

WEEK 4

# BEFORE BABY

KAKEIBO  
the japanese  
art of saving money

PRE-PREGNANCY  
PILATES: FINALE

the future  
OF FERTILITY

**GENETICS 101**

Give fertility a boost  
with plant-based protein

emotional  
health  
vulnerability  
& courgae





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# welcome

It's hard to believe the first test tube baby was born 40 years ago. Fertility science has changed completely in the decades since, with technology improving at an exponential rate. So if you're embarking on the journey of having a baby, we can help you understand and harness the latest technologies to, hopefully, get the best outcomes.

In this issue, we showcase some of that fertility technology – including Artificial Intelligence – and reveal how it could help. We also explain the role genetics has on conceiving a healthy child, and what tools are available to help you navigate this. Don't miss a delicious recipe that taps into the benefits of a plant-based diet, which may support fertility. Plus, we explore how to remain resilient (because

there's nothing more emotional than the pregnancy journey) and look at a new money-saving trend, called 'kakeibo'.

This is our final issue of Before Baby for 2022 – we hope we've given you knowledge and support over these four weeks to empower you to make informed fertility decisions. If you have concerns about your fertility, we're here to help – make an appointment to chat to one of our fertility experts.

You are never, ever alone. We are here to help!

**“Fertility science has changed completely in the decades since, with technology improving at an exponential rate.”**

**Kate Munnings,**  
Virtus Health Group CEO





**Are you aware of the role genetics has to play when it comes to conceiving a healthy baby? Plus, we break down some of the genetic testing options available before pregnancy. Read on to find out more.**

A human cell contains genetic material arranged in strands, called chromosomes. A healthy cell will contain 23 pairs of chromosomes. Fertilisation combines 22 chromosomes and an X chromosome from the egg with 22 chromosomes and either an X or Y chromosome from the sperm. An embryo then has 46 chromosomes – if it’s a female, with

two X chromosomes, and if it’s a male, with an X and a Y chromosome.

As you can imagine, there’s a lot that needs to happen perfectly for an embryo to result in a healthy baby. In fact, up to 70 per cent of embryos – whether they’re fertilised naturally or in a laboratory – sadly don’t survive the first three months of pregnancy or aren’t successfully implanted in the uterus due to gene conditions or random chromosome variations.

A recent Australian study of 12,000 couples showed high carrier rates of Cystic Fibrosis, Spinal Muscular Atrophy and Fragile X. Screening for these conditions alone, or better, as part of a larger panel, is something you may want to consider.

### **Ok, so what are the genetic testing options?**

#### **Pre-conception carrier screening**

We all carry genes that could result in serious disease in our children. Fortunately, most of us have good

copies of those genes to keep us healthy. The problem arises when two people who, by rare chance, carry the same bad genes meet and start their family.

In this circumstance, the child is at risk of inheriting both bad genes, which could result in serious disease in the child.

Although family history can be helpful, often carriers of genetic conditions do not know they are carriers. We know 80% of babies born with a single gene genetic disorder had no family history of the condition, it is a matter of chance and who the genetic partner is.

Nowadays there are genetic panels available to screen whether or not you are a carrier of a genetic problem.

With carrier screening, one partner is tested first, and if they are found to be a carrier of a recessive condition, the other partner will need to be tested too. This is because if both partners carry the recessive gene, there is a one in four chance that their child will inherit that condition.



## What happens if both partners are carriers?

One approach is to conceive naturally and to have testing performed on the pregnancy. The advantage of this is natural conception – more fun than IVF! The drawback of this, is the need to terminate a much-wanted pregnancy if it is found to be affected by the genetic disorder.

A sophisticated scientific technique called pre-implantation genetic testing (PGT) is a potential alternative, testing embryos so that only those that are chromosomally healthy or unaffected by specific disorders will be used in IVF.

All Virtus Health clinics offer an internationally recognised genetics program, including PGT, to help even more families achieve their dreams of having a healthy child.



**If you'd like to chat in person to talk through all things genetic testing, our fertility specialists would be happy to take the time.**

**Contact us or [click here](#) to book an appointment.**





## the future of fertility

There've been some exciting developments in fertility science in recent years. Find out more about how they could help you start a family.



The world of fertility science is ever-changing, and as leaders in the field, we've got our fingers on the pulse of the latest developments. Having a baby isn't always straightforward, in fact – sometimes it can feel like straight-up science-fiction, so let's sort that from the facts.

## Artificial intelligence

Artificial intelligence has been a rapidly growing area in recent years, and in fertility science, this technology is now helping select the most viable embryos. We have AI systems that perform comprehensive assessments of embryos to help us identify which ones have the greatest chance of developing into a healthy baby. That means we're able to zero in on the ideal embryo, then transfer it into the woman's uterus in IVF. Until now, an embryologist would assess an embryo's viability based on appearance, but AI technology allows us to select with greater precision, improving patient pregnancy results.

## EmbryoScope+

This innovative time-lapse technology carefully monitors and analyses the development of embryos. It combines an incubator, high-resolution camera and software to automatically photograph an embryo every ten minutes. Scientists can review the development of embryos at any point in time without removing them from their safe incubator environment. It also means that the precious cargo is constantly kept at optimal temperature and pH conditions, mimicking the conditions of a natural pregnancy.

## Antioxidants

One of the most exciting projects in development is our antioxidant trial. Previous small studies have found that certain antioxidants have a positive impact on embryo development, implantation and fetal growth. We're running a larger study to explore whether those antioxidants, added to the embryo culture conditions, improve embryo development and pregnancy outcome. If successful, the study could lead to greater results for people undergoing IVF.

## Electronic ID tracking

Known as 'Witness', this electronic system allocates the patient's identity to each sample to ensure better traceability of vessels containing that patient's eggs, embryos and sperm. This reduces the chance of error in human samples.

**At Virtus Health, we have a vast network of scientists, fertility specialists, nurses, and counsellors who are dedicated to giving you the best possible chance of having a family.**



**If you're concerned about your fertility and want to explore your options, contact us or [click here](#) to make an appointment.**





# Give fertility a boost with plant-based protein

Want to make one simple change to your diet to boost your fertility? Try replacing some meat with plant-based protein.

Wendy Fedele, a Fertility and Prenatal Dietitian, says that studies on dietary patterns and fertility show that eating less red meat and more plant protein is associated with lower rates of infertility for both men and women.

“Now, we don’t need to go full Vegan to get the benefits, and animal proteins can be a great source of important fertility nutrients, but

aiming for smaller serves of meat less often, and particularly limiting processed meats, is the way to go,” Wendy says. “In fact, a very large and well-known study, called the Nurses’ Health Study II, found that replacing just 5% of animal protein with plant-based protein was associated with a more than 50% reduction in ovulation-related infertility for women. Pretty impressive, huh?!”

So, what exactly is a plant-based protein? Think beans and legumes, soy foods like tofu, tempeh and edamame beans, as well as nuts and seeds – all of which are packed with fibre, fertility-boosting nutrients like folate, iron, zinc, selenium, choline and more.

**If you’re not sure where to start with boosting your plant protein, try out these tips:**

- replace mince with lentils or tempeh in your pasta sauce
- use tofu in your curries and stir-fry’s
- use black beans in place of meat in your tacos and burrito bowls

Try our black-bean burrito bowl to get you started!

**Everyone’s dietary needs are unique. Be sure to discuss any recommendations with a physician or other healthcare professional.**



# Veg out

## savoury golden oats



### Ingredients

- 2 cups Vegetable Broth
- 1/2 cup Oats (rolled)
- 1/4 cup Dry Red Lentils
- 1/2 tsp Onion Powder
- 1/2 tsp Turmeric
- 1/4 tsp Garlic Powder
- 1/8 tsp Sea Salt
- 1 cup Baby Spinach
- 1/2 tsp Nutritional Yeast (optional)

### Directions

1. Bring the vegetable broth to a gentle boil over medium-high heat.
2. Add the oats, lentils, onion powder, turmeric, garlic powder and salt. Stir to combine. Reduce the heat to medium-low and cook for 12 to 15 minutes, stirring often, until the lentils are tender.
3. Stir in the baby spinach and nutritional yeast, if using. Season with additional salt if needed. Enjoy!

### Notes:

#### Leftovers:

Refrigerate in an airtight container for up to three days. For best results, reheat with additional broth on the stove or in the microwave.

#### More Flavor:

Add red pepper flakes, fresh ground black pepper or fresh garlic.

#### Additional Toppings:

Fresh herbs, green onions, diced tomatoes or sesame seeds.

#### No Vegetable Broth:

Use water instead and increase the sea salt to taste.



# pre-pregnancy pilates

## finale

Our final Pilates class is the most advanced session where we incorporate everything we've learned over the past few weeks – including technique and the mind-body-breath connection - and we use this to support our body with these more advanced moves. It is important to

remember to continue to maintain your pelvic floor connection, your lats (underneath your shoulder girdle), your core and glutes.

Pilates is a full body workout, and you'll certainly feel it this week!

Read on below for a highlight of some of the movements this week.

Ready to prep your body with Pilates? Click [here](#) to see the full video.



### bridge with hand weights

This version of Bridge is a progression on the previous versions. The hand weights increase the level of difficulty by challenging the core /torso stability, shoulder position, glute and hamstrings... all whilst not engaging the lower back. Remember, you should not feel any pain in your lower back.



### mermaid

This stretch is great gentle stretch that opens the side of your body, allowing you to expand your ribs and chest fully when breathing. Fiona adds, "You'll feel the stretch down the side of the body as you reach your arm up on a diagonal."



### kneeling - glutes

This Side Kneeling glute exercise is an advanced exercise incorporating fully integrated move-ment, core, shoulder and pelvic stability. With one leg extended out to side, slightly forward of the hips, kneel high on your other leg making sure you are vertical at the hip. Fiona adds, "I recom-mend you have a look at the class video so you are able to see the full movement and receive more information. Enjoy the burn!"





Listen to the podcast [here](#).

# emotional health mindfulness podcast: vulnerability & courage

**It's become a catch-cry recently, but what does it mean to be vulnerable, and what does it mean for your journey to parenthood? An expert explains.**

Wouldn't it be ideal if all dreams came to fruition easily? We tend to think getting pregnant is the most natural thing in the world, but for so many people it's not that straightforward. If your goal of parenthood hasn't happened yet, it's important that you look after your mental wellbeing. Staying connected to your loved ones can help you navigate challenging times, says psychotherapist, social worker and fertility counsellor Judith Krause. And one of the best ways to strengthen those relationships is to practise vulnerability.

"We have this misconception that we can go it alone, but we're hardwired for connection," says Krause. "And when we don't have connection we suffer – we need other people to help us be ourselves."

Krause says being vulnerable with people we love can help build trust.

"Trust is made up of really, really tiny moments of being vulnerable," she explains. "Vulnerability is not oversharing. Vulnerability is about pulling on the brave boots, being fearful and moving through it anyway."

## Managing Anxiety

Krause recommends the 4-7-8 breathing technique for calming anxious thoughts:

"Put your tongue behind your top teeth where your gum line meets your teeth, and it stays there for the entire

exercise," she says. "Then breathe in through your nose for the count of four. Hold your breath for the count of seven. And then exhale through your mouth for the count of eight with some force behind it and make it measured and controlled."

## Gratitude

Another way to boost mental wellbeing is to practise being grateful. Krause says many of us tend to fall into a pattern of thinking 'I'll be happy when I have a holiday', for example, or 'when I get a new job'.

"What's the underlying message that we're telling ourselves? I'm not happy right now. But we can be happy by being grateful for what we have right here, right now," Krause says. but it also helps you to self-reflect and understand your thinking pattern.





# finance

## kakeibo: the japanese art of saving money

**The new money-saving trend, 'kakeibo', could help you be more mindful with your finances.**

It may have been created in 1905, but a Japanese budgeting system is proving popular in the west for its mindful approach to managing money. Finance experts Tilly Money say kakeibo can be an effective way for parents-to-be to manage their income and expenses.

"If you're preparing for or have just had a baby, it's probably a good idea to get familiar with your spending habits through kakeibo," Tilly Money says, "as life has most definitely changed from those single girl budget days."

Put simply, kakeibo means writing down your expected incomings and outgoings – ideally by hand in a notebook, "as an almost meditative practice". The main principles of kakeibo are to separate your finances into 4 categories:

### NEED

Items necessary for your day-to-day life

### WANT

Non-essential purchases that could potentially be counteracted with a bit more mindful thinking

### CULTURE

Items like books that provide a certain quality of life

### UNEXPECTED

Expenses that aren't anticipated, like a doctor's appointment.

At the end of the month, add up all your expenses and deduct that from your original budget.

"This will really give valuable insight into the realities around your spending," says Tilly Money.

Learn more about Kakeibo [here](#).





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