



LIVING IN HARMONY WITH  
YOUR HORMONES:

AN OPERATING MANUAL  
FOR THE CYCLING WOMAN

## About the author

A native of the Pacific Northwest, Beth grew up with a love for playing outdoors and eating fresh, locally grown foods. This upbringing ultimately led her into a nutrition therapy program and to start her nutrition therapy practice. She is the owner and sole practitioner of **Well Nourished LLC**. She specializes in female hormonal health, specifically optimizing the menstrual cycle's hormonal changes. "My goal is to nourish the whole person using a comprehensive approach focusing on food, movement, sleep, lifestyle, and stress resiliency to help you thrive."



Well Nourished



“A TEACHER AT HEART, I THRIVE IN HELPING MY CLIENTS UNDERSTAND THE NATURE OF THEIR CONDITION AND HOW DAILY LIFESTYLE CHOICES CAN DRASTICALLY IMPROVE THEIR QUALITY OF LIFE. ”

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Welcome!

This e-book is all about the female cycle! We will explore what impacts our sex hormones, the power of specific food choices in supporting and realigning our bodies, and the environmental factors that affect us.

*Beth, with Well Nourished*

# Chapter 1

## Getting to know Your Cycle

Unfortunately, the topic of the female cycle has been taboo and touted with embarrassment and shame for centuries. I want to remove some outdated stigma and start a conversation to help empower women to take control of their hormonal health and thrive!

Very few women seem to know the details of their cycle, and even fewer know the accurate vocabulary to communicate their needs, especially during dysfunction. Let's look at some language every woman should know and be comfortable using.



# Vocab Lesson

## Part 1

**Corpus luteum** - the casing of the follicle after the egg is released during ovulation.

**Endometrium** - the lining of the uterus that gets shed with each bleed.

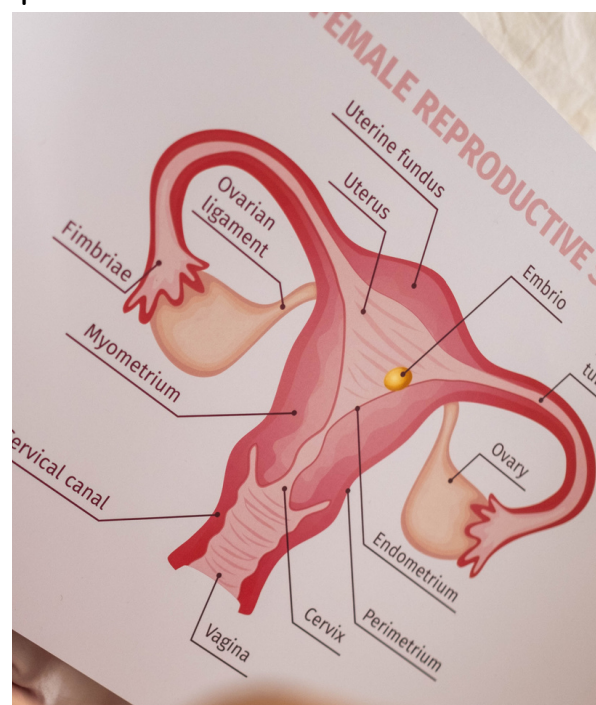
**Follicle** - located in the ovaries - capsules that each contain one oocyte (immature egg cell) - Each month, one follicle matures and generates a secondary oocyte or mature egg to be ovulated (released)

**Ovaries** - paired organs that produce eggs to be released for fertilization

**Ovulation** - the release of an egg from an ovary during the menstrual cycle

The following five hormones work together to support and regulate the three phases of the menstrual cycle. (Follicular phase, ovulation, and the luteal phase)

- **Estrogen** - produced in the ovaries during reproductive years (adrenal glands after) and promotes the development of the uterine lining.
- **Follicle-stimulating hormone (FSH)** - produced by the anterior pituitary gland and promotes follicular growth in the ovaries.
- **Gonadotropin-releasing hormone (GnRH)** - secreted from the hypothalamus and initiates the monthly cycle. In the reproductive years, GnRH is released in response to estrogen and progesterone in the blood.
- **Luteinizing hormone (LH)** - produced by the anterior pituitary and stimulates ovulation.
- **Progesterone** is produced by the corpus luteum and prepares and holds the endometrial lining in place.



# Period Myths

## Part 2



Bloating, mood swings and acne OH MY!

In part 2, we will be covering five myths about our cycle. While these symptoms may be common, they are by no means normal or healthy. Let's take a closer look.

### Myth #1

Everyone gets PMS (premenstrual syndrome)

Many women have some form of PMS, including but not limited to bloating, mood swings, acne, sugar cravings, and weight gain. These are simply a sign of estrogen and progesterone imbalances during the luteal phase and can be rebalanced through targeted support.

### Myth #2

Cramps just come with the territory

While some contracting occurs when the uterus is shedding its lining, an overproduction of a specific prostaglandin can cause painful menstrual cramps. There are additional antispasmodic prostaglandins that help reduce excessive menstrual cramping.<sup>1</sup> Our diet can drastically affect the intensity of cramping.<sup>2</sup>

# Period Myths

## Myth #3

**It's OK not to have a period** - Heck no! The lack of a period is a biological symptom of imbalance or distress in the body. Healthy levels of estrogen and progesterone are appreciated far beyond our reproductive system and provide lifelong benefits to the brain, cardiovascular system, bone health, and much more.

## Myth #4

**Heavy bleeding or spotting is normal** - Nope, these are not “normal” and are a sign of hormonal imbalance, specifically too much or too little estrogen. We need to listen to how the body communicates its needs, which is loud and clear. Using a therapeutic diet, exercise, and targeted supplements, in as little as one cycle, we can support our hormones and influence the quality of the cycle.

## Myth #5

**The Pill regulates our cycle** - You may have been told that the Pill helps regulate your cycle. This has been a common practice among many practitioners for decades. Unfortunately, the Pill overrides the “brain-ovarian” line of communication and stops your body from making its estrogen and progesterone. Read more below in the [Birth Control section](#).





# The Menstrual Cycle

## Part 3

“ Along with heart rate, respiration, blood pressure, and temperature, our cycle is considered the 5th vital sign for women once we are of reproductive age. ”

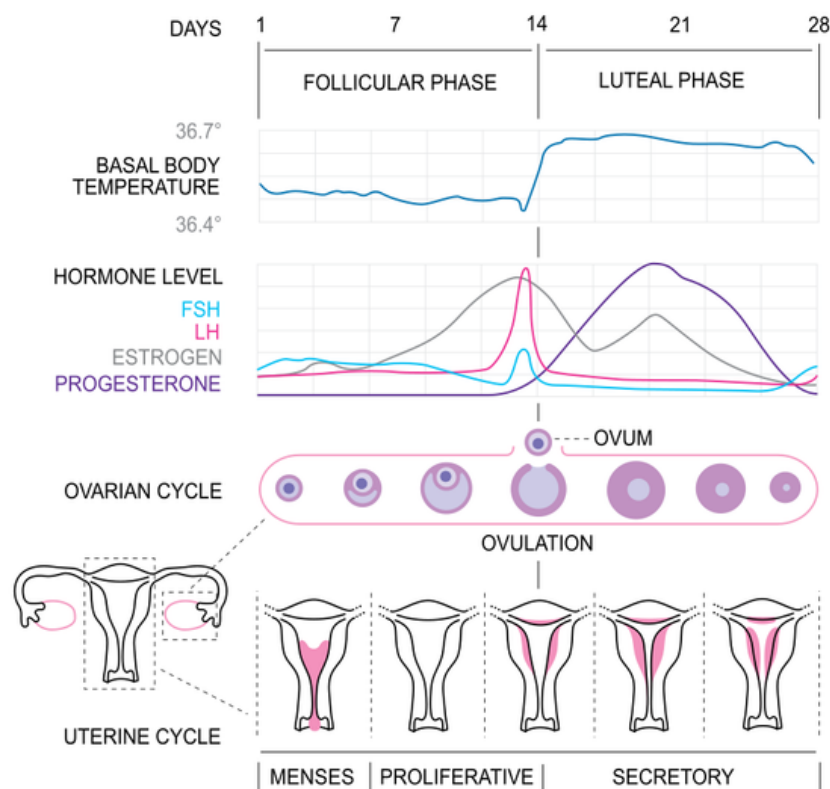
If you want to evaluate your health, take a look at your cycle. Many pieces of this puzzle speak to the underlying health of our hormones, such as cycle length, color, PMS symptoms, and more. Along with heart rate, respiration, blood pressure, and temperature, our cycle is considered the 5th vital sign for women once they have reached their reproductive years. Let's review what a "typical" cycle looks like.



# Intro to ovarian hormones

Let's look at the primary female sex hormones that influence our cycle. Made from cholesterol, estrogen and progesterone are the main hormones produced in the ovaries during childbearing years. However, once menopause hits, the adrenal glands

become the site of production for both estrogen and progesterone. Imbalances of these two hormones can cause many menstrual and uterine dysfunctions. The timing and fluctuations of hormone levels and their relationship to one another contribute to the health of our cycle and our entire system.



1. By Isometrik - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=8703107>

A “normal” cycle lasts between 21-35 days (28 being the average) and can be considered normal and healthy anywhere in that range. Outside that window (21-35 days) can indicate anovulation (lack of ovulation) even though you might still have a bleed phase. For the sake of this ebook, I will be using a 28-day cycle, and day one will be the first day of the bleed phase.

The bleed phase or menstruation is the accumulation of effects from the previous hormone cycle and should be considered the last phase. In the teenage years, the follicular phase can be as long as 32 days, but the luteal phase is the same, between 10-16 days.<sup>3</sup>

# The Phases of the Menstrual Cycle

Luteal Phase

Follicular Phase

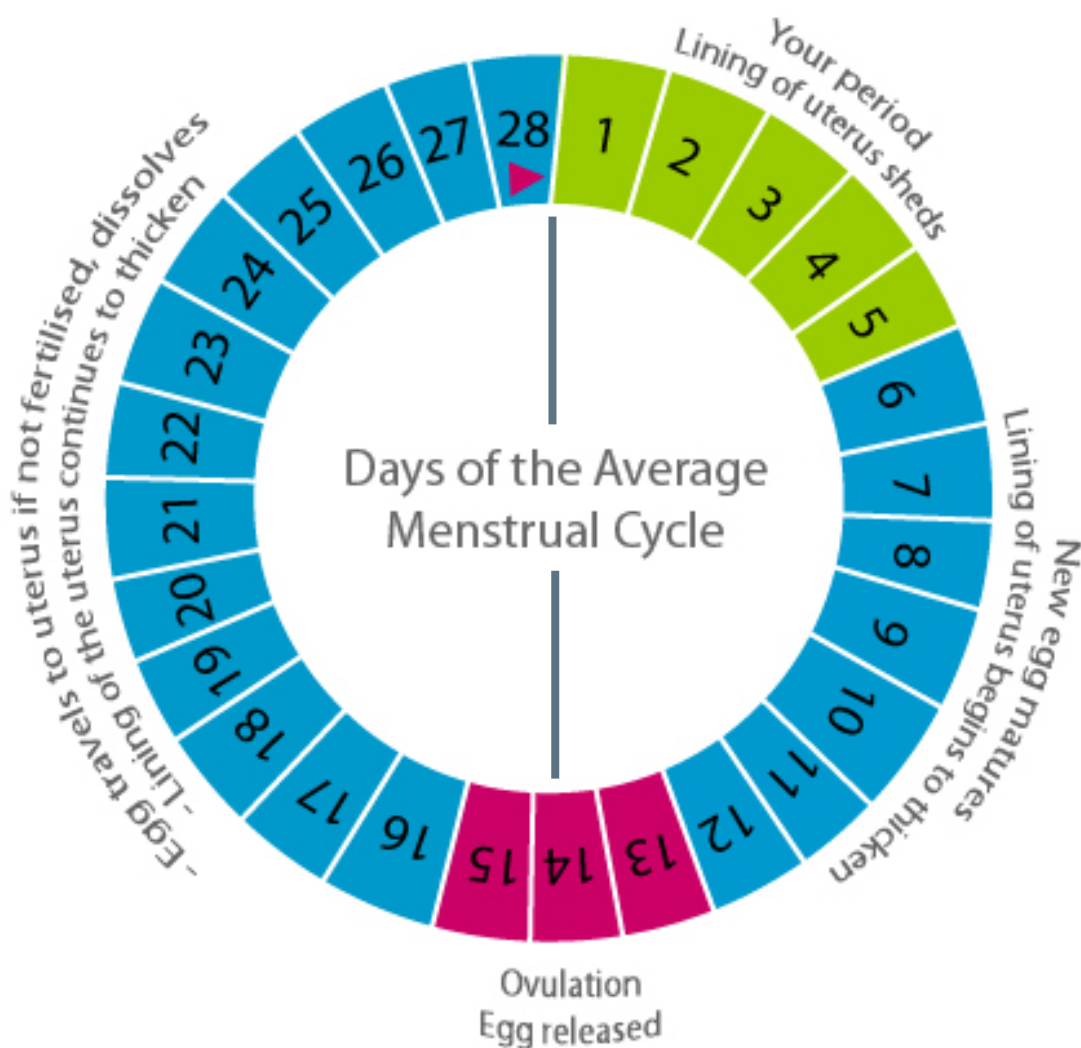


Image complements of Crea Conception <http://www.creaconceptions.com/conception.php>

This is a 28-chart demonstrating the menstrual cycle phases with approximate days for each phase.

## Phase 1

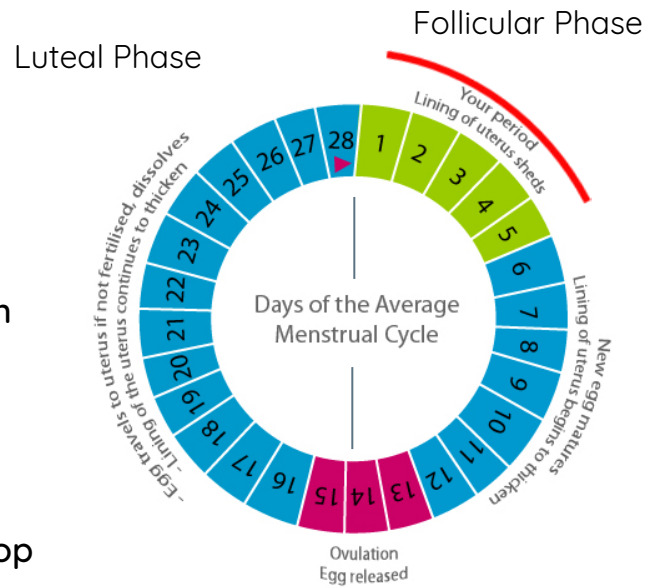
### Menstrual Phase: day 1 -5 or so

#### Duration 3-5-ish days

The average blood loss is 35-150 ml or 2-10 tablespoons, which translates to 8 or fewer soaked tampons/pads daily with no more than two heavy days.

This is technically the early follicular phase. Progesterone production drops as the corpus luteum gets reabsorbed into the body. This drop in progesterone triggers the uterus to shed the endometrial lining, and the menstruation phase begins.

The consistency, color, and duration of our menstrual period is a powerful sign of our hormonal health and provides a wealth of information.



<http://www.creaconceptions.com/conception.php>



## Phase 1

### The Follicular Phase (first day of your bleed until ovulation)

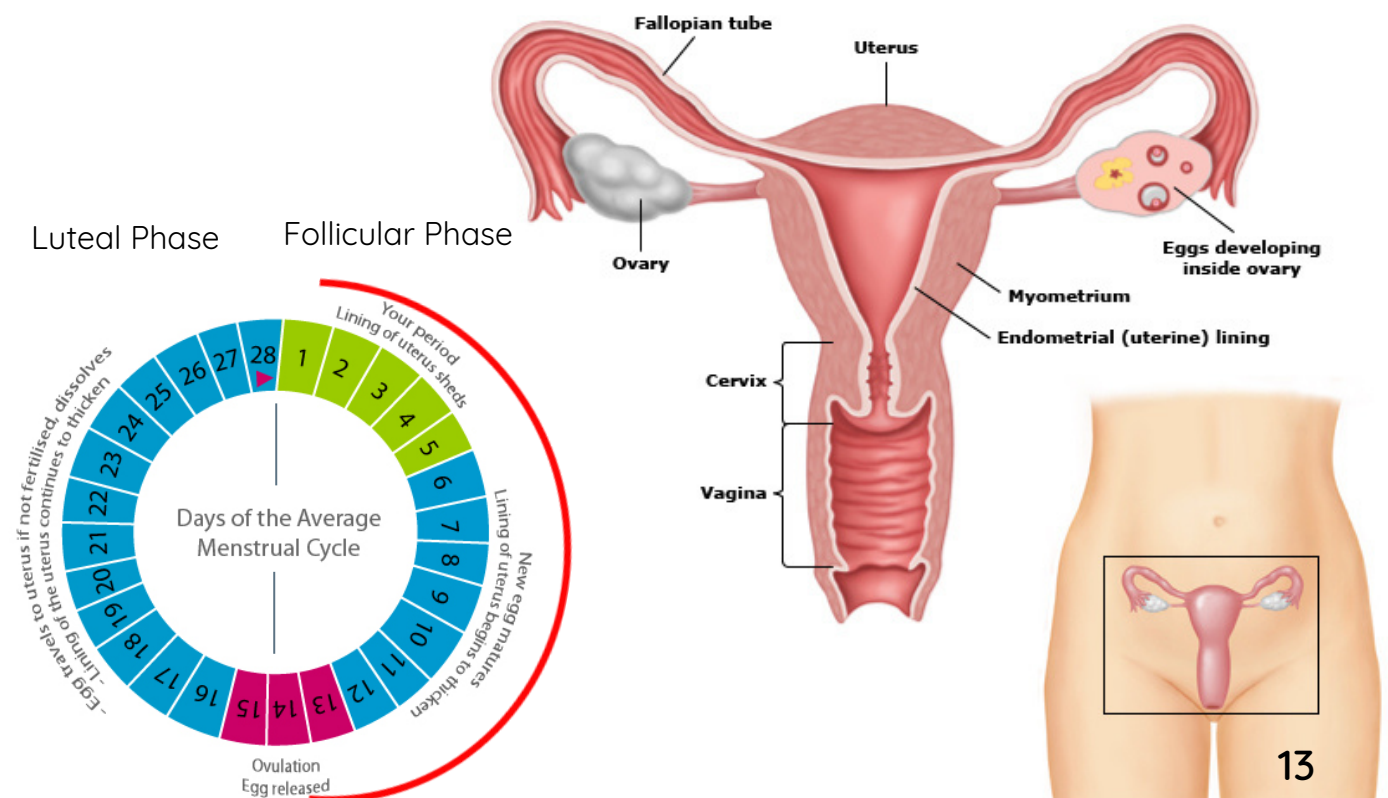
**Duration** 7-14 days - this can be shorter or considerably longer

This phase spans the first day of the menstrual cycle to ovulation. The follicular phase is the final "race to the finish line." Approximately 6-8 follicles are maturing and getting closer to one follicle reaching ovulation.

At this point, the hypothalamus, in the brain, signals the pituitary to shuttle follicle-stimulating hormone (FSH) to the ovaries to help the follicles make estrogen. As estrogen levels rise, the uterine lining, or endometrium, begins to regenerate (also referred to as the proliferation phase) and thickens to provide the perfect environment for an egg to live if fertilization takes place.

FSH is lower when we are young, so the follicular phase will be longer. However, we have more FSH as we age, so our follicular phase will be shorter.

Rising estrogen concentrations paired with minimal progesterone levels continue to stimulate the release of gonadotropin-releasing hormones (GnRH) from the hypothalamus and FSH and luteinizing hormones (LH) from the pituitary gland. Rising LH stimulates the release of an egg from the matured follicle.

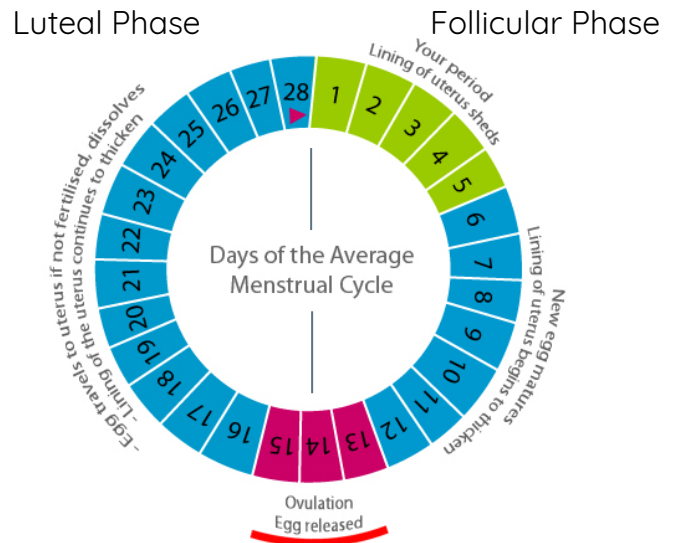


## Phase 2

### Ovulatory Phase - Days 14-17 generally

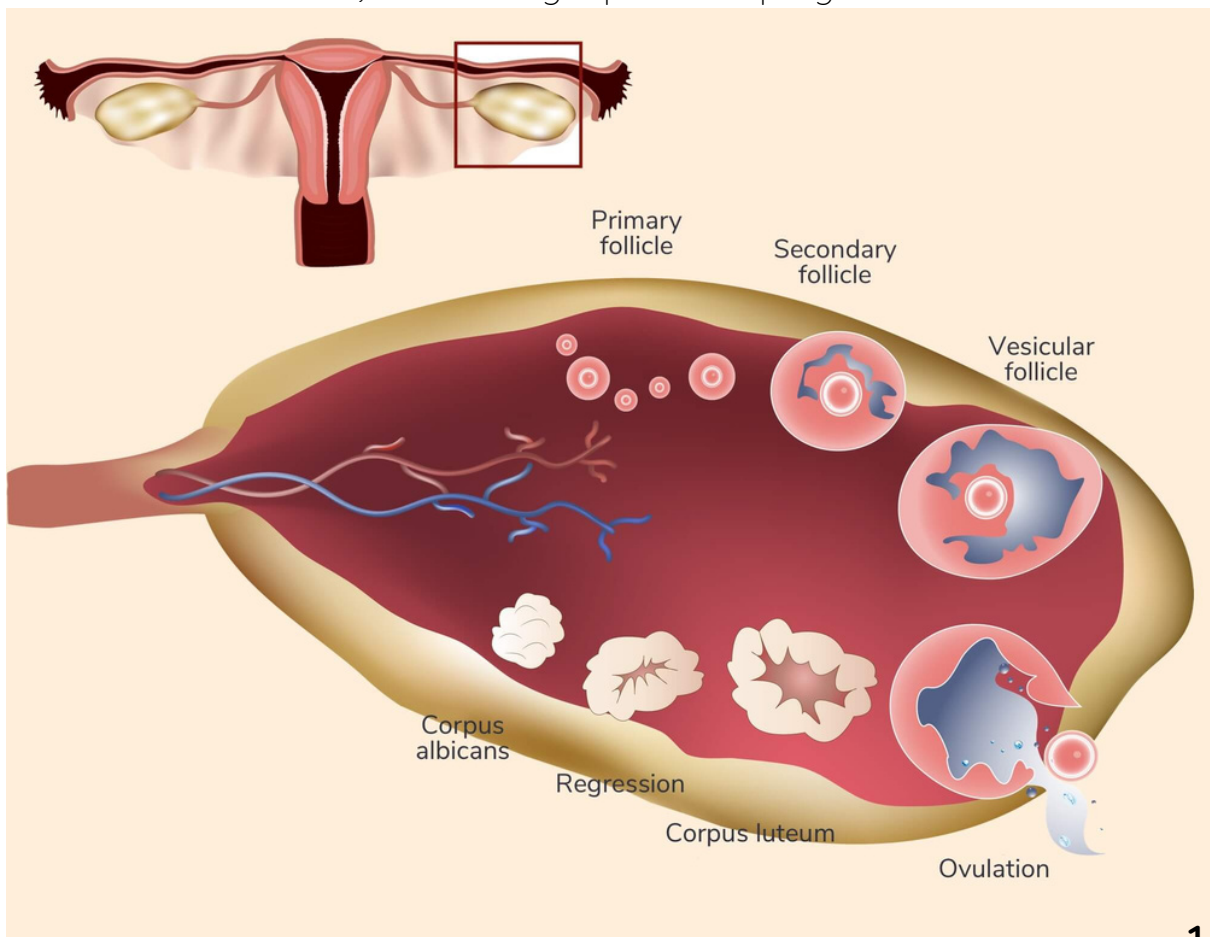
Duration 3 day window but ovulation takes place in one day

A spike in LH and estrogen stimulates one follicle to mature completely and be released into the fallopian tube, which travels to the uterus. At this point, the uterine lining is fully formed. There is also a sharp rise, then rapid fall, in testosterone during this phase.



<http://www.creaconceptions.com/conception.php>

Below is a lifecycle of a primary follicle through the progesterone-producing corpus luteum that ultimately gets broken down, renamed the corpus albicans, and no longer produces progesterone.



### Phase 3

#### Luteal Phase: Days 14 - 28 generally

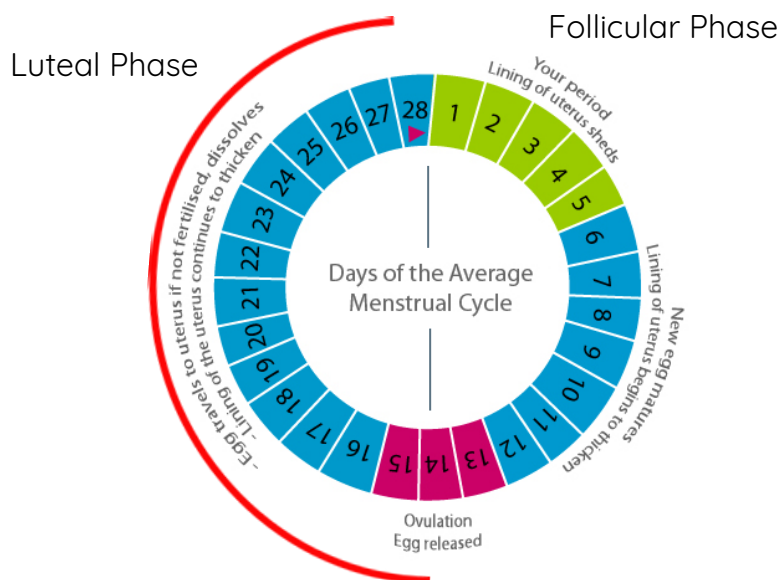
Duration: 10 - 14 days

Once the follicle releases the egg, the follicle is now called the corpus luteum. While in the ovaries, the corpus luteum is the primary producer of progesterone and small amounts of estrogen.

Estrogen levels continue a more minor but significant rise to boost the growth of the uterine lining further. The increase in progesterone signals the body to keep the thickened lining in place in anticipation of a fertilized egg. The rise in progesterone also signals the pituitary gland to stop releasing FSH and LH.

The corpus luteum is reabsorbed into the body if the egg has not been fertilized. Estrogen, progesterone, and testosterone will reach their peak concentration and begin to fall to their lowest levels right before menstruation begins.

If there are symptoms of PMS, it is due to relative estrogen dominance, where estrogen levels are too high compared to progesterone levels.



<http://www.creaconceptions.com/conception.php>

“Hormone balance means having the appropriate levels of hormones at the appropriate times.”

# Chapter 2

## Becoming One with your Cycle

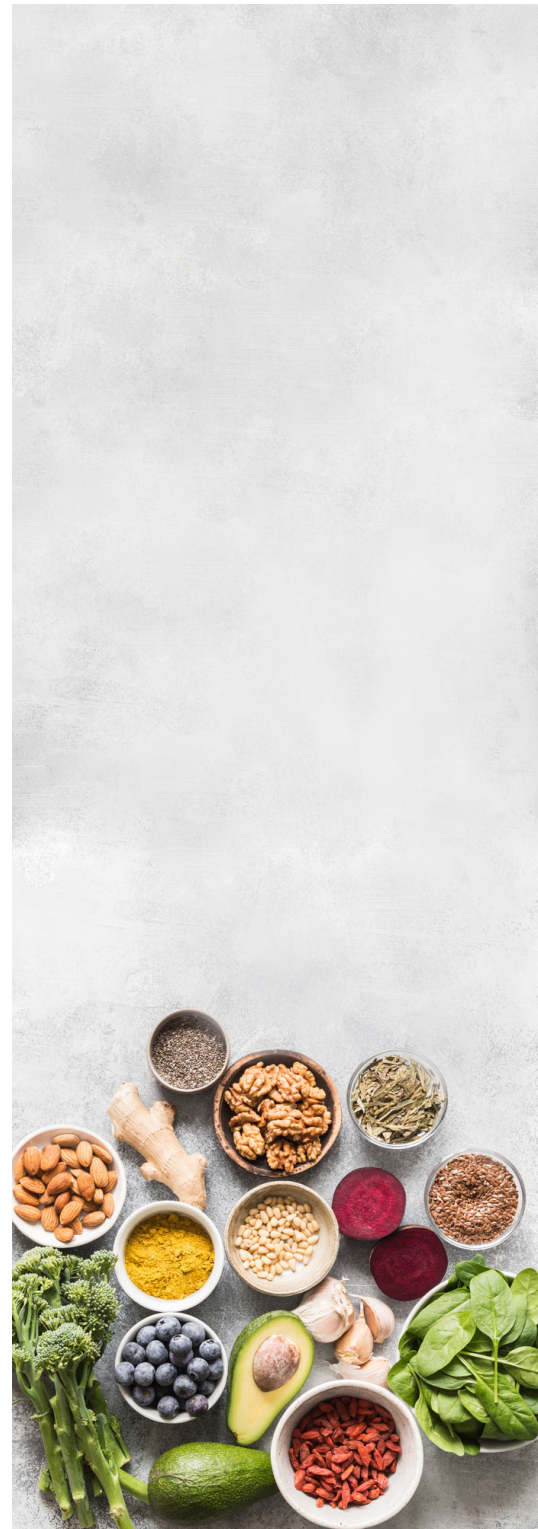
### Nutrition

#### Part 1

Knowing the intricacies of our cycle can be very powerful. Food and lifestyle play a significant role in our hormonal symphony. This section will examine these two influences and how they can realign our system.

By making food and lifestyle choices in alignment with each phase of our cycle, we can thrive at a whole new level. There are ways to support and elevate our system in each phase. We will be diving deeper into this in chapter 2.

Let's look at food during our cycle and see how to optimize our choice with varying hormone levels.





## Menstruation: Days 1-5

A happy medium between paleo/keto/grain free

Our hormone levels are at their lowest during this phase, and our body temperature also drops. Great choices to support this phase are warming foods such as healthy fats like avocado, olive oil, coconut milk, coconut oil, butter, and pastured meats. Sea vegetables are also helpful to remineralize our bodies at this time. Antioxidant-rich, brightly colored veggies and fruits help combat prostaglandin synthesis and support antioxidant status to support this phase. If you are not already grain free, this is a great time to try a few days without grains. Your metabolism is slightly lower, and you don't require extra carbs like later in your cycle.



During this time, our body needs to rest and be nourished. As we go through the menstruation phase, our body sheds blood, vaginal fluid, and uterine endometrial lining cells while dumping iron. If you are iron deficient, iron-rich food is especially therapeutic at this time. A high-quality iron supplement may be necessary if you are vegan or vegetarian. Getting enough iron from plants is challenging if you are already deficient.

**Power foods:** avocado, olive oil, pastured red meat, spaghetti squash, blueberries, concord grapes, beets, seaweed, kelp



**A few words regarding gluten and grains, processed foods, sugar, and alcohol...**

Gluten, unfortunately, poses many issues for many people. You should avoid gluten altogether if you have celiac or are simply sensitive. Even if you are not allergic or reactive, gluten degrades the proteins that hold the cells in the intestines tightly together and contributes to a leaky gut, which is a problem for many individuals. I generally advise people to either be gluten-free or consume gluten sparingly.

Grains - Grains can be pesticide-laden and pose estrogen-mimicking qualities, which can negatively impact our cycle (read more in the endocrine disruptors section below). In addition, the most nutrient-dense options are choosing organic and ideally sprouted grains that are minimally processed.

As you can imagine, highly processed foods, added sugars, and alcohol are also problematic for healthy hormones. Try to limit or eliminate these items if possible.

## **Follicular Phase (post bleed)**

### **Days 6-14**

**Think paleo-ish**

Our hormones remain low at the beginning of this phase until we near ovulation. This is an excellent time to add food containing phytoestrogens (plant-based compounds that mimic our body's natural estrogens), including fermented soy (tempeh, miso) and flaxseed to help balance estrogen levels. However, you would not want to eat these during the ovulatory or luteal phases, when your estrogen usually is higher.

In addition, probiotic-rich foods like sauerkraut, kimchi, probiotic olives, and veggies help balance the gut microbiome and support the estrobolom - the bacteria in the gut capable of metabolizing estrogen.

Due to a suppressed appetite in this phase, you can handle fewer calories and might see slight weight decreases.

**Power Foods:** Carrot, lettuce, rhubarb, zucchini, artichoke, flaxseeds, pumpkin seeds, sauerkraut, citrus, avocado, sour cherry, pomegranate

## **Ovulatory Phase: Days 14-16**

**Think animal protein and raw veggies**

Raw veggies, fiber, and nutrients that support the liver and digestive tract are essential through the luteal phase. These will help our body metabolize excess estrogen and aid in the excretion process through the stool.

**Power Foods:** Brussels sprouts, swiss chard, spinach, asparagus, tomato, scallions, persimmon, raspberries, strawberries, apricot, salmon, shrimp, red lentils, lamb



## Luteal Phase: Days 14-28

Think of a well-rounded whole foods diet with a focus on cruciferous veggies

As mentioned above, the luteal phase is a time to focus on detoxification support. Veggies from the cruciferous family are recommended. Animal protein is also an essential part of liver and detoxification support. Focus on sourcing from organic, grass-fed dealers for the cleanest options.

Foods rich in B vitamins are essential and can help relieve sugar cravings. Animal products, especially liver, seafood, poultry, and dark leafy greens, are great sources of B vitamins.

Due to the increased demands during this phase, slow-burning carbs are power foods. An additional 207 calories a day are needed. <sup>4</sup>

**Power Foods:** Cauliflower, broccoli sprouts, broccoli, cabbage, radish, onion, winter squash, sweet potatoes, parsnip, garlic, ginger, brown rice, slow-cooking oats, chickpea, navy, great northern beans, cod, halibut, mint, spirulina, beef, turkey, chicken



Broccoli sprouts are the diet's highest source of DIM (a metabolite of indole-3-carbinol). DIM is a phytonutrient found in cruciferous veggies, which is a powerful stimulant of detoxification enzymes in the liver and gut. <sup>1</sup>

Each chart provides phase-specific power foods  
(Click individual charts to enlarge)

### MENSTRUAL Power foods Days 1-5

ADD THESE FOODS IN DURING THE MENSTRUAL PHASE TO LIVE IN HARMONY WITH YOUR HORMONES

- MEAT AND SEA FOOD**
  - Flathead red snout, lean pork, duck
  - Shrimp, oysters, sardines, lobster
  - Duck and Pork
- VEGGIES**
  - Leafy greens, seaweed, kelp
  - Zucchini, summer squash, spaghetti squash
  - Yellow, orange, and red peppers
  - Beets
- FRUITS**
  - Avocado, blueberries
  - Concord grapes, cranberries
  - Lemon, lime, grapefruit, clementine
- LEGUMES**
  - Azuki
  - Black Soybeans
  - Black turtle
- GRAINS**
  - Buckwheat
  - Wild rice
- NUTS AND SEEDS**
  - Walnut
  - Chickpeas
  - Flax
  - Pumpkin
- OTHER**
  - Miso
  - Goat coffee
  - Hot respiratory leaf tea, herbal
  - Turmeric, cinnamon

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### FOLLICULAR Power foods Days 6-14

ADD THESE FOODS IN DURING THE FOLLICULAR PHASE TO LIVE IN HARMONY WITH YOUR HORMONES

- MEAT AND SEA FOOD**
  - Chicken, eggs
  - Tuna
  - Soft shell crab
  - Fresh water clam
- VEGGIES**
  - Artichoke, fufu bean, string bean
  - Broccoli, sweetpot
  - Cornish
  - Parsley
- FRUITS**
  - Avocado
  - Lemon, lime, grapefruit, orange
  - Pine, pomegranate
  - Sour cherry
- LEGUMES**
  - Black-eyed pea
  - Green lentils
  - Mung bean
  - Night pea
- GRAINS**
  - Oats
- NUTS AND SEEDS**
  - Walnut
  - Black seed, cashew
  - Flax
  - Pumpkin
- OTHER**
  - Sunflower
  - Probiotic olive and vinegar
  - Nettle

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### OVULATORY Power foods Days 14-16

ADD THESE FOODS IN DURING THE OVULATORY PHASE TO LIVE IN HARMONY WITH YOUR HORMONES

- MEAT AND SEA FOOD**
  - Salmon
  - Shrimp
  - Tuna (limited quantities)
  - Lamb
- VEGGIES**
  - Broccoli sprouts, asparagus, dandelion, red bell pepper
  - Brussels sprouts, endive, escarole
  - Chard, spinach, choy, eggplant
  - Scallops, chives, dill
- FRUITS**
  - Tomato, persimmon
  - Apricot, Cantaloupe
  - Coconut
  - Raspberries, Strawberries
- LEGUMES**
  - Red lentils
- GRAINS**
  - Amaranth
  - Quinoa
- NUTS AND SEEDS**
  - Almond
  - Walnut
  - Potatoes
- OTHER**
  - Respiratory leaf
  - Nettle

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### LUTEAL Power foods Days 16-28

ADD THESE FOODS IN DURING THE LUTEAL PHASE TO LIVE IN HARMONY WITH YOUR HORMONES

- MEAT AND SEA FOOD**
  - Goat, Rabbit, Turkey
  - Flattened ribs, beef, turkey, chicken
  - Liver
- VEGGIES**
  - White mushrooms, broccoli sprouts, broccoli
  - Cabbage, cauliflower, carrots, mustard greens, celery
  - Cooked radish, garlic, leeks, onion
  - Winter squash, sweet potato, parsnip
- FRUITS**
  - Apple, Pear
  - Quince
  - Peach, Banana (greening)
  - Rice
- LEGUMES**
  - Chickpeas
  - Great Northern bean
  - Pink bean
- GRAINS**
  - Black rice
  - Slow cooking oats
  - Millet
- NUTS AND SEEDS**
  - Almond, walnut
  - Moring seed
  - Beetle seed
  - Sunflower seeds
- OTHER**
  - Peppercorn
  - Caper
  - Sage
  - Burdock root

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# Seed Cycling

Seed Cycling is the practice of consuming certain seeds at certain times in your cycle to help regulate and support estrogen and progesterone levels.

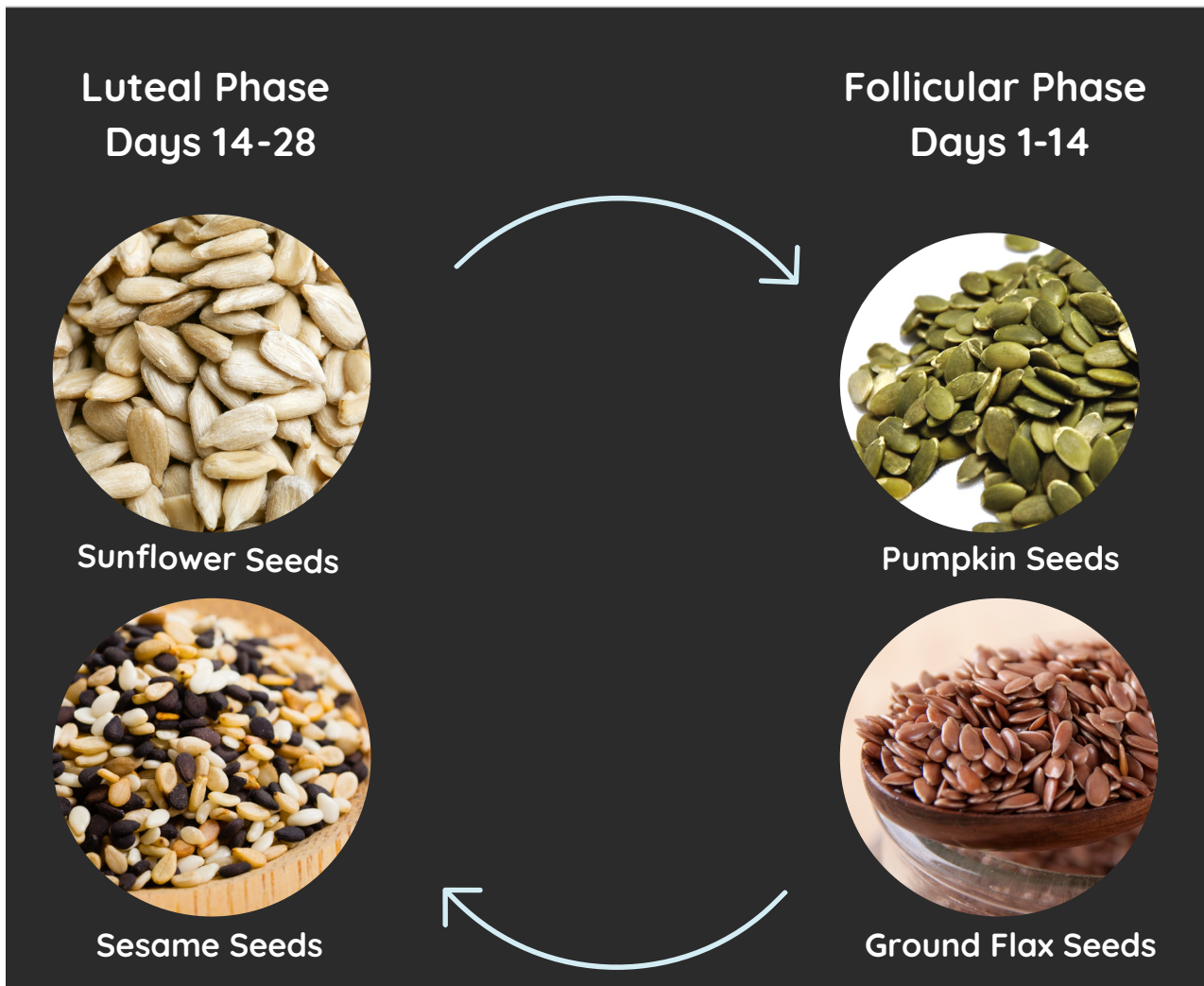
This practice also increases essential fatty acid intake to help regulate androgen levels.<sup>5</sup> In addition, these seeds are helpful in binding and eliminating excess metabolized hormones. Continue this practice for at least three months to see the benefits.

## Follicular Phase Day 1-14

Consume 1-2 tablespoons of ground flax seeds and pumpkin seeds daily in the first phase to support estrogen levels. Keep flax in an air-tight container in the freezer to prevent rancidity.

## Luteal Phase Day 14-28

During this phase, consume 1-2 tablespoons of sesame and sunflower seeds to support progesterone levels.



Each smoothie template offers phase-specific food suggestions and servings sizes  
 (Click individual templates to enlarge)

**MENSTRUAL PHASE SMOOTHIE** DAYS 1-5

- Liquid:** Water, Almond milk, Hazelnut milk, Hemp milk, Coconut milk, Whole cow's milk, Whole goat's milk (1 cup)
- Fruit:** Blackberry, Blueberry, Concord grape, Cranberry, Cinnamon

**FOLLICULAR PHASE SMOOTHIE** DAYS 6-14

- Liquid:** Water, Almond milk
- Fruit:** Avocado
- Veggies:** Greens (spinach, kale, chard, collards)
- Protein:** Protein powder: (bone broth, hemp, pea...no soy), egg (very fresh, pasture raised) (Aim for 15-25 gram of protein)
- Fat:** Pumpkin seeds, Ground flax, Coconut milk, Cashews butter/nut butter (1Tbs)

**OVULATORY PHASE SMOOTHIE** DAYS 14-16

- Liquid:** Water, Almond milk, Hazelnut milk, Hemp milk, Coconut milk, Whole cow's milk, Whole goat's milk (1 cup)
- Fruit:** Apricot, Cantaloupe, Coconut, Persimmon, Raspberry, Strawberry

**LUTEAL PHASE SMOOTHIE** DAYS 16-28

- Liquid:** Water, Almond milk, Hazelnut milk, Hemp milk, Coconut milk, Whole goat's milk (1 cup)
- Fruit:** Apple, Pear, Date, Peach, Banana (greenish), Kiwi (1-2 servings)
- Veggies:** Greens (spinach, romaine, kale, chard, collards), Pumpkin, Sweet potato, Celery, Ginger, Mint, Spirulina (2 servings)
- Protein:** Protein powder: (bone broth, hemp, rice, pea...no soy), Raw egg (very fresh, pasture raised) (Aim for 15-25 gram of protein)
- Fat:** Sesam Seed, Sunflower Seed, Coconut milk, Walnuts, Pine nuts (1Tbs)

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# Exercise

## Part 2



Everyone knows the benefits of exercise and daily movement. However, not all training is complementary to each menstrual cycle phase.

By matching our biology with the appropriate form of self-care, we can take our physical and mental health to a whole new level.

Muscles,<sup>6,7</sup> bones,<sup>8</sup> ligaments,<sup>9</sup> and tendons<sup>10</sup> all contain estrogen receptors,<sup>6,7</sup> and estrogen has shown to regulate metabolism in these tissues.<sup>11</sup>

Let's look at how the varying levels of estrogen and progesterone should dictate our movement choice and can help us thrive.

### **Menstruation (Early Follicular Phase): Day 1-5**

Once our period has started, our hormone levels are at their lowest. Leisurely walks, restorative yoga, and gentle stretching can help support our bodies and help reduce menstrual cramping and discomfort and improve mood and energy.

We can still perform high-intensity activities if appropriate; we must listen to our bodies and do what feels intuitive.



### Late Follicular Phase: Days 6-14

Around day 3 of menstruation, estrogen and testosterone begin to rise. From the end of menstruation to ovulation, our continually increasing estrogen and testosterone allow us to build muscle more efficiently. This, coupled with low resting cortisol levels, makes it an excellent time for weight lifting, HIIT, CrossFit-style activities, and running.



### Ovulation Days 13-15

While ovulation is a one-day event, estrogen is at its highest right before. Estrogen provides many benefits to tissues far beyond the reproductive system. It also enhances muscle performance.

The relatively high estrogen levels at this point in the cycle can be harnessed to improve muscle strength and mass and increase the collagen content of connective tissues.<sup>12</sup> However, additional research shows that high estrogen levels can create laxity in connective tissue and lead to higher injury rates.<sup>13</sup> Be mindful at this point in the cycle. Push when and where it feels right.



## Luteal Phase: Days 15-28

At this point, estrogen plummets, and progesterone begins to rise. Body temperature is also increasing, and water retention makes it harder to cool the body.

Studies researching runners and hormonal influences show decreases in the time it takes to reach exhaustion for participants during the mid-luteal phase. This is partially due to increased body temperature. This suggests possible adverse effects on the cardiovascular system.<sup>14</sup> Consider this especially in hot temperatures, as your body temperature is already elevated.



At the beginning of the luteal phase, we might feel like higher intensity activity. However, as our energy declines in the later half and our period approaches, try scaling back the intensity and focus on active recovery. Activities like Pilates and yoga are fantastic for this time.

Our metabolism also increases at this time; you might notice an increase in appetite.

“ Think about scaling back the intensity and focusing on active recovery. ”

# Exercise and Our Cycle

HARMONIZING MOVEMENT WITH OUR HORMONES

## MENSTRUAL PHASE

Days 1-5

Focus on restorative movements like yoga, tai chi, walking and light hiking.



## FOLLICULAR PHASE

Days 6-14

Take advantage of the rising estrogen and low resting cortisol by include HIIT, strength training or CrossFit type activities and running.



## OVULATORY PHASE

Days 14-16

This is similar to the follicular phase. This is still a great time for strength training and higher intensity activities.



## LUTEAL PHASE

Days 16-28

This is a time for active recovery like Pilates and yoga flow, walking and hiking.



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# Chapter 3

## Hormonal Birth Control

### Impacts of Hormonal Birth Control



### Part 1

Let me start by saying I firmly believe all women should have access to multiple safe and reliable birth control options and be able to choose what is best for their bodies.

The Pill is a fantastic tool; however, to most effectively manage our hormonal health, let's take a deeper dive into how it might affect our bodies.

In this chapter, we will discuss how the birth control pill and other hormonal contraceptives work to prevent pregnancy, the role synthetic hormones play in our

health, hormone-free alternatives, and ways to use nutrition to support the body if taking the pill or for post-pill recovery.

Since the pill was introduced in the 1950s, numerous other hormonal contraceptives have come on the market, from the NuvaRing to the Depo Provera shot to hormonal implants. While these all have slightly different applications, the impact of synthetic hormones has similar effects on the body.

## The Pill in a nutshell

As we learned in Getting to Know Your Cycle, our hormones naturally rise and fall in symphony with each other. Progesterone is low as estrogen increases in the first half of our cycle (the follicular phase). In the second half (the luteal phase), estrogen drops, and progesterone rises.

This intentional and cyclic event primes our reproductive system to generate, mature, and release a viable egg. However, most birth control pills deliver a consistent dose of estrogen and progestin (more akin to testosterone than our natural progesterone) throughout the 3-week hormone phase. Unfortunately, this in no way mimics the natural rise and fall of our natural cycle.

A placebo pill is taken during the fourth week. When taking the placebo, a uterine bleed is triggered. This, however, is simply from not having the steady input of synthetic hormones, which triggers the uterus to shed the lining, and a “period” arrives.

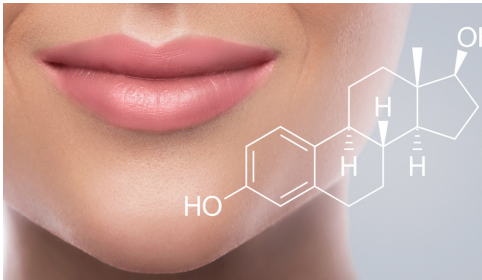


This steady plateau of estrogen and progestin maintains a series of hormonal cascades in a static state during the three-week window. The hormonal composition of the Pill can affect people differently and lead to inflammation, high blood sugar, and insulin resistance.<sup>1</sup> A healthy “real period” is the culmination of hormonal events. This starts with a direct line of communication between the brain and the ovaries and includes ovulation and progesterone production. A pill bleed is simply a bleed with no “brain-ovary” communication.

## Two types of pills:

The combination pill contains estrogen and progestin. This Pill is more effective and has less breakthrough bleeding. The combo pill works by thickening cervical mucus, suppressing ovulation, altering tubal motility, and thinning the uterine lining, creating an uninhabitable environment for a fertilized egg. For some people, weight gain, anxiety, and depression can be experienced on the combo pill.

The progestin-only pill is also known as the "mini-pill.", It is taken when women do not tolerate synthetic estrogen or are breastfeeding. It has been shown only to be effective in about 60% of women.<sup>1</sup>



“ Ovarian hormones, estrogen, and progesterone have many effects beyond reproduction. Our mood, bones, thyroid, muscles, heart, and metabolism all rely on a healthy functioning cycle to thrive during and beyond our reproductive years. ”

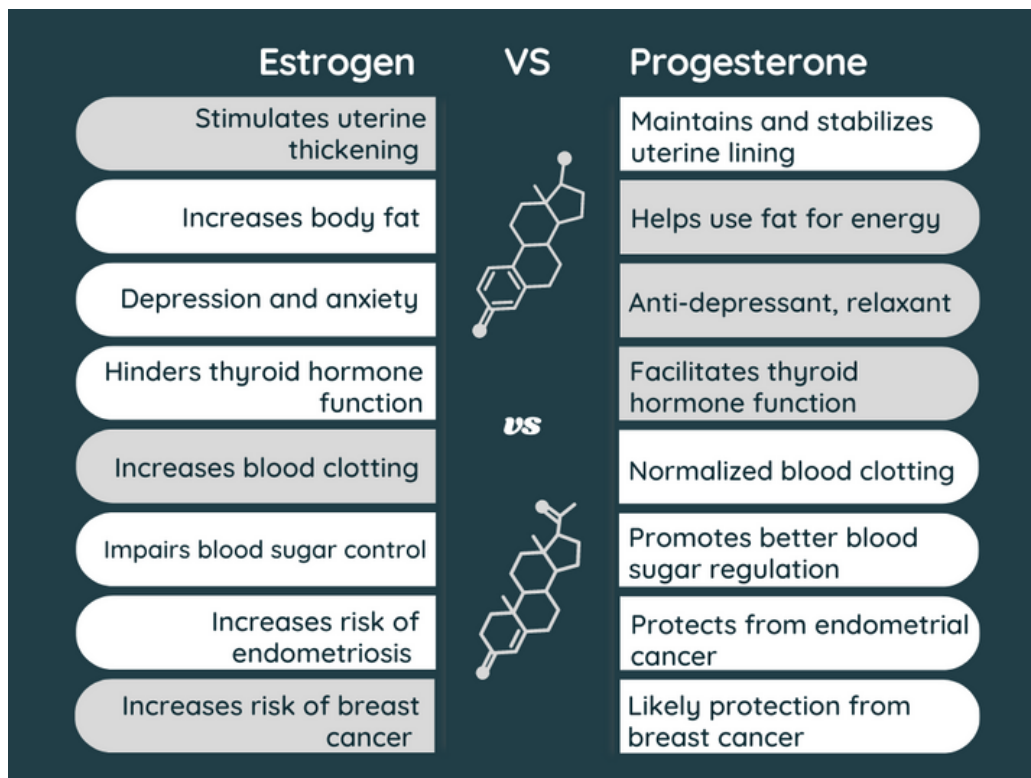
Although modern-day birth control has provided benefits and autonomy over the menstrual cycle, there are some real adverse impacts of synthetic hormones. This unnatural hormone pattern delivered by the Pill overrides the pituitary gland in the brain. This prevents the release of follicle-stimulating hormone (FSH) and luteinizing hormone (LH), two primary hormones that facilitate communication between the brain and the ovaries.

The lack of FSH and LH is what prevents ovulation from taking place. Due to the consistent levels of synthetic estrogen and progestin, our body kicks in a negative feedback loop, telling our brain we have plenty of ovarian hormones (estrogen and progesterone). At this point, our brain suppresses the signal that tells the body to make additional FSH, LH, and, ultimately, estrogen and progesterone.

Now, we have lost our natural “brain-ovary” line of communication and no longer produce sex hormones of our own. In addition, because we do not ovulate on the Pill, we do not make the wonderful and necessary progesterone. The Pill does not regulate hormones as some individuals might say; instead, it turns them off.

Ovarian hormones, estrogen, and progesterone have many effects beyond reproduction. Our mood, bones, thyroid, muscles, heart, and metabolism all rely on a healthy functioning cycle to thrive during and beyond our reproductive years. For example, progesterone improves brain health and cognition, whereas progestin has been linked to depression and anxiety.<sup>15</sup>

Some of the many roles estrogen and progesterone play in the body:



In the chart above, estrogen and progesterone play critical roles in the female body. They work in harmony to support a healthy cycle. When dysfunction occurs, there is an increased risk of disease, especially with estrogen dominance. Estrogen and progesterone must be balanced and work harmoniously for the body to function optimally.



## **A word on the Pill and Estrogen Metabolism**

The Pill has also been shown to alter estrogen metabolism in the liver. The liver needs reliable sources of B vitamins and magnesium (depleted while on the pill) to eliminate used estrogens properly.

While on the Pill, used estrogens are shuttled toward a more problematic exit pathway known as the 4-hydroxy estrogen pathway, which is associated with inflammation, PMS symptoms, and cancer.<sup>1</sup>



# Nutritional Support and Hormone-Free Alternatives

## Part 2

### Nutrient support while on the pill or post-pill recovery:

The Pill depletes vital nutrients for a healthy menstrual cycle. These include vitamin B2, B6, B12, folate/B9, selenium, vitamin C, vitamin E, magnesium and zinc, and CoQ10.

Let's take a deeper dive into B6, magnesium, and zinc.

**B6** has been shown to help prevent or alleviate PMS symptoms. It is beneficial in forming the corpus luteum (the source of progesterone production once the egg has left the follicle).

**Wild-caught fish, grass-fed beef, beef liver, pastured chicken, sweet potatoes, spinach, and banana, are all reliable sources of B6.**



**Magnesium** is an essential mineral in controlling insulin production, which is connected to testosterone levels and the health of the ovaries. This also heavily influences adrenal health, the foundation for balancing hormones. In addition, magnesium helps reduce sugar cravings,<sup>1</sup> which can be challenging with unbalanced hormones. Phase II detoxification in the liver also relies on magnesium.

Reliable sources include kelp, fish, spinach, almonds, molasses, mineral water, dark chocolate, shrimp, avocado, and buckwheat. However, our food supply is not as rich in magnesium as it once was, so supplementation is probably necessary (bisglycinate 300-600mg a day).<sup>1</sup>



**Zinc** - this is an essential trace element for female hormonal health. Adequate levels are needed to release FSH from the pituitary gland in the brain and the development of the follicle,<sup>16</sup> which helps reduce menstrual pain.<sup>17</sup>



In addition, we cannot store zinc,<sup>17</sup> so we must consume adequate amounts in our daily diet to replenish what is lost due to daily demands.

**Reliable food sources include pumpkin seeds, red meat, chicken, and shellfish.** One tricky thing about zinc is that once your body stores are low, you need zinc in your cells to absorb zinc from your diet. A zinc lozenge is your best bet at this point as it will absorb into the bloodstream from the mouth tissue and not depend upon the zinc in your gut for assimilation from your diet.

## **Reliable sources of B's, Vit C, Vit E, and CoQ10:**

**B vitamins** - meat, especially liver, poultry, egg, seafood, dairy products, leafy greens, and legumes

**vitamin E** - sunflower seeds, almonds, and hazelnuts

**Vitamin C** - citrus fruits and orange, yellow and red peppers

**CoQ10** - oily fish (salmon and sardines, trout, herring), organ meats, and whole grains

**Selenium** - organ meats (liver and kidney), seafood, poultry, and Brazil nuts. Brazil nuts are an excellent source only if grown in selenium-rich soil (look for sources from The Great Plains of the US and Canada as well as Central America.



# Safer hormone-free birth control options

(always consult your doctor first)

**Hormone-Free IUD Paragard** - this small T-shaped device is inserted into the uterus and can be left in for up to 10 years. Paragard uses one active ingredient, copper, wrapped around the device. Copper creates a local inflammatory reaction that is "toxic" to sperm and eggs and, therefore, prevents pregnancy.



It is over 99% effective. Please keep in mind the possibility of copper overload and maybe have copper levels tested. AND the extra good news: You will still ovulate and have a monthly cycle which is imperative for hormonal health. For more information, check out Paragard for yourself.

**FAM - Fertility Awareness Method** - you track your cycle and plan intercourse around the 6-ish days you are fertile each month. This is a very effective method, but you must be diligent about getting to know your body, your cycle and tracking the events of this process. Your fertile days are the five days before ovulation because that is how long sperm survives in the uterus, and one day after ovulation. After all, that is how long an unfertilized egg survives. If used correctly, the FAM is as effective as the pill.<sup>3</sup>





## Male or Female Condoms

Condoms are a barrier method of birth control and are easy and inexpensive. They can be used without toxic spermicide and protect against STDs. If used “correctly,” there is a 2% failure rate, and if used “typically,” there is an 18% failure rate for the male condom. So, ensure you have the right size and know how to keep it in place properly. The female condom has a “correct use” failure rate of 5% and a “typical use” failure rate of 28%.

Other safer options include a diaphragm without spermicide, a cervical cap without spermicide, and the withdrawal or pull-out method.

If you decide you want a hormonal option, I feel the hormonal IUD Mirena (aka Skyla and Liletta) is the best option. Still not my favorite due to the influences of synthetic progestin, but it acts to thicken cervical mucus, thins the lining of the uterus, and only partially suppresses ovulation. The only reason I choose this as the least of all evils in the hormonal contraceptive world is that there is a chance ovulation still occurs where ovulation is completely suppressed on the pill. Ovulation is the key step in producing progesterone.

**Be sure to do your own extensive research and consult your physician to find out what is best for YOU! Only YOU know what is best for YOUR body.**



# Chapter 4

## Environmental Influences

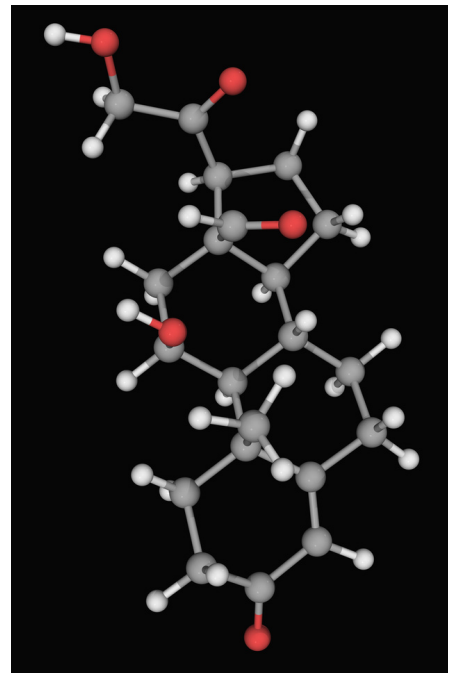
### The Role of Xenoestrogens in Hormonal Health

#### Part 1

##### Endocrine Disruptors

Endocrine disruptors (aka xenoestrogens) are becoming more and more common in our very convenient world. This is a vital topic to shed light on as our systems are flooded with chemicals that drastically affect our health.

The endocrine system is responsible for making and releasing hormones into the bloodstream. These hormones help control mood, growth, and development, our flight or fight response, affect how organs work, our metabolism, and our reproduction. <sup>18</sup>



Endocrine disruptors are chemicals that alter the normal function of our hormones.<sup>19</sup> These chemicals are found in many everyday products, from plastic bottles (with or without BPA), the lining of cookware (non-stick), clothing, toys, cosmetics, flame retardants, detergents, household cleaning products... the list goes on and on. We contact these chemicals through the air, food, skin, and water.

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# Ways to Limit Exposure

## Part 2

### 4 Major Ways to Limit Exposure:

Let's take a quick look at four primary sources of endocrine disruptors and ways to limit Exposure.

#### Food:

- Replace as many plastic food and beverage containers w glass, unlined stainless-steel, cloth, silicone, and wood... options
- Never heat food in plastic
- Avoid drinking out of disposable water bottles
- Choose pastured meats and animal products, including dairy, when possible
- Choose organic veggies and fruits when possible

#### Birth Control

- Choose hormone-free birth control options mentioned in the previous section



# Additional Ways to Limit Exposure

## Body Care Products:

- Choose scent-free beauty and body products, including sunscreen, with ingredients you can pronounce
- Read ingredient labels and avoid
  - Parabens
  - Phthalates
  - Fragrance
  - Polyethylene glycol
  - Formaldehyde
- Check out the Environmental Working Group's (EWG) list of clean beauty options [here](#).



## Household Products:

- Choose simple cleaning products or make your own - what did your grandmother use? Vinegar, water, baking soda...
- Read ingredient labels and avoid
  - 2-Butoxyethanol
  - Ethanolamines (AKA: Monoethanolamine (MEA), Diethanolamine (DEA), and Triethanolamine (TEA))
  - Chlorine Bleach
  - Phenols
  - Ammonia
  - Phthalates
- Check out the EWG's list of clean brands [here](#).





*Beth with Well Nourished*

Thank you for trusting me to guide you through this vital information. Now it's time to take the next step. Use this knowledge to help optimize your cycle and start living in harmony with your hormones!

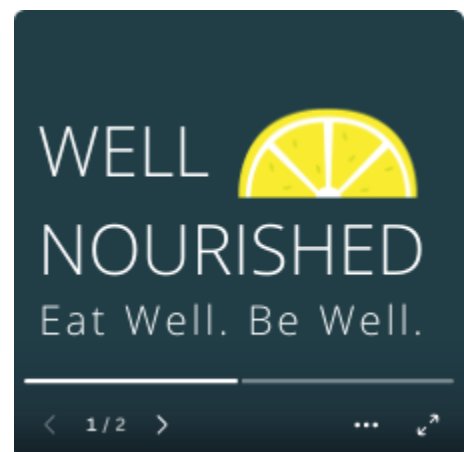
For more information or personalized support please reach out. I would love to help!

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