading to low B12 in the blood.

Getting the right type of Folate and B12 was essential for both partners. Remember folate is essential for the health of DNA within the egg AND sperm. Both partners needed high-dose methyl folate and methyl folate.

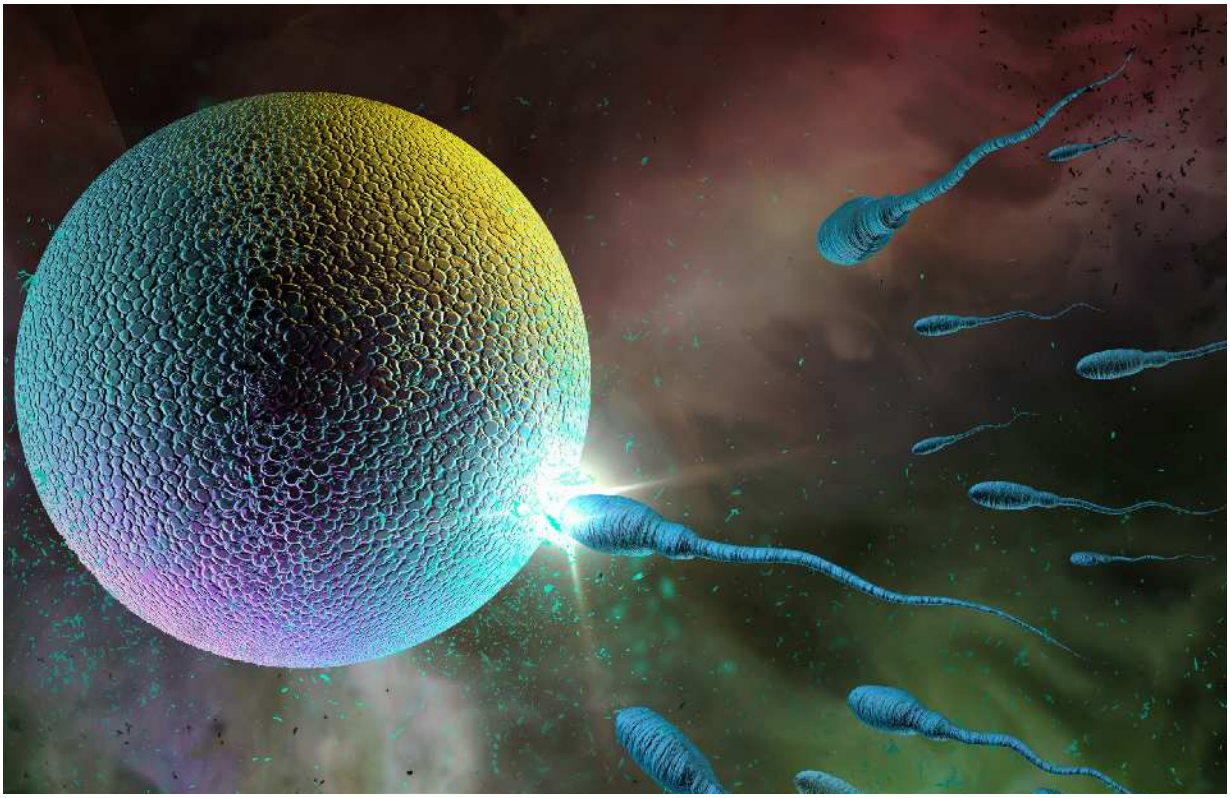


Key Genetics Continued...

- Choline

The choline genes/ enzymes can act as a "back-up" to methylation and get up-regulated when the folate pathway is slowed. Choline is also essential for healthy cell membranes that protect the DNA within the sperm and eggs.

Hence, Insufficient choline will impact the health of the sperm and eggs. The male had multiple genetics that slowed the production of "active" choline (needed for sperm morphology) and healthy liver function (needed to reduce damage to sperm via toxin and oxidative stress).



MTHFR Fertility

Treatment Overview

Both partners

Step 1: Support Methylation

- Switch to MTHFR-suited prenatal (no folic acid)
- Add additional high-dose methyl folate
- Methyl B12 injections (female)
- Methyl B12 supplements (male)
- Phosphatidylcholine

Note: after 1 month of this protocol they used a frozen embryo and it miscarried at <5 weeks

Step 2: Support Hormones + Oxidative Stress

- DHEA (female)
- N-acetyl-cysteine (both)
- Herbal hormonal mix (male)
- Glutathione (male)
- PQQ + CoQ10 (both)

Advised to wait to do another IVF round after being on supplements for at least 3 months and not to use remaining frozen embryo.

RESULTS - Another round of IVF after 3 months

- 7 eggs retrieved
- 5 embryos
- 1 transfer- successful!

Very healthy pregnancy, delivering a healthy, baby boy!

This is a great example of how addressing BOTH partner's genetics and methylation BEFORE doing IVF can drastically improve the success of treatment.

Tell Us Your Story

Have you tried IVF?

Tell us about your story in our private Facebook group or our Instagram page and use the hashtag ***#thisismystory***