

WOMEN'S WORLD GUIDEBOOK



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INTRODUCTION

Well, well, well...what on earth is a man doing writing a load of information and advice for women specific topics?!

I did think about this as I was compiling everything I have done below. The truth is:

1. I am deeply fascinated by the female body

It is one of, if not the most, complex and intricate creations on the planet.

Much of my coaching expertise is around helping women in particular and the Coach James Club reflects this as it is largely made up of women.

Therefore, I feel as your coach it is my absolute duty, as well as my team's, to be up to date and familiar on as many female specific topics as we can, to ensure we give you the best service to help you not only reach your goals, but understand more about your body too

2. I have created this booklet with the help and input of a fantastic and highly experienced Nutritionist called Megan Hallett.

Megan is a fully qualified Nutritional Therapist and has been working in this space for six years.

You can check her out on Instagram @meganhallettnutrition. It has been a pleasure working with her and having her expert input into creating something that I hope will be of the utmost value to you.



Before I begin, I would like to make it very clear that the information in this booklet is not medical advice. With some of these topics, in particular PCOS, it is important you seek professional medical help if you are experiencing symptoms or you'd like to get checked out. As I have mentioned, it has been written by myself and Megan who specialises in female hormones so the information is as accurate as we could make it. If you do suffer from any medical problems it is always recommended to obtain a second opinion from a medical professional.

When it comes to taking supplements, it is always worth checking with your doctor beforehand whether there may be any reason as to why you may not be able to take said supplement.

And finally, I'd like to remind you that every woman is different. Your body will be different to the next woman's body, and so on. No two women are the same. For that reason, whilst we have tried to make the information in this booklet as accurate as possible, it is also taken from a "general" standpoint. If you want to take a deeper dive into your own body and its hormones, I would suggest seeking specialised help with a professional in that area.

Alright, now the formalities are over, let's dive into the good stuff!



YOUR MENSTRUAL CYCLE

As a woman, understanding your body better will give you more insight into how your lifestyle is impacting your health. The more in tune with your body you are, the easier it will be to navigate living a healthy lifestyle and the better informed you will be about making decisions that help your body run as best as it can.

A woman's hormones are complex and are quite often changing from day to day, month to month. Some women are very lucky and have a pretty regular hormone balance; other women are not so lucky and have to work much harder and endure a lot more in order to find out what is right for their body and what kinds of things they should be doing to ensure it's running optimally.

Your body will often never be perfect, you may never fully get to grips with it; in some respect, that's the beauty of the female anatomy, it's forever changing and will likely often challenge you. But if you can at least become more aware of your own body and lean into understanding it more, then you'll be in a much better position than the majority of women out there.

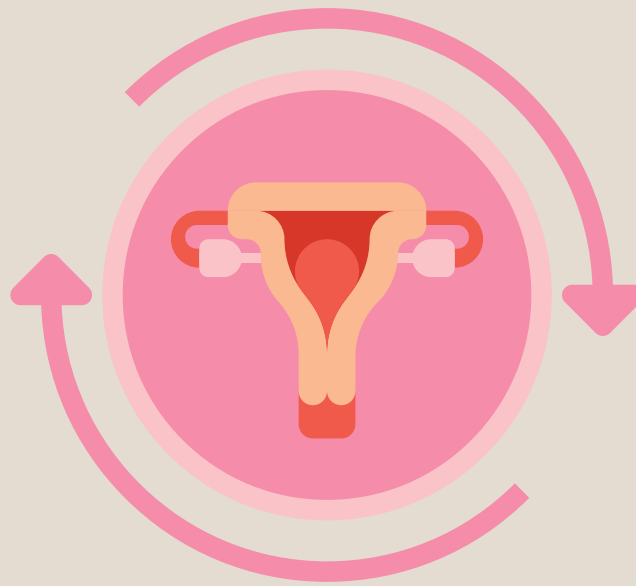
With this in mind, let's get started with something every single woman has in common and experiences each month: the menstrual cycle.



There are 3 main phases in a healthy period:

- The follicular phase (can last anywhere from 7 to 21 days)
- Ovulation (lasts one day)
- The luteal phase (usually lasts 10-16 days)

There is technically a fourth (menstruation) but we'll be looking at the above three in this case.



28 days is the average length of a cycle but generally speaking for a healthy adult a cycle can last between 21 and 35 days. It is worth highlighting that as a teenager, a cycle will be longer as the follicular phase can be as long as 32 days so a cycle can last between 21 and 45 days.

It is recommended to count day 1 as the first day of heavy bleeding in order to determine your cycle length. This also indicates the end of your last cycle. Your period (menstrual bleeding) should last anywhere between 2 and 7 days, with most women flowing for 3-5 days with 1-2 days of light spotting as it finishes.

Getting to know these different phases will give you an insight into why your training can often be affected by which stage you are in in your cycle. More of this later.

The Follicular Phase

This phase begins when a small number of follicles (usually 6-8) enter the final days of their race to ovulation. When your follicles enter the final stage of development, follicle stimulating hormone (FSH) pushes you closer to ovulation and stimulates your follicles to make oestrogen. When you're younger you have less FSH and this is why this phase is usually longer. When you are 40+ you have more FSH so your follicular phase is usually shorter.

These developing follicles release an important oestrogen called oestradiol. This is your happy hormone and it stimulates mood and libido because it works to help boost neurotransmitters like serotonin and dopamine. Oestradiol also contributes to the health of bones, muscles, brain, heart, skin and metabolism.

Ovulation:

One of oestradiol's main roles is to stimulate your uterine lining to grow and thicken to prepare for the possibility of a pregnancy. The more oestradiol you have the thicker your uterine lining will be and therefore the heavier your period will be. -

During this process, eventually one follicle will be dominant and swell and eventually rupture to release its egg. This is ovulation. The average day for ovulation is day 14.

After your egg is released, it goes into one of your fallopian tubes, where it can be fertilised if sperm is present. The other follicles that didn't make it are then reabsorbed by your ovary. Ovulation is clearly important for pregnancy, however it is also very important for the production of progesterone.

Luteal phase:

After ovulation occurs, you go into the luteal phase of your cycle. The release of progesterone helps to hold and nourish a pregnancy which is actually how it got its name. Progesterone also helps to reduce inflammation, calm the nervous system and promote sleep.

If you do not fall pregnant your corpus luteum (emptied follicles) has a life span of 10-16 days which is what defines your luteal phase. At the end of your luteal phase the corpus luteum shrinks and your progesterone drops. The stimulates your uterus to contract and shed its lining.

With enough progesterone your period should arrive smoothly with no spotting or pain. You should lose a total of 50ml of menstrual fluid over the days of your period. Less than 25ml is deemed a light flow and more than 80ml is deemed a heavy flow. Day 1 of your cycle is marked by the first day of heavy bleeding and also the end of your last cycle.



Birth Control

One thing that's important to note is that if you are on any kind of hormonal birth control you are effectively stopping your cycle. Another important point is that any bleed whilst on birth control is known as a withdrawal bleed and is not a period. In fact, often being on contraception can mask any underlying female health conditions like PCOS or endometriosis.

Birth control is a confusing and complicated world which I won't go into for this very reason. It is entirely your choice whether you take birth control and it's important you get the right medical advice with it, as there is a lot of conflicting information out there. With that in mind, I'd also recommend getting several opinions on it.

One thing that is for certain is when it comes to training around your cycle, it may play less of a role since you aren't having to work with the natural fluctuations of your hormones as birth control principally keeps your hormone level stable.

TRAINING AND YOUR CYCLE



Every single woman is unique and different when it comes to training and your cycle. Everyone has differing experiences so don't take this for gospel and think you need to change your training to fit these parameters. It is important you listen to your body as your main priority, especially as it might differ month to month, cycle to cycle. You will know best when to push hard and when to ease off so in that respect, listen to your body because often it is right and giving you signs for a reason. God really did make the female body a complicated thing eh, a thing of beauty, but bloody complicated!

It is worth noting though that lack of sleep or poor nutrition can't be filed under the bracket of "Oh well I must be in that phase of my cycle as I'm feeling tired with no energy and my coach tells me to take it easy then".

That cannot be your excuse for not taking care of yourself or arriving at your training session and you "can't be bothered" so you skip it. There is a big difference between not being bothered and genuinely experiencing hormonal imbalances/changes. You must dig deep and push on when you "can't be bothered"!

Right then, let's look at the science.

Week 1: Early follicular phase

The low hormone phase (when oestrogen and progesterone are low) is generally when you are primed to take on stress and adapt well to heavy training. In other words, it's a good time to do more intense workouts, lift heavy and take advantage of optimal recovery. Your body is also more primed to access carbohydrates better so take advantage and get those carbs in pre and post workout for that much needed fuel.

Week 2: Mid follicular phase (including ovulation)

Like the first week, keep the foot on the gas with the workouts. Around day 14 (ovulation) you've had a surge of oestrogen which is anabolic and therefore a good time for high intensity and heavy weight training. It goes without saying, whilst pushing your body to the limits, always train smart and safely. Just because you've had a surge of oestrogen, it doesn't quite come with actual superpowers.



Week 3: early Luteal phase

In this phase, oestrogen and progesterone start to rise as your body prepares the uterus for the chances of pregnancy. This is a good time to slightly take your foot off the gas and instil more moderate training and aerobic workouts. You can certainly still train with intent, lift weights and do cardio, but intensity wise it may be a good option to slightly reduce this. Within your body, immune system becomes more pro-inflammatory, stress resilience lowers and there is an increase in your sympathetic drive.

After ovulation, the body begins to rely more on blood glucose and fatty acids as oestrogen and progesterone reduce its ability to access muscle glycogen (this is carbohydrates stored in your body as energy). You want to keep carbohydrates on board as you almost need them more at this time to ensure you have a good supply given muscle glycogen is harder to access (more carbs yay). For this reason, you might feel a bit more heavy and slow in your workouts. During this time, as your body is in more of a breakdown state it's a great idea to ensure you are consuming 30-40g protein in every meal and post-exercise trying to consume this amount as soon as you can (within a 1-2 hour window is optimal, but not necessary).

Week 4: mid luteal phase

This stage is where women often experience PMS for those that may experience fluid shifts, cramping and bloating. Generally, this is a good time to take your foot off the gas and completely reduce the intensity of your training and use these last several days leading into your next period to recover and absorb the hard training you've done in the previous 2-3 weeks. Things like yoga, pilates, swimming, cycling and walking are good low impact forms of exercise to do. Technique work with your weight training can also be a good idea alongside lots of active stretching and flexibility work.



During the second half (luteal phase) your basal body temperature may increase which means when it comes to exercising in the heat or more humid environments, you may struggle more and performance can decrease as a result as you are more sensitive to the conditions. During this phase, it's important you're taking on lots of fluids (non-alcoholic cough cough) on board and plenty of electrolytes. These are great for replenishing key salts and nutrients as you may tend to be sweating more and keeping you fully hydrated.

Progesterone is also usually higher here which in turn increases your resting heart and breathing rate. It is very common at this stage with all of these changes happening in your body to feel like you're swimming against the tide and not making any progress. Rest assured you are, it may only be a little slower than usual. But it's important that you don't become impatient and go hard on yourself and you allow your body to slow down. Nurturing your body the way it is intended to be nurtured will mean that come the start of the next cycle your body will be prepped in the best way possible for your training.

And there you have it. If you use the knowledge of your own cycle patterns to your advantage and try to be in tune with your body as much as you can when you train, you will not only make greater progress, increase performance and hit PBs, but you will also enjoy your training a lot more.



PCOS

Polycystic Ovary Syndrome (PCOS) is defined as a group of symptoms related to a lack of ovulation and high levels of androgens (male hormones). There are variations to this definition but I want to keep things as easy for you to follow as possible.

It affects 1 in 10 women of childbearing age. The main symptoms are irregular periods (in particular later periods or too many days of bleeding), acne, hair loss, weight gain, skin tags, darkening of the skin, infertility and excessive facial and body hair.

All of these symptoms are unpleasant and unfortunately, there are longer-term health issues that come with PCOS. In this regard, it can be viewed as a whole-body hormonal condition.

Complications with areas such as blood pressure (women with PCOS are at risk of having high blood pressure for example), sleep apnoea, endometrial cancer risk, cholesterol levels and depression. Half of women with PCOS will have diabetes or be pre-diabetic before the age of 40.



How is PCOS tested?

Unfortunately, there isn't a single test to determine if you have PCOS or not. It is not a well defined disease but rather a group of symptoms. Usually a physical exam, ultrasound and blood tests can help with the diagnosis. It is important to note that healthcare professionals shouldn't be diagnosing PCOS without a blood test. It is possible for an individual to have polycystic ovaries, but not polycystic ovarian syndrome, whilst some with polycystic ovarian syndrome may not have polycystic ovaries. Blood tests, in addition to symptoms, really are needed to differentiate between the two.

Because there is currently no universal definition of PCOS, different expert groups use different criteria to diagnose the condition. However, all the groups look for the following three features and you need to meet 2 of the 3 to be diagnosed.

1. Irregular, heavy, or missed periods due to missed ovulation—the release of an egg from your ovaries. This also keeps you from becoming pregnant.
2. Signs of higher-than-normal levels of androgens—male hormones that women also have. They can cause unwanted hair growth, called hirsutism, on your face—especially the upper lip and on the chin, back, chest, and in other places where men typically grow hair. You might lose hair or see it thinning. We can detect those androgens in blood work.
3. Collections of 12 or more egg follicles or "cysts" on your ovaries that may be larger than normal. Your doctor will use an ultrasound to check for cysts. (Women who don't have PCOS may also have cysts, but fewer than 12 don't meet the criteria for a diagnosis.) Some women with PCOS may not have any cysts.

Once a diagnosis of PCOS has been confirmed there is no complete “cure” but there are many different steps you can take to manage the symptoms of PCOS.

Now there are conventional (medical) treatments that you can take to do with controlling hormones such as hormonal birth control, Spironolactone (suppresses androgens), Cyproterone acetate (anti-androgen drug), Metformin (diabetes drug) and Clomiphene (fertility drug). Surgery is also an option too. However, as a holistic health coach I always want to take the natural, non-medicine approach. In this case we shall focus on addressing insulin resistance (as one of the main drivers of PCOS) and reducing inflammation. A lot of this can be managed with lifestyle and diet:

The 3 key lifestyle factors that can help manage insulin sensitivity and alleviate symptoms of PCOS are:

- 1) Sleep: 7-8 hours of sleep each night should always be the priority. It only takes a small amount of sleep deprivation to increase insulin resistance which in turn will increase blood sugar levels.
- 2) Exercise: It is well established that acute exercise is associated with substantial improvement in insulin sensitivity. Exercise promotes weight loss which reverses the insulin resistance which is the characteristic of obesity. It reduces the morbidity and mortality associated with cardiovascular disease and diabetes, subsequently reducing insulin resistance. Studies have shown that 70 minutes of exercise at 50% VO2 peak increased insulin sensitivity by 35%. Resistance training can result in dramatic improvements in both insulin sensitivity and glucose uptake. So, even more reason to continue with your strength training programme!
- 3). Stress Management: Your stress hormones and insulin are closely linked, with one impacting the other. When you are stressed, blood sugar levels are impacted and when blood sugar levels are chronically elevated, your body views it as a form of stress. As a result, PCOS symptoms may worsen when you are under stress. There is a small percentage of those with PCOS whose condition isn't as deeply rooted in insulin resistance, but high adrenal androgens (testosterone-like hormones created in the adrenal glands). If this is the case for you, stress-management is paramount.



Diet is absolutely fundamental when it comes to regulating your hormones, menstrual cycle, and improving insulin sensitivity. Here are a number of things you can do:

1. **Eat whole foods:** whole foods provide sustained energy without big spikes in blood sugar. Wholemeal bread, brown rice, sweet potato, vegetables and animal products (fish, meat, dairy). Trying to stay away from ultra-processed foods such as white bread, biscuits, cake, sweets, soda drinks, crisps. These are get digested incredibly fast and can lead to big blood sugar spikes.
2. **Caloric deficit:** by burning more calories than you consume, or consuming less calories than you burn, and thereby losing body fat, you will also lower your blood glucose levels, enhance the way you body utilises insulin and enable your hormones to operate at normal levels. A lower body fat percentage can help improve your menstrual cycle and also increase the chances of becoming pregnant.
3. **Limit sugar consumption:** natural sugars are totally fine: sugar you find it fruit and vegetables for example. However, you want to try to limit the amount of added sugar you consume: candy, soda drinks, cereal bars etc. These kinds of foods contribute to spiking insulin levels.



4. **Consume lots of protein:** you want to aim for 1.5-2.2g protein per kg of bodyweight you weigh, or as an optimal amount 1g protein per lbs of bodyweight you weigh. There have been studies which have proven those who are on a high protein diet (around 40% calories coming from protein) lose more body fat than those who are on a normal protein diet (around 15% of calories coming from protein). Good protein sources include: meat, fish, eggs, dairy, tofu, beans and pulses. Supplementing protein is also a good option too, with whey protein being the most optimal.
5. **A diet high in fibre:** studies have proven that if a person consumes a diet high in fibre it can help lower insulin resistance and total body fat in women with PCOS. Fibre helps slow down digestion and therefore reduces the effect sugar has on the blood. Foods high in fibre include: wholegrains, nuts, seeds, oats, fruit and vegetables.
6. **Healthy fats:** for people with PCOS, healthy fats (omega-3) are vital. They reduce inflammation, blood pressure and they improve triglycerides and insulin levels. The best source is in the form of fish oil e.g. salmon. Nuts and seeds are also a good option.
7. **Probiotic foods:** gut health is extremely important when it comes to improving PCOS symptoms. Women with PCOS may have less healthy gut bacteria than women without PCOS so for that reason consuming foods like yoghurt and kefir can be very beneficial for your gut health.
8. **Gluten and dairy intake:** You may have noticed that there is a lot of noise around those with PCOS needing to omit gluten and dairy. The fact of the matter is there is no research indicating that giving up gluten and dairy will magically reverse PCOS. That doesn't mean that it won't be beneficial for some, it just means that you don't need to fear certain foods without reason. There is some research around the protein A1 casein in cow's milk increasing oil production and inflammation, therefore triggering breakouts in those prone to acne, but this may not be the case for everyone and different dairy products contain differing amounts of this protein. Again, it's very individual and if you suspect you are sensitive - remove and observe symptoms.

Alongside a healthy diet, there are also some supplements you can take to help alleviate symptoms:



1. Magnesium: the Godfather (or mother!) of supplements. Studies have shown that 45% of Americans are deficient in magnesium. This is something I supplement every day and it has done wonders for me. But for people with PCOS specifically, food sources are not enough so supplementing is certainly recommended. There are many different types of magnesium but I recommend Magnesium Glycinate and it is easily absorbed and doesn't cause digestive upset.
2. Zinc: a deficiency in this nutrient is associated with a higher risk of PCOS as it's involved in keeping a healthy ovary function alongside helping reduce inflammation and regulates the stress response. The recommended intake if you are supplementing Zinc is around 30mg per day and it's best to take it with a meal.
3. Vitamin D: generally promotes a healthy development of ovarian follicles and also improves insulin sensitivity. Vitamin D is good to supplement generally from the colder, darker months of the year (typically October – March), but if you can get morning and evening sunlight as much as you can this will also help keep Vitamin D levels healthy. It can be wise to test your vitamin D levels every now and then to help you determine the exact dosage you opt for. This can be done with health care professional or via an at home test.
- 4). Omega-3: Omega-3, is an essential fatty acid, as as stated above, is found in oily fish in its most useable form. Of course, you can get adequate amounts by consuming oily fish 3 times per week or so, however, if this isn't feasible, opt for an omega-3 supplement containing both EPA and DHA. Omega-3 is anti-inflammatory, making it a great staple nutrient for those with PCOS and may help to reduce symptoms such as acne and hair loss, and support mental health.
- 5). Inositol: Inositol is a nutrient similar in structure to the family of B vitamins. Inositol is a very well-researched supplement, specially in those with PCOS. It increases insulin sensitivity, which in turn, may help to reduce androgenic symptoms such as acne and hair growth, as well as assist weight loss/management. It can also help to regulate ovulation and therefore a great option if you are struggling with irregular cycles. Opt for a combination of myo-inositol and D-chiro inositol.

You have come to the end of what I hope has been a useful guide surrounding some key topics when it comes to women's health and understanding all the intricacies and the nuances around the menstrual cycle, your training with it and also PCOS.

I have done my very best with the help of the brilliant Megan to cover as much detail as possible around these topics in order to help you further succeed with your own health journeys.

This guidebook will be here for you to refer back to whenever you like so please use it as you wish.

Ass always, if you have any questions, please message myself and the team in the app and we will do our best to help you.

Your coach,
James.

