

PROVEN FERTILITY OUTCOMES

# *Optimising your Fertility*

and Pre-Conception Health

Scientifically Proven Strategies to Improve YOUR  
Chance of Conception



**The IVF Project**  
ENHANCING REPRODUCTIVE OUTCOMES

PROVEN FERTILITY OUTCOMES

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# ***You have just improved your chances!***

Well it's not quite THAT simple, BUT research shows that educating yourself about what impacts your fertility is a positive step on the road to conception.

*Congratulations on getting empowered to make proven, effective changes to give yourself every chance of pregnancy success!*

Our mission is to ensure that everyone can receive scientific guidance to help achieve pregnancy through exercise, diet and mindset - scientifically proven strategies! Everyone should be given their *best opportunity* for conception.

*I have been where you are.* My husband and I struggled with infertility but knowing how to improve our chance of pregnancy success while undergoing assisted reproductive treatments gave us our beautiful boy. ***The IVF Project wants to help you get there too!***

With the experience of multiple IVF cycles I understand how stressful and challenging this time can be. Successful treatment would never have been possible without the essential tools and strategies that I now get to share with everyone through *The IVF Project*.

Now *YOU can benefit* from our years of research and specialist Exercise Physiology, Dietetics and Psychology services.

The scientific evidence is clear that these strategies work!

Improve your chance of conception, save expensive cycles of treatment, build your resilience through the roller coaster of assisted reproductive treatments, and get yourself ready for making a tiny human!

Are you ready to empower yourself for a positive outcome? Then The IVF Project is right here with you!

*Dr Cecilia Kitic*

## PROVEN FERTILITY OUTCOMES

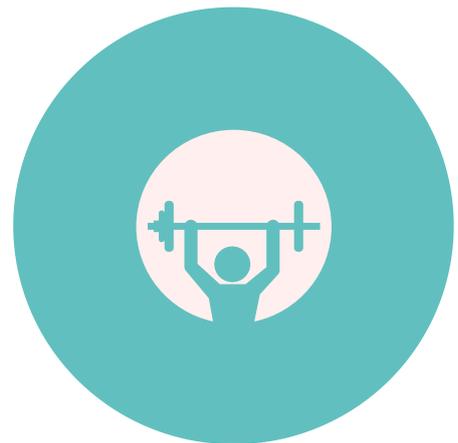
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*Let's Start with Some Fertility Facts....***BODY COMPOSITION**

- Overweight and underweight women take **longer to conceive**, have lower chance of spontaneous conception, and have higher rates of infertility treatment cycle cancellation and failure.
- Males who are overweight or obese have a **50% greater chance of reductions in fertility**.
- Strength training which builds muscle **improves sperm quality** and reduces DNA fragmentation.
- Improved body composition **improves hormone profiles**, particularly in women with PCOS.

**PHYSICAL ACTIVITY**

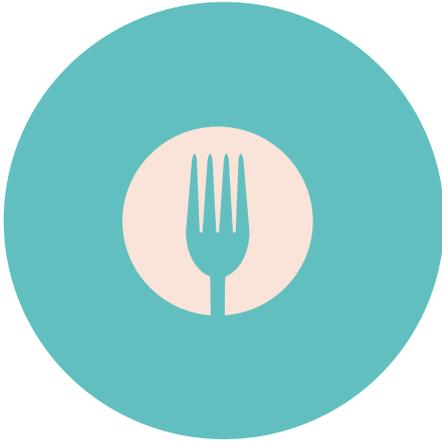
- Being active before IVF/ICSI improves your chance of **pregnancy by over 95%** (AND increases your chance of natural conception!).
- If you have PCOS the ideal exercise prescription **increases pregnancy success by up to 200%**.
- Physical activity dampens inflammation and oxidative stress which underlie **endometriosis, male factor and unexplained infertility**.
- Women who exercise have improved age-specific levels of **ovarian reserve** markers.



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## *And a Few More Fertility Facts....*

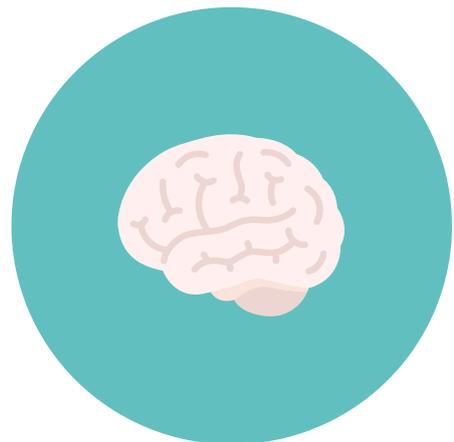


### **MINDSET**

- The stress that comes with infertility and undergoing assisted reproductive treatment can be **equivalent to that of someone dealing with cancer**.
- Pre-treatment counseling **reduces stress** during egg retrieval and pregnancy test time by >30%.
- Gratitude reduces infertility related stress.
- Female and male stress **reduce the chance of a live birth** from IVF.
- **Exercise** is a powerful antidepressant and **what we eat** affects our mood.

### **NUTRITION**

- 8 weeks of diet and exercise prior to an IVF cycle can **improve your chance of a live birth by 52%**.
- Eating wholegrains **increases uterine lining thickness**, implantation and live birth rate.
- Getting the right amount of fruit and vegetables for men and women **improves IVF fertilization rates**.
- High intakes of trans fats reduce conception rates.
- The **right fibre is key** to making your gut microbiota fertile!



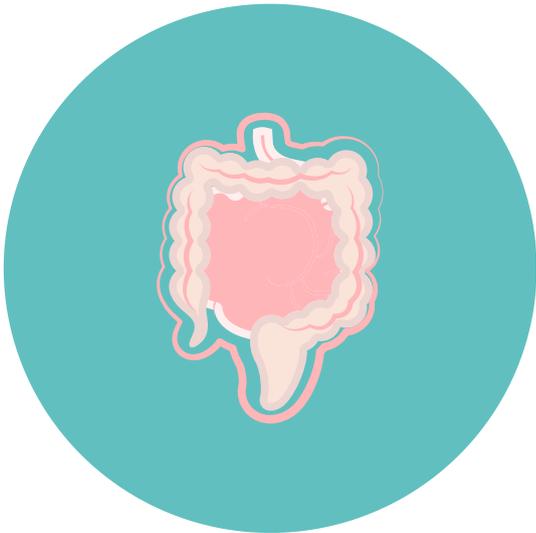
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## *Creating a Fertile Gut*

### OUR GUT FRIENDS

The gut is central to our fertility. We see clients reach pregnancy success through lifestyle changes that promotes a fertile gut. Egg, sperm, and optimal uterine lining are necessary for conception and their quality is impacted by what happens in the gut!



### A FERTILE GUT

- Imbalances in the diversity of our resident gut friends (our microbiota) are found in conditions affecting fertility, including **PCOS** and **endometriosis**.
- **Increased testosterone** concentrations in males that drive the production of **healthy sperm** are increased with a healthier gut.
- A poor **microbiota contributes to obesity** and a high body mass index (BMI) reduces pregnancy success.
- Including **resistant starch** in your diet improves your microbiota diversity = **better health and fertility**.
- **Exercise** increases the proportion of **'good' microbiota** in your gut, improving metabolic health.
- A healthy gut **limits inflammation** and oxidative stress, which is a major cause of **unexplained infertility** (70%) and recurrent pregnancy loss.
- Follow our friends **@fertilegut** on Instagram for some great gut health tips!

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# You Can Enhance Your Fertility!

## AEROBIC EXERCISE

Exercise that is repetitive and involves large muscle groups is considered aerobic. Examples of aerobic exercise include cycling, jogging, dancing, swimming and walking... you get the idea!



There are so many myths that exist around exercise and fertility treatments but we love busting them!

Have you heard this one: *"Don't exercise during fertility treatment."*

Or this one: *"Don't lift more than 5kg after your embryo transfer."*

**They are simply not true!**

If you are very active and used to engaging in high intensity exercise, then with the right exercise prescription you can still undertake high intensity exercise at times. The volume of activity you undertake though may need to be adjusted and it is always essential to ensure you have the right energy intake to fuel your activity and optimal egg and sperm health.

If you have never exercised then there is no better time to start! Exercise, even without weight loss, increases your chance of pregnancy. Start small with 10 to 15 min blocks of moderate walking each day. Some say it takes 21 days to make a habit but just be consistent and get active a little bit each day and you will make progress in a week!

### Monitoring Exercise Intensity

#### Light

40-55% Heart Rate  
Maximum\*

An activity that does not  
cause a noticeable change  
in breathing

#### Moderate

55-70% Heart Rate  
Maximum\*

An activity that lasts ~30-  
60min where you can  
maintain a conversation  
uninterrupted

#### Vigorous

>70% Heart Rate  
Maximum\*

Unable to maintain a  
conversation  
uninterrupted / difficult to  
talk

- Heart Rate Maximum can be calculated by subtracting your age in years from 220. For example for a 30 year old person  $220 - 30 = 190$  beats per minute.

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***Exercise is Medicine!*****STRENGTH TRAINING**

Strength training is incredibly beneficial for fertility yet more than 60% of the population do not engage in sufficient, optimal resistance exercise. Strength training does not necessarily mean heading the gym- you can do this in the comfort of your own home!

Your weight is made up of body fat and fat free mass, which includes your muscle and bone. It is the proportion of each of these that is important in influencing your health and fertility. Muscle is metabolically active tissue which means that if a higher proportion of your body weight is made up of muscle, your metabolic rate is higher, burning more energy.

The bonus is that improvements in fertility are realised just a few weeks after adopting a more active lifestyle, even without weight loss.



- Strength train major muscle groups (ie. legs, chest, back, shoulders, arms) twice a week.
- Aim for at least 48 hours between strength training sessions.
- Start with 1 set but build up to 3 sets of a weight you can lift 10-15 times (repetitions) which will provide ideal loading for enhancing metabolically active tissue - get the right loading!
- You don't need a gym to strength train- your body weight provides great resistance for loading.



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# ***Fuel Your Fertility with Food!***

## **FERTILITY NUTRITION**

It is no surprise that studies investigating nutrition and the outcome of reproductive treatments show that a diet high in fruit, vegetables, whole grains, lean meats and fish is associated with better IVF/ICSI outcomes than a diet high in processed foods.

Of course fibre and effective prebiotics are also dietary essentials for fertility. Follow our friends @fertilegut on Instagram for some great gut health tips for you!

Generally speaking then, what does a 'healthy' diet look like and what are the associated outcomes for assisted reproductive treatments? What elements of your diet can you tweak for a better outcome? To determine if you are on the right track, take the Preconception Dietary Habit test: *For every question you answer 'YES' to, you receive a point. When you answer 'NO' you score 0. The maximum score you can obtain is 6 and a higher score most likely indicates a better quality diet.*



### **Pre-Conception Dietary Habit Quiz**

- 1 Do you have four serves of wholegrains daily (eg. one serve = a slice of wholegrain bread; 1/2 cup brown rice; 1/4 cup muesli; 1/2 cup pasta)?
- 2 Do you use monounsaturated or polyunsaturated oils? (eg. canola oil, olive oil, sesame oil)?
- 3 Do you eat more than 200g of vegetables daily (ie. around 2.5 serves)?
- 4 Do you eat > 3 servings of meat or meat replacers weekly?
- 5 Do you eat = to or > 1 serving of fish per week?
- 6 Do you eat = to or > 2 pieces of fruit daily?

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# *Fuel Your Fertility with Food!*

## FERTILITY NUTRITION

Now you have your Pre-Conception Dietary Quiz Score - how does it compare?

199 couples attending a fertility clinic in Denmark completed the preconception dietary habit quiz. The average score for the women was 3 but each increment in score (ie. answering yes to another question) was associated with a 65% better chance of an ongoing pregnancy for their first time round of IVF/ICSI.

Eating a 'Mediterranean' style diet that is high in fruits and vegetable, whole grains, legumes and nuts, fish and healthy fats such as olive and canola oil prior to conception also increases the chance of an IVF/ICSI pregnancy by 40%. Now everyone has different energy requirements and while eating fresh, whole foods is a great step we still see people missing out on key fertility micronutrients. While a comprehensive nutritional analysis will detail your micronutrient intake, try adding some of some of these fertility foods to your day to get started:

- **Flaxseed** - High in linoleic acid, a sprinkle of ground flaxseed on your cereal can provide a super boost to reproductive performance. Dietary linoleic acid is associated with improved pregnancy rates in overweight women undergoing IVF.
- **Brazil nuts** - Brazil nuts are high in selenium which plays a role in reproduction, DNA synthesis and reducing oxidative stress. No need to eat a whole handful- eating just 2 to 4 a day is plenty to give you a good dose of selenium.



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# *Fuel Your Fertility with Food!*

## FERTILITY NUTRITION

- **Sweet potato** - Vitamin A plays an important role in the immune system and sweet potato is a great source. Vitamin A is necessary for male reproduction (spermatogenesis) and for embryogenesis (growing babies). Why not substitute potato for some sweet potato or get creative with some sweet potato pancakes and reap the benefits for sperm and egg!
- **Red meat** - Iron from animal sources is absorbed much better than the iron you find in plant based foods. If you are not averse to eating animal products than lean red meat is an ideal source to boost those important red blood cell stores of iron. One serve of red meat is 65g which is probably a lot smaller than most of us would have in one meal. The national recommendation is for a maximum of seven serves a week, which would be the equivalent of three 150g serves of red meat a week.
- **Leafy green vegetables** - Including a diverse array of coloured vegetables in your diet is important but do ensure you get plenty of leafy green vegetables. Vegetables like spinach and kale are great sources of many minerals and vitamins, including folate which is essential for a developing baby. They are also super easy to throw in a smoothie!
- **Oily fish** - Fatty acids found in oily fish are important substrates in early reproductive events including egg maturation and embryo implantation. Fillets of Atlantic salmon are also a great source of Vitamin D (~ 5.8ug/100g fish). Choose low mercury fish. One serve for an adult is 150 grams.



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# *Are You a Glass Half Full Kinda Guy/Gal?*

## MINDSET

This may seem like a pretty loaded question, especially if you are in the midst of dealing with infertility, recurrent pregnancy loss and just the general emotional load that comes with trying to conceive! BUT, your answer to this provides insight to your mindset.

With the stress that comes with fertility treatment it pays to increase your self-awareness of your mental well being and your ability to 'bounce back'. Knowing how you cope with stressful situations can help you recognise the most effective strategies to develop to keep you on track when faced with the challenges of fertility treatment. Take the brief resilience coping scale quiz to find your resilience score (on the next page).



### BRIEF RESILIENCE SCALE

Consider how well the following statements describe your behaviour and actions:

	Does not describe me at all	Does not describe me	Neither a little nor a lot	Describes me	Describes me very well
I look for creative ways to alter difficult situations.	1	2	3	4	5
Regardless of what happens to me I believe I can control my reaction to it.	1	2	3	4	5
I believe I can grow in positive ways by dealing with difficult situations.	1	2	3	4	5
I actively look for ways to replace the losses I encounter in life	1	2	3	4	5

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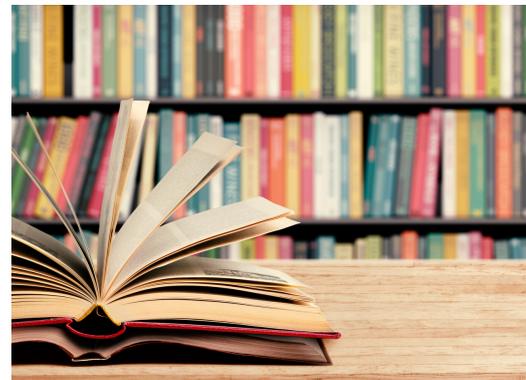
# *What's in Your Toolbox?*

## **RESILIENCE SCORING**

Add up each score for each of the four questions. Your total score could range from 4 to 20. Higher scores indicate greater resilience in coping with adverse situations. As a general guide 'low' resilient copers would have a score 4-13, medium resilient copers 14-16 and high resilient copers would have a score of 17-20.

Exercise is one 'tool' in your resilience coping tool box and a morning walk on test day was my saving grace! Other coping strategies that might work for you:

- Ensure you are well educated and informed about aspects of your treatment to alleviate stress of the 'unknown'.
- Knowledge is power and understanding the ins and out of your treatment will give you some control over the process. Letting go of treatment elements that you have no control over and focusing on those that you do, such as making yourself as healthy as possible by exercising and eating well.
- Be kind to yourself and make your well being a priority.
- Surround yourself with a support network. This could be talking with a good friend, your partner or 'chatting' in an online community. Know you are not alone, and reaching out every now and again can be a great way to put everything into perspective.
- Adopt a positive, hopeful outlook. Pessimism has been shown to predict IVF failure so start your day with some positive affirmations.



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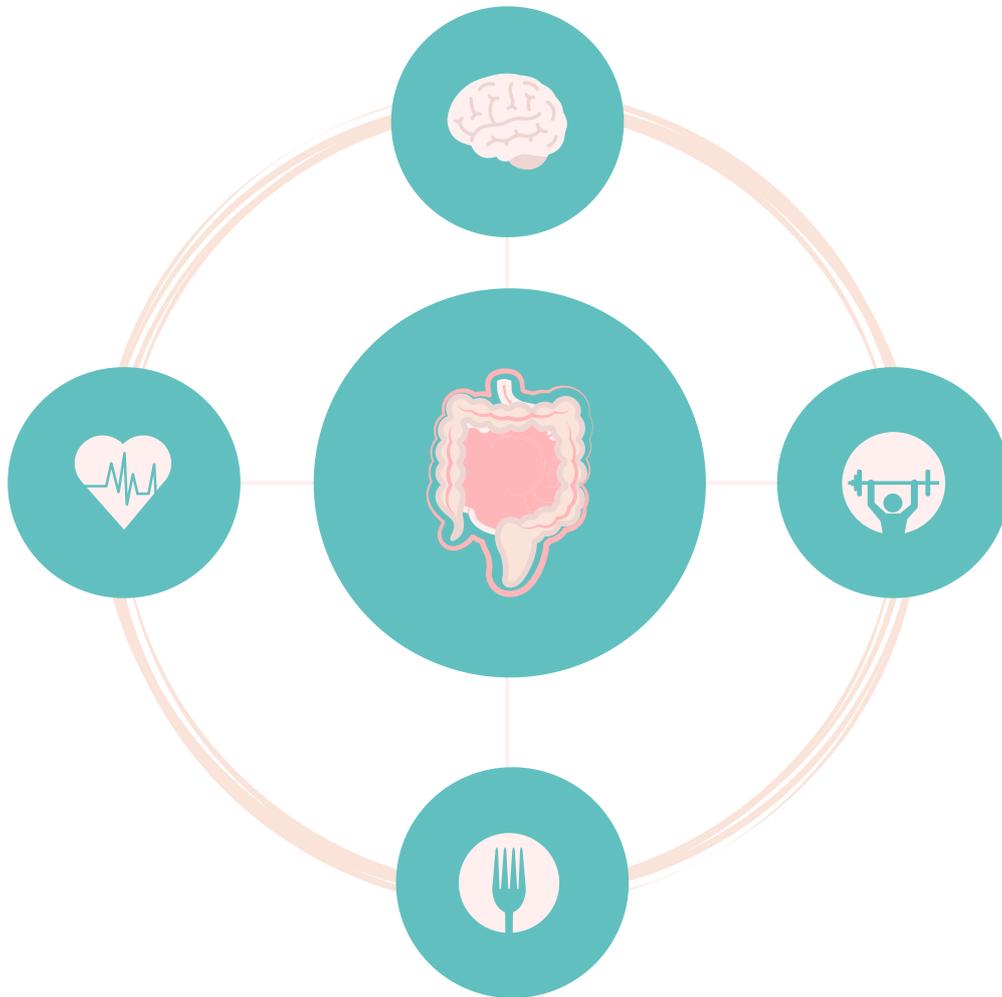
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# *A Fertile Foundation*

## READY FOR A BABY?

Improving your health before conception means better quality eqq and sperm, enhanced embryo development and increased chance of pregnancy! As an added bonus it also provides long lasting health benefits for your future child.

Are you ready to improve *your* chance of pregnancy?



@DrKitic

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### Address

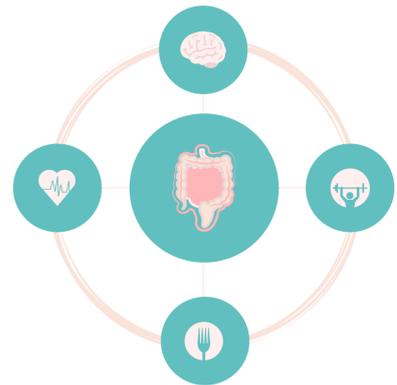
The IVF Project is located within The Johnson at Spring Hill with on street parking or secure car parking nearby.

Suite T34, 477 Boundary Street  
Spring Hill, Brisbane  
Queensland, AUSTRALIA 4000

### Contact Phone

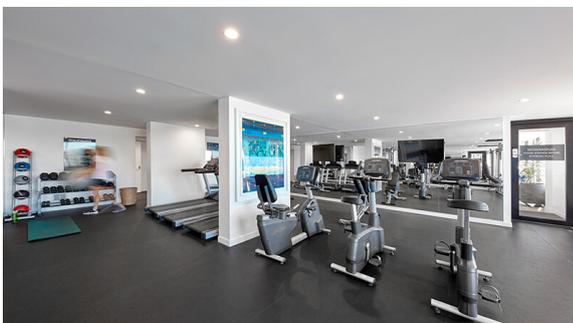
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### Email

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