

Preconception Guide

Build strong
foundations for a
healthy pregnancy.

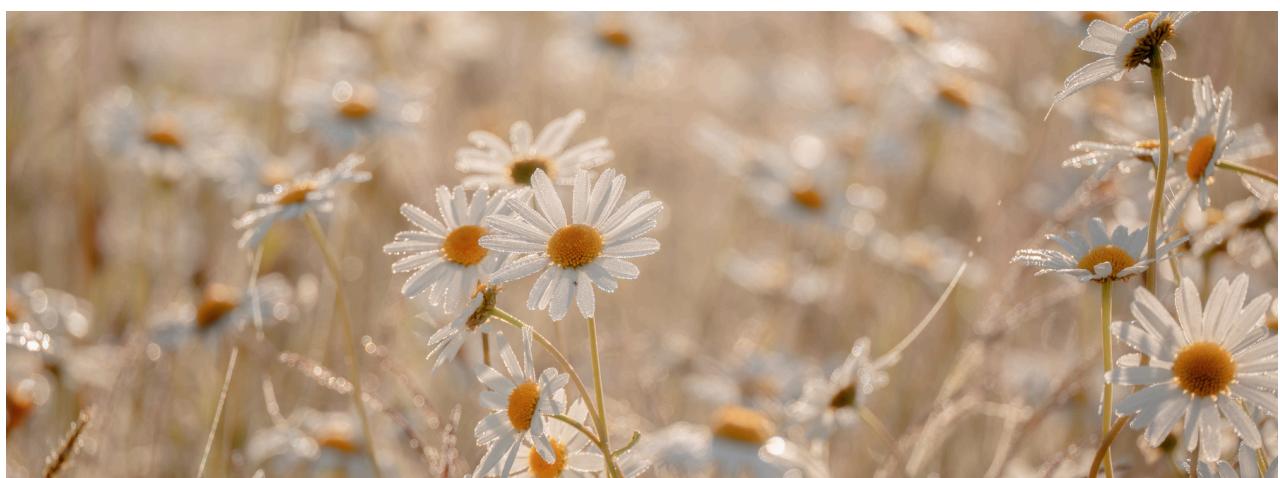


Dr. Shweta Patel, MD FACOG

Introduction

The period of time before you conceive, known as preconception, is a crucial window of opportunity to optimise the health of yourself and your partner. It takes roughly 3 months or 100 days for an ovarian follicle (egg) to mature and be released through ovulation. Sperm on the other hand take approximately 74-76 days to fully mature. The genetic potential of a baby is equally dependent on the health of both the egg and the sperm.

3-4 months at a minimum is recommended for preconception care, however, evidence has shown that your health 12 months and even up to 3 years prior can influence the chances of conception and pregnancy health outcomes [1]. Therefore, it's never too early to start!



Disclaimer

This book will guide you through your preconception journey and help you to build strong foundations for a healthy pregnancy and baby. It is intended as an educational guide only and does not take into account your individual circumstances. It should not be used to diagnose or treat any health concerns or replace the advice of your healthcare practitioner.



Part 1 - Begin 6+ months prior to conception

The very start of preconception care is all about creating healthy diet & lifestyle habits, reducing your toxin load and identifying and addressing any health conditions.

01 ADOPT A MEDITERRANEAN DIET

One of the most well-researched dietary patterns is the Mediterranean diet which emphasises the consumption of whole, natural and minimally processed foods including fruits, vegetables, whole grains, legumes, nuts, seeds, fish and extra virgin olive oil. It also limits the intake of processed foods, refined carbohydrates, and red meat.

Studies have shown that a western-style diet high in sugar & refined carbohydrates can potentially impact fertility, whereas the Mediterranean diet has a protective influence on fertility [4].

The Mediterranean diet has been shown to reduce the risk of gestational diabetes, preeclampsia, emergency C-section, perineal trauma, preterm birth and low birth weight [3]. It does this by supplying an abundance of dietary fibre, vitamins and minerals, antioxidants, polyphenols and healthy fats such as omega-3 and monounsaturated fatty acids.



BUILDING A HEALTHY PLATE

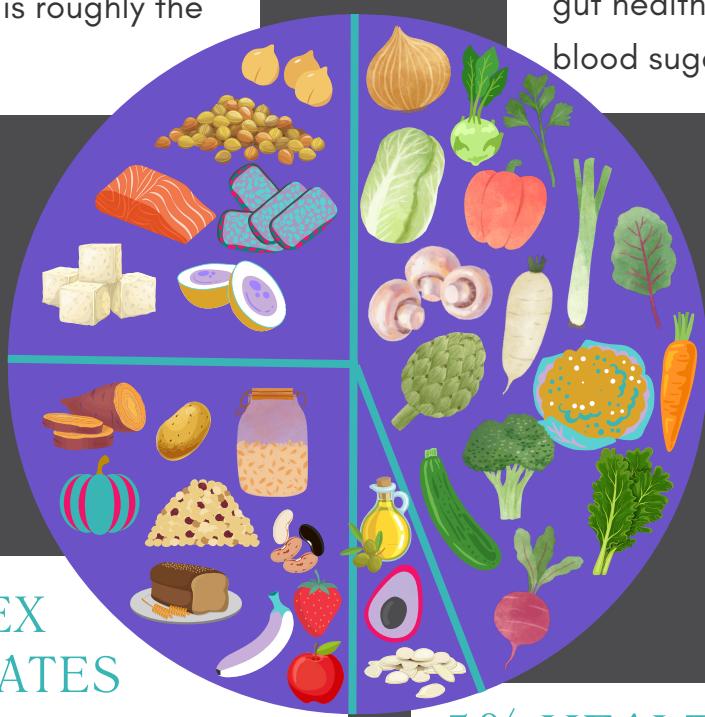
25% PROTEIN

Protein is essential for hormonal balance, ovulation, embryo development and sperm health. It's also necessary for nutrient transport, immune function and a healthy stress response.

Aim for a portion that is roughly the size of your palm.

45% VEGETABLES

Aim for a rainbow variety of vegetables to provide your body with essential vitamins, minerals, antioxidants, fibre and polyphenols to support fertility, gut health, immune health and blood sugar regulation.



25% COMPLEX CARBOHYDRATES

Carbohydrates are essential for energy production, mood regulation, metabolism, hormonal balance, energy levels & fertility.

The key is to focus on quality sources of complex carbs such as wholegrains, legumes, fruit and vegetables.

5% HEALTHY FATS

Healthy fats play a vital role in hormone production. They also help to maintain fluid cell membranes, which is necessary for sperm motility, egg quality & fertilisation.

Aim for 1-2 tablespoons of healthy fats at every meal.

EAT MORE	EAT LESS OR AVOID
<ul style="list-style-type: none"> Fruit & veg: Leafy greens, cruciferous veg, fresh herbs, berries High-quality protein: Fish, eggs, organic poultry, natural yoghurt, hard cheese (ie. cheddar or tasty), tofu, tempeh, legumes Healthy fats: Extra-virgin olive oil, avocado, coconut, nuts, seeds, fatty fish like salmon & sardines (2-3 serves fish a week). High-fibre foods: Wholegrains like quinoa, buckwheat & brown rice Filtered water: Aim for 2L of filtered water daily 	<ul style="list-style-type: none"> Caffeine & alcohol Refined grains: white bread, flour, pasta, white rice Added sugars: soft drinks, baked goods, ice cream, breakfast cereals, flavoured yoghurt, sauces Processed meats: sausages, deli meats, bacon. Trans fats: margarine, fried foods, pastries. During pregnancy: Soft cheeses, large fish eg. tuna & shark, raw/smoked seafood, cold meat, undercooked eggs

02

MOVEMENT



The benefits of building and maintaining muscle mass during preconception cannot be overstated. During pregnancy, your ligaments relax to make space for the baby. This instability in your musculoskeletal system can contribute to joint and back pain. Having a strong body going into pregnancy can stabilise your bones and muscles to reduce the risk of pain. In addition, exercise supports metabolic health and body composition, blood sugar balance, stress reduction and blood circulation to your reproductive system, which all help to improve pregnancy outcomes.

If you're just starting to incorporate more movement into your daily routine, then any physical activity is better than none. Ideally, you want to aim for at least 20-30 minutes of moderate-intensity exercise every day. This includes anything that increases your heart rate and breathing, but still allows you to carry on a conversation. This could include a fast-paced walk, bike ride, swim, pilates, climbing stairs, or even household chores like gardening or sweeping.

Those who regularly do moderate-intensity exercise are statistically more likely to fall pregnant compared to those who are inactive [7].

It's also recommended that you do muscle-strengthening activity/resistance training at least two or more days every week. This includes bodyweight exercises such as push-ups, lunges and squats, using weights to perform exercises, pilates, certain types of yoga focused on building strength and heavy gardening work like digging or shovelling.

Many people also enjoy more intense exercise such as HIIT, however, this kind of exercise can place huge stress on the body. Studies have shown that vigorous or high-intensity exercise can be detrimental to fertility and reduce the chances of conceiving [7].

How to incorporate more movement into your daily life:

- Set small, achievable goals that you can sustain over time.
- Try habit stacking where you take an already established habit and add some exercise. For example 10 squats every time you brush your teeth.
- Exercise with a friend or partner, or join a fitness class. This can help keep you accountable and motivated.

03



TOXIN EXPOSURE & EDC'S

Endocrine-disrupting chemicals (EDC's) are environmental chemicals that wreak havoc on your hormones. There are thousands of different EDCs including pesticides, BPA, PCBs, phthalates, dioxin, parabens, air pollution, nickel, copper, lead and mercury. EDCs impact fertility by mimicking or blocking sex hormones, altering endometrial function, impairing sperm quality, inhibiting embryo implantation and promoting conditions like endometriosis & fibroids.

A 2023 study found that regular use of perfume is associated with increased concentrations of endocrine-disrupting chemicals in ovarian follicular fluid [8]. A 2022 systematic review found a negative association between pesticide exposure and total sperm count, sperm morphology, sperm and DNA damage [9].

While our bodies have natural ways to eliminate toxins, we were never designed to cope with the ever-increasing level in our modern environment.

REDUCING YOUR TOXIN LOAD:

Low-tox lifestyle

Choose natural cleaning products, skincare, cosmetics and fabrics. Avoid artificial fragrances like perfumes.

Optimise indoor air quality

Ensure plenty of ventilation and incorporate plants that improve indoor air quality such as devil's ivy and peace lily.

Limit processed foods

Reduce or avoid packaged and refined foods, deep-fried foods, additives, preservatives, artificial colours, flavours and sweeteners.

Reduce EMF's

Put your phone on flight mode & turn off the wifi-router overnight. Avoid using bluetooth earphones. Sit your laptop on a desk rather than your lap. Limit plane travel where possible as it is a huge source of radiation. If plane travel can't be avoided make sure to stay well hydrated and regularly take small doses of vitamin C throughout the flight.

Alcohol

Alcohol depletes vital nutrients from your body and disrupts hormonal balance even with mild consumption. It has been shown to impact egg and sperm quality and reduce IVF success rates [5].

Smoking

In females, smoking can impact ovarian function and significantly decrease the chances of conception. It can cause DNA damage to the egg and increase the risk of preeclampsia, birth defects and premature labour [5]. Smoking in males is known to reduce sperm concentration and motility, as well as increase DNA damage [5].

Vaping

There are limited studies on the effects of vaping on fertility and pregnancy, however early studies suggest it can impact fertility and reduce the growth of the baby during pregnancy [6].

Cannabis

Cannabis has been shown to reduce sperm count and motility. It can also diminish erectile function over time. In females it can increase the risk of infertility by impacting hormone levels and disrupting ovulation [5].

SUPPORTING DETOXIFICATION



A plant-rich Mediterranean diet will provide your body with nutrients to support each phase of detoxification.



Drinking plenty of clean, filtered water is necessary to flush toxins out of your body.



Daily exercise helps in the elimination of toxins stored in fat tissues. It also helps with blood and lymphatic circulation.



Ensuring 8 hours of quality sleep a night allows your body to remove waste and toxins from your brain and body.

SWAP OUT



Tap water or
plastic bottles



Filtered
water in
stainless or
glass bottle



Non-stick
cookware



Stainless, or
cast iron



Conventional
Produce



Organic,
local, home-
grown or
washed well



Artificial
fragrances



Fresh flowers,
essential oils (in
moderation)



Plastic
containers



Store food in
glass & never
heat food in
plastic.



SWAP OUT



Cleaning supplies



Use bicarb soda, vinegar, lemons &/or castile soap

SWAP IN



Skincare products



Use natural alternatives free from parabens & phthalates



Clothing and bedding



Use natural fabrics like cotton and bamboo



Alcohol



Sparkling water with lemon & mint or pomegranate juice



Processed foods and additives



Wholefoods



04 STRESS

In this day and age, it's rare to find anyone who isn't stressed. But the harsh reality is what's common isn't necessarily normal. Preparing for a baby can be a particularly stressful time, so it's important to build a support team around you and develop healthy coping strategies to bring your nervous system back into balance. It's also important to familiarise yourself with different sources of stress that you may not be aware of, and minimise these as much as possible.

Psychological stressors: self-criticism, lack of boundaries, toxic relationships, multitasking, perfectionism, comparison to others, trauma.

Physical stressors: skipping meals, too much or too little exercise, inflammation, poor gut health, nutrient deficiencies, poor sleep.

Environmental stressors: Mould, toxins, excess artificial light esp. at night, technology overload, doom scrolling, exposure to negative news and media, work demands, financial difficulties.



Removing sources of stress

Start by making a list of things that cause you stress. This can include external factors like financial issues and work deadlines or internal factors like self-criticism. Categorise your stressors into things you can control and things you can't. Make a plan for the ones that you can control. This could mean changing your routine, setting boundaries or seeking the help of a therapist.

Regulating your nervous system

To support optimal nervous system function it's important to find mindfulness activities that work for you and practice them regularly. This can include deep breathing, meditation, yoga, qi gong, journalling, getting out in nature and even gentle exercise. Bringing your attention to the present moment helps to calm your body and reduce stress hormones.

Professional support

There are many health professionals out there that can help you to manage your mental health during your preconception journey. Your doctor can offer a referral to a counsellor or psychologist and a naturopath can offer personalised herbal, nutritional, dietary and lifestyle support. There are also hotlines and resources such as Beyond Blue - 1300 224 636
<https://www.beyondblue.org.au>

05

TRACKING YOUR CYCLE

Your cycle is like a monthly report card, offering valuable insight into your reproductive health and fertility. Tracking your cycle empowers you to know your body on a deeper level and identify problems that may otherwise go unnoticed.

It helps you understand the length and regularity of your cycle, which is a fundamental indicator of your overall reproductive health. Long or short cycles, a short luteal phase, missed periods and spotting can indicate a potential underlying condition or hormone imbalance that needs to be addressed.

In addition, pinpointing the exact time of ovulation is essential for conception. Many people rely on apps to track their cycle and identify ovulation, and while apps can provide an educated guess based on the length of your cycle, it's still only a rough estimate. In addition, many women experience anovulatory cycles where they don't ovulate but still experience a normal period. Tracking your temperature and cervical

mucus helps you accurately predict when ovulation will occur, as well as identify anovulatory cycles.

HOW TO TRACK YOUR CYCLE

The first step is to purchase yourself a basal body or ovulation thermometer. This is more sensitive than a regular thermometer and has 2 decimal places. You'll find them in most chemists.

Your basal body temperature is your body's temperature at rest, which is measured first thing in the morning before you get out of bed, after at least 3 hours of consecutive sleep.

1. Choose a starting point, the best place to begin is on the first day of your period, which is day one of your cycle.
2. As soon as you wake up in the morning, take your temperature under your tongue. Add your temperature to the chart on the next page.
3. It's also helpful to pay attention to cervical mucus changes, noticing the colour and consistency.



BASAL BODY TEMPERATURE TRACKER

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
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Intercourse:																																			
Period:																																			

Charting your cycle: Using a digital thermometer, take your temperature under your tongue before getting out of bed. Record it with an X on the chart. Day 1 of your cycle is the first day of menstruation.

HOW TO INTERPRET YOUR CHART

Follicular phase (pre-ovulation):

- In the first half of your cycle your basal temperature tends to be lower, typically ranging from 36.1°C to 36.4°C (97.0°F to 97.5°F).
- Your cervical mucus may be minimal or absent right after your period, and then gradually become creamy or lotion-like in consistency as your oestrogen levels rise.

Ovulation phase:

- Your basal temperature may dip slightly right before ovulation due to a surge in oestrogen. This dip will be followed by a significant rise in temperature after the egg has been released, usually reaching between 36.4°C to 37.0°C (97.6°F to 98.6°F).
- Cervical mucus becomes stretchy, slippery, and transparent, resembling raw egg whites. This type of fluid is highly fertile, creating an optimal environment for sperm.

Luteal phase (post-ovulation):

- After ovulation your temperature remains high until progesterone drops, triggering menstruation. If the egg has been fertilised, temperature will remain high as progesterone levels are sustained.

TROUBLESHOOTING

Inaccurate readings:

- Factors like alcohol consumption, stress, illness and irregular sleep patterns can all influence temperature readings. Take note of these and try to minimise them as much as possible.
- Ensure that you're taking your temperature at the same time every morning after at least 3 hours of consecutive sleep.
- If you consistently forget to take your temperature, it might be worth exploring a wearable device like TempDrop.

Difficulty detecting ovulation:

- If you can't identify ovulation through basal temperature and cervical mucus, then track additional signs such as cervical positioning, or use an ovulation predictor kit.
- It's possible that you may have experienced an anovulatory cycle. If this happens for 2 or more consecutive months then it's best to consult with a practitioner.

Irregular cycles, short luteal phase, missing period:

- If you notice any of these things, then it's important to consult with a healthcare practitioner to investigate potential hormone imbalances, PCOS or thyroid concerns.



06

IDENTIFY & ADDRESS UNDERLYING HEALTH CONCERNS

During this phase of your preconception journey, it's important for both partners to have a comprehensive health assessment to identify potential imbalances or health conditions that you may not be aware of. Start by booking an appointment with your doctor for a baseline health check and blood tests.

Doctors play a vital role in your fertility journey and are geared towards diagnosing and treating diseases. For this reason, they can sometimes overlook subtle imbalances that don't fall under the label of a disease but can still significantly affect your current or future health. This is where naturopathy excels, as naturopaths are geared towards a more holistic and functional approach. The aim is to identify and address any imbalances within your body before they progress to a diagnosable disease state.

BLOOD TESTS

Your doctor will likely send you for a preconception bundle of tests including blood type, STI's, infectious diseases, full blood count, liver and kidney function and cholesterol. Along with these tests, it's worth asking them to also include the following tests for a more thorough assessment. You may need to pay out of pocket for some of them.

RECOMMENDED FEMALE PATHOLOGY TESTS

- Full blood count
- Liver & kidney function
- Lipids
- Full thyroid panel including T4, T3 & antibodies
- Fasting glucose, insulin & HbA1c
- B12, folate & homocysteine
- Full iron studies
- Vitamin D
- Copper and zinc
- Female hormone panel (test on day 1-3 of your cycle)
- Oestrogen & progesterone (test 7 days before expected period)
- CRP

RECOMMENDED MALE PATHOLOGY TESTS

- Full blood count
- Liver & kidney function
- Lipids
- Full thyroid panel including T4, T3 & antibodies
- Fasting glucose, insulin & HbA1c
- B12 & folate
- Full iron studies
- Vitamin D
- Copper and zinc
- Male hormone panel
- Semen analysis
- Sperm DNA fragmentation
- Sperm antibodies

OPTIMAL RANGES

The standard lab ranges that doctors use are great for diagnosing disease, however they often don't take into account those more subtle imbalances. For this reason naturopaths use a separate set of reference ranges which are much narrower and more reflective of optimal health. On the next page you'll find a blood test cheat sheet with some of these ranges that you can compare your results with. If you find any results out of range or want a more comprehensive assessment, it's recommended that you work with a naturopath.

BLOOD TEST OPTIMAL RANGES

Marker	Optimal range	Marker	Optimal range
FSH	<10 IU/L (should be approx 1:1 with LH)	Fasting insulin	<8 mU/L
LH	<10 IU/L (should be approx 1:1 with FSH)	Fasting glucose	3.9-5.4 mmol/L
Estradiol (E2)	120-150 On day 3-4 350-500 7 days before menstruation	Vitamin D	>100 nmol/L
Progesterone (P4)	25-30 nmol/L 7 days before menstruation	Ferritin	30-100 ug/L
Total Testosterone	0.8-1.3 nmol/L	Vitamin B12 Active B12	>400 >100
TSH	1-2.5 IU/L	Folate	7-45 nmol/L
Free T4 Free T3	14-18 4-5 pmol/L	Homocysteine	5-8 umol/L

RECAP

The 6-month window before conception is the time to optimise your diet and lifestyle and achieve a baseline level of health. By following a Mediterranean diet, getting moderate exercise, managing stress and reducing your toxin load, you can build strong foundations for a healthy pregnancy. Learning how to track your cycles gives you a deeper understanding of your reproductive health and will help you to identify your fertile window when it's time to conceive. It's also important to have a comprehensive health assessment for both partners, so you have time to treat any potential health concerns.



Part 2 - Begin 3-4 months prior to conception

Once you've reached a foundational level of health, the next phase is all about optimising fertility, egg and sperm quality

01

OPTIMISING EGG & SPERM QUALITY



It takes 3-4 months for an ovarian follicle (egg) to fully mature before being released through ovulation. Sperm on the other hand take approximately 74-76 days to fully mature before being stored. So during this time, whatever you put into your body will influence the quality of your egg and sperm for better or for worse. During this time it's essential to minimise your environmental toxin exposure as much as you possibly can. You'll also want to prioritise certain foods, nutrients and supplements that have been shown to optimise egg and sperm quality.

NUTRIENTS TO PRIORITISE

Folate: Important for DNA synthesis, methylation, egg & sperm production. Adequate folate has been shown to reduce chromosomal abnormalities in eggs [10]. Increase leafy greens, chickpeas, lentils, wholegrains, avocado and fresh fruit.

Zinc: Involved in DNA synthesis, cell division and regulating hormone levels which are crucial for egg and sperm development. Prioritise poultry, beans, sunflower and pumpkin seeds, nuts, whole grains and dairy products.

Selenium: A powerful antioxidant that helps protect egg and sperm cells from oxidative damage caused by free radicals. It's also essential for sperm development and motility, as well as proper cell division during egg development and fertilisation. The best source of selenium is 3 brazil nuts daily. Other sources include fish, eggs and wholegrains.

Omega 3: Essential for cell membrane integrity and fluidity for egg cells. It also supports sperm motility and overall sperm count. The best source is oily fish such as sardines, salmon and trout, flaxseeds, walnuts, hempseeds and a fish or vegan algal oil supplement.

CoQ10: Involved in cellular energy production which is essential for sperm as they use a lot of energy to swim. Egg cells also require a lot of energy for maturation and fertilisation. CoQ10 is also a powerful antioxidant that protects egg and sperm against oxidative stress. CoQ10 is found in oily fish such as sardines and salmon, chicken, nuts and seeds.

Vitamin C: Another antioxidant nutrient that protect the egg and sperm against oxidative stress. It also helps with sperm motility, as well as collagen production to support ovarian health. Prioritise vitamin C-rich foods including citrus fruits, kiwi fruit, capsicum, berries, leafy greens and broccoli.

02

SUPPLEMENTS

DO I NEED A PRENATAL?

Think of your prenatal like an insurance policy. While it's important to eat a nutrient-dense diet, unfortunately, our soil quality isn't as nutrient-rich as it once was, and unless you are carefully planning every meal, it's very easy to lack essential nutrients. Your prenatal serves as a baseline to ensure that the essential nutrients required for optimal pregnancy outcomes and the health of the baby are covered. Beginning your prenatal as early as possible will ensure your nutrient stores are built up prior to pregnancy.

WHAT TO LOOK FOR IN A PRENATAL

- 30-40% of women cannot easily convert folic acid into the active form of folate due to a genetic variation called MTHFR. Opt for a prenatal with an active form of folate such as folinic acid, methyl folate or calcium folinate instead of folic acid.



- Choline is an essential nutrient for baby's brain and eye development and a quality prenatal should contain at least 250mg choline.
- Many prenatales found in chemists contain very small amounts of nutrients. You want at least 1000IU of vitamin D, 20-40mg B vitamins, 400 mcg B12 & 250 mcg iodine.
- Prenatales don't need iron & copper. If you are iron deficient you should be taking a separate iron supplement. Copper levels naturally rise in pregnancy & too much can impact mental health.

Other recommended supplements:

- DHA, a form of omega 3, is essential for the development of baby's nervous system, brain and eyes. Take at least 500mg DHA daily from fish oil or algal oil. Make sure you stop taking it at 37 weeks as their anti-inflammatory nature can lead to prolonged gestation.
- Taking a pregnancy-specific probiotic can prevent eczema and allergies in the baby and support mood, gut and vaginal health in the mother.
- Supplementing with at least 300mg magnesium daily can reduce the risk of pre-eclampsia, gestational diabetes, low birth weight & preterm labour.

- Iron needs go up quite significantly during pregnancy, so deficiency is common. Regularly test levels & supplement with a quality iron bisglycinate if necessary.
- Nutrients like zinc, CoQ10, vitamin C, selenium and vitamin D can also help to improve egg quality, however it's important to consult with your health practitioner before taking any new supplements, as quality and dosage are crucial.

Preconception multivitamin for men:

- A preconception multi for men can benefit fertility in a number of ways. Look for one that contains folate in the form of folinic acid, methyl folate or calcium folinate and B12 in the form of methylcobalamin or hydroxocobalamin.
- Ensure it also contains at least 200mg choline as well as selenium, zinc, CoQ10, vitamin D, A & E.
- These nutrients support healthy sperm count and motility, healthy DNA, and hormonal balance.

Practitioner Guidance:

- Self-prescribing supplements is not recommended because everyone has unique needs based on their bio-individuality. It's recommended that you consult with a naturopath or nutritionist and have a supplement protocol tailored to your unique needs.

03



THE TWO WEEK WAIT

The two-week wait between ovulation and menstruation can be excruciating when you are trying to conceive. It's important to stick to a daily routine such as going for a morning walk, eating a nourishing breakfast or taking some time to do deep breathing. Your routine is what anchors your nervous system and creates a sense of safety and calm. Refrain from any cardio or weights and instead opt for gentle movement like walking and yoga.

If things are not happening as quickly as you like, it's important to be patient. Some couples may conceive within the first few months, and others may take a little bit longer. Discuss any concerns that you may have with your doctor, fertility specialist or naturopath so they can support you through this often confusing and frustrating time.

FINAL WORDS

Navigating preconception and fertility can be an overwhelming experience, often filled with obstacles and uncertainty. It's important to be gentle with yourself and go at your own pace. While this guide is here to support your journey, remember that nobody is perfect.

Making significant diet and lifestyle changes is a lifelong journey, so go slow and focus on what's achievable for you. Embrace the process.



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