

REPRODUCTIVE / GENITO-URINARY CARE

PART TWO: Systems with a Uterus, Ovaries, Vulva, Vagina and the Associated Hormones

Outline of Learning Section One

1. The Cycling Years: Review of Mechanisms

2. Supporting a Healthy Cycle: Holistic Recommendations for Reproductive Care

3. The Client Inquiry: Signs & Symptoms to Evaluate
 - a. Documenting Menstrual Blood Quality
 - b. Determining Ovulation:
 - Basal Temperature Test
 - Physical Symptoms
 - Erratic Ovulation
 - c. Cycle Length

4. Pain and Discomfort as Differential Diagnosis
 - a. Deficiency vs Excess
 - b. Where is the Pain
 - c. Hot vs Cold indications

5. The Main Hormones and their roles within the Reproductive System
Progesterone | Estrogen | Prolactin | Androgens/Testosterone

6. Possible Cycle Length Disharmonies: Shorter vs Longer

7. Pre-menstrual Syndrome: Luteal Phase Ovulation to Menses
PMS Categories
 - PMS A Anxiety
 - PMS C Cravings
 - PMS D Depression
 - PMS H Hydration

8. References and Resources

THE CYCLING YEARS: REVIEW OF MECHANISMS

Menarche is the first menstruation cycle that generally begins at age 10 – 15.

Cycling will continue to the average age of 50 years old. The average menstruation cycle can be anywhere from 21 – 25 days long with the medium being 28 days. Peri-menopause generally happens 5 – 8 years prior to menopause often associated with irregular cycles and bleeding.

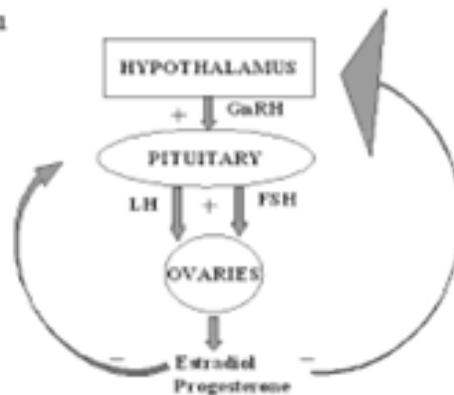
Menopause is indicated when no menses and/or spotting has occurred for 1 complete year.

Changes in the cycle are under the influence of the endocrine system.

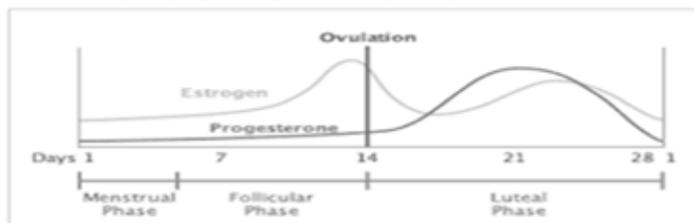
Hypothalamus

- Releases gonadotropin-releasing hormone (GnRH)
- GnRH tells the pituitary to release either:
 - Follicle stimulating hormone (FSH) - Day 1 -14
 - Luteinizing hormone (LH) – Day 5-28
- Ovaries respond to message secreting either estrogen or progesterone

Figure 1



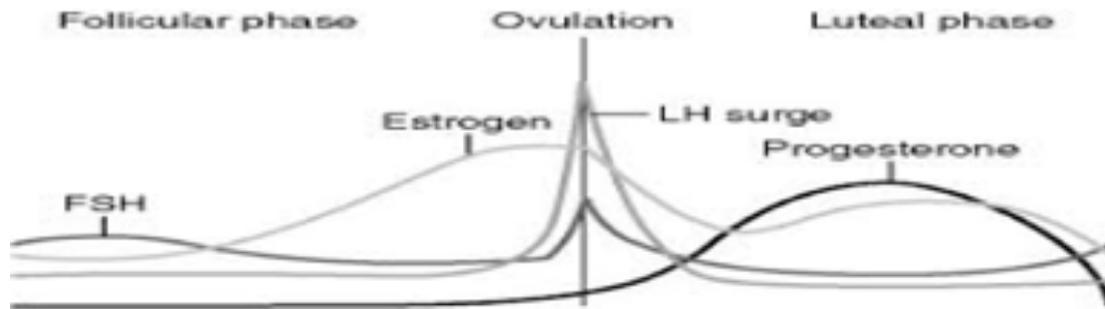
The Menstrual Cycle



Day 1 of menstrual cycle begins with menstruation. Prostaglandins are at the highest, compounds in body made from fats (resulting in contractions, inflammation, body ache)

Day 1 – 5

- Both estrogen & progesterone are at the lowest
- Estrogen will start to increase at the end of bleeding with a slight surge of testosterone



The Menstrual Cycle Phases: Follicular or Proliferative Phase

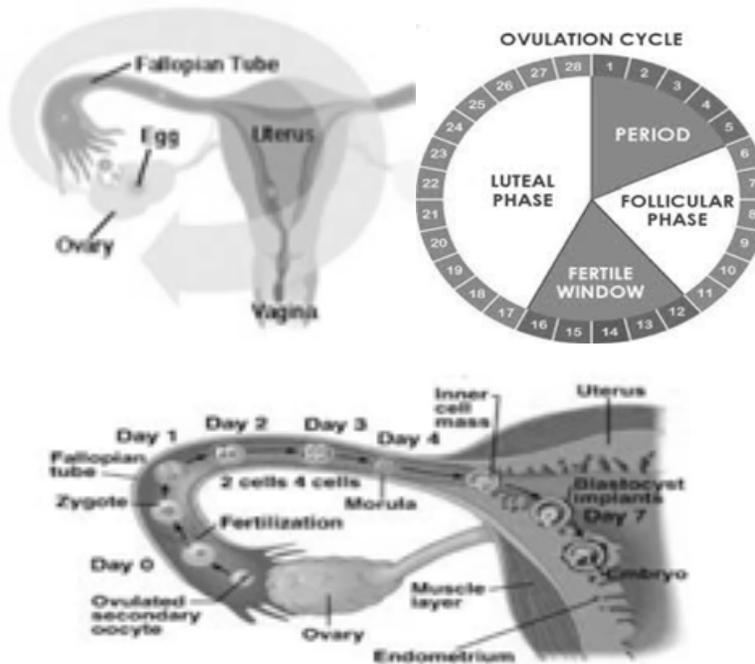
The Follicular Phase consists of day 1 of menses to ovulation. This is a time when the body is under the influence of rising estrogen which peaks at ovulation. Testosterone levels also increase during this time.

FSH (follicle stimulating hormone) stimulates the follicle containing the egg to initiate its growth. The rising estrogen levels during this time increase growth or “proliferates” endometrium lining for implantation

The endometrial lining is nourished with nutrients & blood. The length of this phase can vary in the number of days.

The stimulating effects of estrogen within are associated with a feeling of introverted energy, a time for activity outside. This phase can be filled with joy and increased energy, positive thinking and incentive to start projects, and get things done.

The higher estrogen signals for the Luteinizing Hormone (LH) surge and egg maturity. Within 24 hours of the LH surge the follicle sack bursts and the egg is released indicating ovulation is occurring.

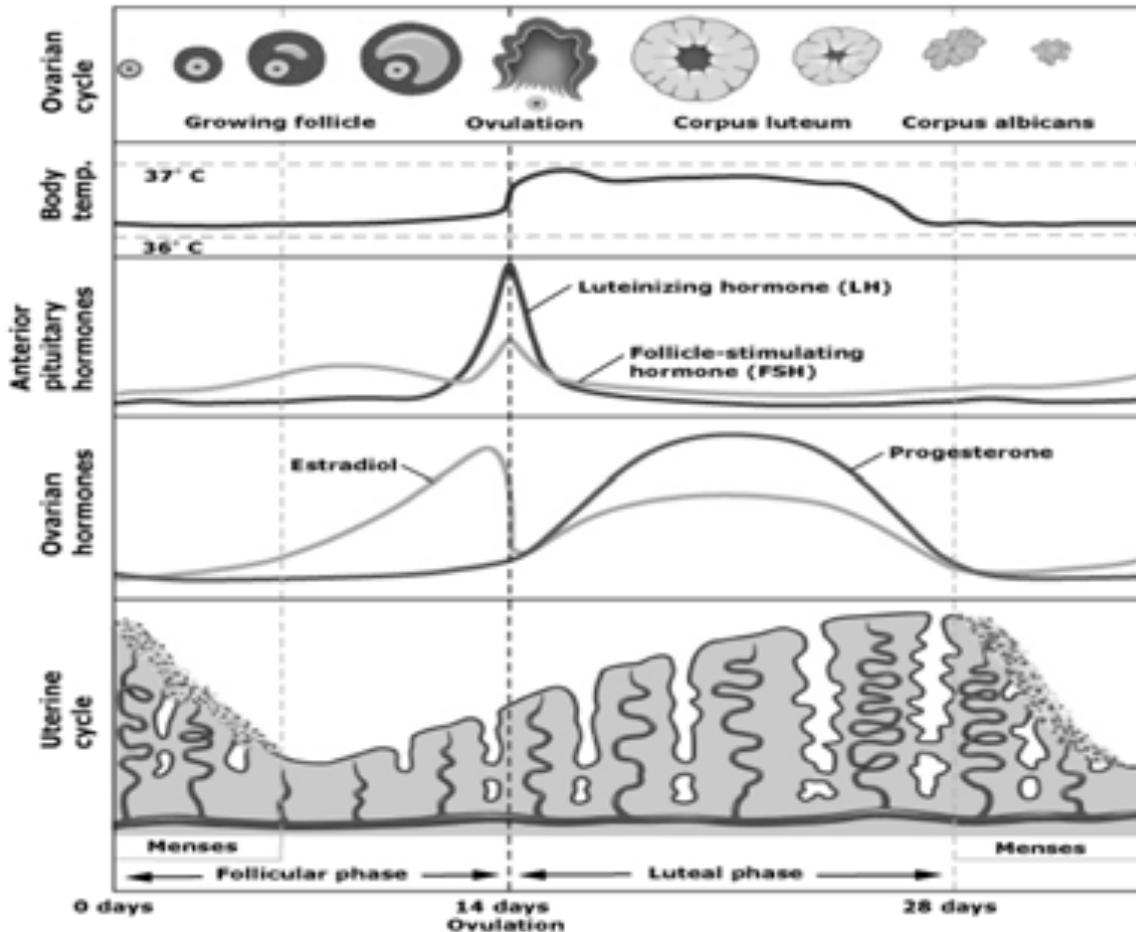


The egg is picked up by finger like projections on end of fallopian tube and swept into the tube to start journey to uterus which takes roughly 6 days. Ovulation is a time of peak increased energy, mental & emotional vitality. There is typically an associated increase in sex drive.

The Menstrual Cycle Phases: Luteal or Secretory Phase

After ovulation until bleeding begins, the follicle becomes the Corpus Luteum producing progesterone. As progesterone rises, this increase thickens the uterine lining, preparing to support the fertilized egg. Progesterone has a calming effect and this time is associated with feelings of going inward. It can be more of an emotional phase, with enhanced intuition. Just before menses starts, there is an increase in the ability to share feelings more openly, speak one’s mind. Emotions & tears are related to things of meaning & should be acknowledged. This is a time of letting go.

If egg is fertilized, corpus luteum continues to secrete progesterone to support pregnancy. If conception does not happen, the corpus luteum stops secreting progesterone and menses begins.



SUPPORTING A HEALTHY CYCLE: HOLISTIC RECOMMENDATIONS FOR REPRODUCTIVE CARE IN CLINIC

- Evaluate the function of each part of the cycle
- Offer nutritional & lifestyle support for each part of cycle
- A complete understanding of the client's hormones & cycle activity ensures results
- The client's understanding of the cycle empowers them to make changes lifestyle changes & work with their cycle.

Be thorough with the intake process:

- Are the concerns "Reproductive" or "Systemic"
- Are the concerns present for the entire month?
- General concerns in appointments often lead to discovery of dysregulation of the menstrual cycle
- Get all the information to make the right choices
- Have a thorough intake questionnaire that is separate from your typical intake form for those folks who have or have had a menstrual cycle.
- Consider including: Age of menarche, date of last period, birth control history, any known concerns such as yeast infections, STI's, pregnancy, miscarriages, painful intercourse, quality of blood, pain
- Emotional changes during the month – irritability/sadness.
- Menstrual concerns can be indicator of health problems. Correct the imbalance now and avoid serious or chronic conditions further down the line.

Formulation Goals for the Phases of Menstruation:

Phase I Formulation: Follicular Phase – Estrogenic Phase

- Hormonal regulation
- Nourish and replenish blood
- Adrenal & Nervous System support
- Build Spleen Qi, focus on digestion

Phase II Formulation: Luteal Phase – Progesteronic Phase

- Hormonal regulation
- Uterine Stimulants or Decongestants
- Move Qi & Blood – Circulation
- If Blood is deficient, build in Phase 1 before consider moving in Phase 2
- Increase vitality of Qi & Yang
- Disperse dampness & liver congestion

Pre-Menstrual: 1 week prior to menses

- Eat well
- Anti-inflammatory diet
- Balance prostaglandins (EFA's)
- Increase fluids
- No lifting (uterus is full)
- Antispasmodics: 2 days prior
- Sufficient sleep
- Reduce stress
- Embrace the calm

SUPPORTING A HEALTHY CYCLE

Botanical, Nutritional and Lifestyle supports have been used throughout history to maintain and restore reproductive system balance at all stages of hormone involvement.

Diet | Blood Quality and Quantity | Liver | Elimination | Lifestyle | Stress

Diet

Key Principles to focus on: Digestion, Assimilation & Elimination

Healthy diet improves hormonal balance. Include a variety of nourishing whole foods within a balanced diet.

- An abundance of veggies & fiber to support detoxification
- Hormone free meats & dairy product
- The first half of the cycle needs a higher consumption of healthy fats to build healthy hormones
- Cholesterol creates hormones

“Plant Hormones” within food

- Do not contain actual hormones
- Contain substances that are converted into hormones by our own gut bacteria
- This conversion depends on balanced gut flora and healthy digestion

Estrogenic activity

Isoflavones: Found in most beans, green beans, mung beans, chickpeas, lentils and nuts and seeds

Lignans: Found in fruits, vegetables sesame seeds, dates, apricots, avocados, garlic, broccoli, chestnuts, seaweeds, flaxseed

Coumestrol: Found in sprouted sesame seeds, mung beans, alfalfa, red clover small amount in fruits & veggies

Progesteronic activity

Kaempferol & Apigenin: Found in capers, cumin, parsley, garlic, strawberries, apricots and sprouts of radish & fenugreek and all brassicas

Anti-Inflammatory Diet: Essential 1 week prior to menstruation

Prostaglandins: Endometrial cells make prostaglandins for muscle contractions, blood vessel constriction, & shed endometrial lining

- Prostaglandins are made from the fatty acids in our diet
- Excessive or Incorrect type cause inflammation, pain, nausea, clotting, diarrhea
- The correct type of Prostaglandins decrease inflammation & pain (Omega 3)

Prostaglandin Imbalance causes:

- Inflammation & pain
- Excess insulin
- Prolactin sensitive
- Influences ovarian function

Suppress inflammatory prostaglandin production:

- Avoid trans-fats, vegetable shorting, processed foods, corn, excessive grains, soybeans, fried food, polyunsaturated vegetable oils
- Reduce Omega 6, Increase Omega 3 Oils
- Increase fruits, vegetables
- Include Anti-inflammatory agents: Ginger, Turmeric, Chamomile, Black Cohosh, Magnesium & Bone Broth

Blood Quality & Quantity

Consider Blood Loss

- Compensate the week after menses and stop one week prior to menses
- Include: Nettle leaf, Yellow dock, Parsley, Ashwagandha, Dong Quai, Processed Rehmannia
- Iron rich foods & lots of water
- Evaluate digestion & absorption to ensure uptake and absorption are functional

Consider Blood Circulation / Deficiency

- Increase circulation if needed during menses for stagnation
- Build Blood first if blood deficient. Build blood first
- Include herbs, spices known to move blood: Onions, Garlic, Dong Quai, Ginger, Gingko, White Peony, Prickly Ash, Nettle Leaf, Cayenne, Dan Shen

Consider Liver Function

A healthy liver function is key to process and eliminate excess hormones, a congested liver will re-circulate hormones:

- B vitamins, B6 required for liver metabolism, if there are issues check methylation processes
- If there is mild PMS symptoms typically avoid heating foods to the liver (sugar, spices, alcohol) during the last two weeks of cycle.
- If there is severe PMS avoid these foods / substances for a minimum of 3 months. Include the known Liver support herbs: Dandelion root, Oregon Grape, Artichoke, Bupleurum, Milk Thistle, Turmeric, Schisandra

Consider Elimination

Effective elimination will stop recycling of hormones

- Sluggish bowels contribute to PMS and hormone dysregulation
- Liver removes hormones from blood, then excreted thru the bowels
- Fiber helps elimination, low fiber, hormones are re-cycled into blood
- Foods to include: Oatmeal, Chia, Flax seed, Veggies

Lifestyle

It is ideal to work with the client's natural rhythm, encouraging a slow down the 2nd half of the cycle

Consider:

- Movement supports circulation to pelvis
- Less concerning symptoms with cycle when regular exercise is included
- Reduce exposure to environmental toxins: plastics, chemicals, toxic cleaners, skin creams, use water filters, sensor cleaning products
- Prior or during menstruation avoid heavy lifting or sitting on cold/concrete floors.

Stress

Excess stress or mismanaged stress is a huge player within menstruation cycle disturbance. Stress has a direct effect on messages to endocrine system & hormone production.

Consider:

- What is in their life that is depleting them, to what degree & how to change
- Include tools that support the client to respond to stress more effectively:
- Meditation, Yoga, Spiritual Practice, Counseling, Trauma release.

Adaptogens: (Probable and Confirmed)

- Reishi / Ganoderma lucidum
- Eleuthero / Eleutherococcus senticosus

- Ashwagandha / Withania somnifera
- Tulsi / Occimum sanctum

Nervous System Tonics

- Milky Oat Tops / Avena sativa
- Lemon Balm / Melissa officinalis
- Chamomile / Chamomilla recutita
- Others include - Linden Flower, Motherwort, White Peony, Black Cohosh, Blue Vervain, Catnip, Passion Flower, St. John’s wort, Hibiscus, Skullcap, Hops, Lavender

THE CLIENT INQUIRY: SIGNS & SYMPTOMS TO EVALUATE

Through the intake process, a series of questions will be asked not only on the intake paperwork but through the interview with the client to determine several components.

At times, the client will not be able to fully provide the details needed for comprehensive formulation. It can be because they have not be observant of their cycle enough to provide these details and/or it may be out of a dissociation to the cycle for reasons that involve a history that could include trauma. Be sensitive to this process of intake.

Areas to Explore:

- Documenting Menstrual Blood Quality
- Determining Ovulation:
 - Basal Temperature Test
 - Physical Symptoms
 - Erratic Ovulation
- Cycle Length

Documenting Menstrual Blood Quality

Colour

Document via each day of the cycle and the changes that may occur as menses progresses. Consider having paint chips or various red colours to show the client and have them point to the colour of their blood.

- Bright ‘merlot’ blood is considered typical or normal
- Bright fiery red indicates heat in the blood and/or potentially a heavy flow
- Dark or brown blood indicates old blood or stagnant blood



Clotting

Include the day of the cycle with associated clots, along with size and consistency.

Smaller clots can indicate:

- Rapid bleeding, fast on-set
- Shortened progesterone phase not able to liquefy excess tissue

Larger clots can indicate:

- Endometrial lining dysfunction with shedding in pieces

Determining Ovulation

Active ovulation during the menstrual cycle will show us where the cycle is potential imbalanced: The Follicular Hormone or the Luteal Hormone stage.

Cervical Mucous Changes:

- Encourage the client to observe mucus changes from beginning of cycle
- Mucus changes 5 days prior to ovulation
- Sticky but slippery and stretchy, ideal for sperm to swim (like raw egg)
- Within 24 hours of peak mucus change ovulation takes place
- Progesterone then decreases cervical fluid and it becomes dryer and sticky

Basal Temperature Test:

As progesterone increases, body temperature increases:

- Creating a warmer, more fertile environment
- Before ovulation, the Basal Body Temperature averages between 36.1°C (97°F) and 36.4°C (97.5°F). After ovulation, it rises to 36.4°C (97.6°F) to 37°C (98.6°F).
- No temperature change, - no progesterone, no LH surge or ovulation

Physical Symptoms of Ovulation

- Light tension in breast
- Slight cramp on one side of pelvis that can result from the increased blood flow to ovaries and contractions of ligaments pulling ovaries and fallopian tubes closer.
- There may be an associated natural increase in libido

Erratic Ovulation is expected during puberty and the menopause years.

Cycle Length

Length determined by numbers of days between menses on average 28 days, but can vary from 21 – 35 days. The Luteal phase is not as variable as Follicular phase. Subtract back from start of menses 14 days for ovulation date with irregular cycles to start getting an understanding of when ovulation may have occurred.

Theoretically a 28-day cycle will ovulate on day 14, a 32-day cycle will ovulate on day 18. Ovulation time within the menstrual cycle is the key information needed to determine which part of the cycle is shorter or longer.

PAIN AND DISCOMFORT AS DIFFERENTIAL DIAGNOSIS

The way in which pain is being experienced by the client will give you your guide to treatment. Gather all you need to fully understand the spectrum of the associated discomfort.

Generally:

Pain is typically related to blood flow being either excessive, deficient and/or stagnant or stuck. Correct blood deficiency first then address the stagnation. Correct the liver stagnation before you try to move blood. Address high levels of inflammation and intense contractions of the uterus by evaluation of prostaglandin quality in diet. Typically heaving blood loss without pain is associated with failure to ovulate.

What are the Pain Pattern Signs?

- a. Deficiency vs Excess
- b. When does the Pain occur? Before, During and/or After menses?
- c. Hot vs Cold indications

Excess Condition

Pain is often experienced as fullness, worse with pressure, feels stagnated or stuck.

- Remove stagnation
- Create movement inside & outside: Dong Quai, Yarrow, Nettle, Ginger, Dan Shen
- Clear dampness/phlegm: Fu Ling, Ginger, Atractylodes, Wild Yam
- Address diet: restrict damp, cloying, greasy foods
- Address liver congestion: Dandelion root, Oregon Grape Root, White Peony, Schisandra, Turmeric, Bupleurum/Chai Hu

Deficiency Condition

- Pain is better with pressure as emptiness likes pressure.
- Build blood
- Strengthen vitality, nourish the body
- Dark green leafy, beets, heme iron
- Deficiency with stagnation can cause pain, always treat deficiency first
- Nettle leaf, Dong Quai, Processed Rehmannia, Yellow Dock/with molasses

When does the Pain Occur?

Pain prior to menses

- Bleeding hard to start, feels stuck
- Lower abdominal pain, feeling of distention
- Pain comes & goes as the energy / Qi is not flowing
- No clots occur, just a feeling of being stuck
- Very low vitality consider thyroid levels

Strategy: Increase vitality with nutrition, often poor digestion, is associated with this condition.

Include Qi tonics: Astragalus, Codonopsis

Strategy: Increase blood circulation: Dan Shen, White Peony, Hawthorn, Gingko, Cinnamon, Yarrow or Ginger

Pain during menses

- Pain is worse with pressure, excess, indicating pelvic congestion often associated with intense stabbing pain,
- Dark menstrual blood, clotting, wiry pulse, purple signs (tongue, lips)
- Often liver stagnation or other pathology (fibroids, cysts)

Strategy:

- Warm the uterus front & back prior to menses
- Pelvic decongestants - Yarrow, White Peony, Rehmannia, Dong Quai, Motherwort
- Uterine tonics: Brown blood spotting is an indication of old blood – Raspberry leaf, Black Cohosh, Yarrow
- If excessive bleeding with pelvic stagnation occur employ use pelvic stimulants mid-cycle, and then astringents to slow bleeding

Pain after menses

This type of Pain is often relieved with pressure

- Occurs at the end of menses with typically dull achy pain
- Scanty period, no clots
- Deficiency signs may include pale blood, restlessness, forgetful & tired, pale tongue and lips
- Blood deficiency symptoms

Strategy

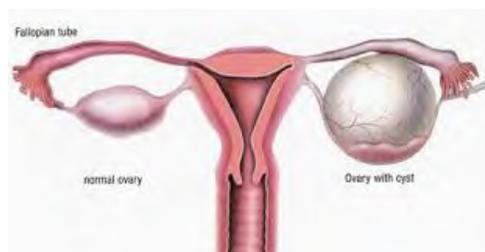
1. Blood build herbs entire month
2. Qi tonics all month long

Pain at end or after cycle is generally deficiency

Mid Cycle Pain (Mittelschmerz)

This type of Pain can occur in either lateral region of the lower abdomen

- Most likely is indicating the rupture of a follicular cyst
- This type of pain typically resolves within 24 hours
- Intense or prolonged pain require medical attention



Hot & Cold Pain Signs

Pain with Heat Signs

Heat makes pain worse, coolness feels better

- Deficient fluids are often contributing a lack of substance in the body
- Sweaty, fast pulse, thirsty, prefers cool drinks
- Agitation, metal restlessness
- Exhaustion, no energy
- Burning pain around sacrum before period/mid cycle could be both heat & dampness

Strategy: Clear heat

- Cooling foods. fruits, veggies, remove heating, spicy foods, alcohol
- Address constipation which is often cause
- Supportive herbal medicines include: Dandelion Root, Bupleurum, White Peony, Blue Vervain

Pain with Cold Signs

Pain occur typically before menses or after menses is over

- Feels better with heat
- Lack of circulation, slow pulse
- Tongue pale or bluish-purple

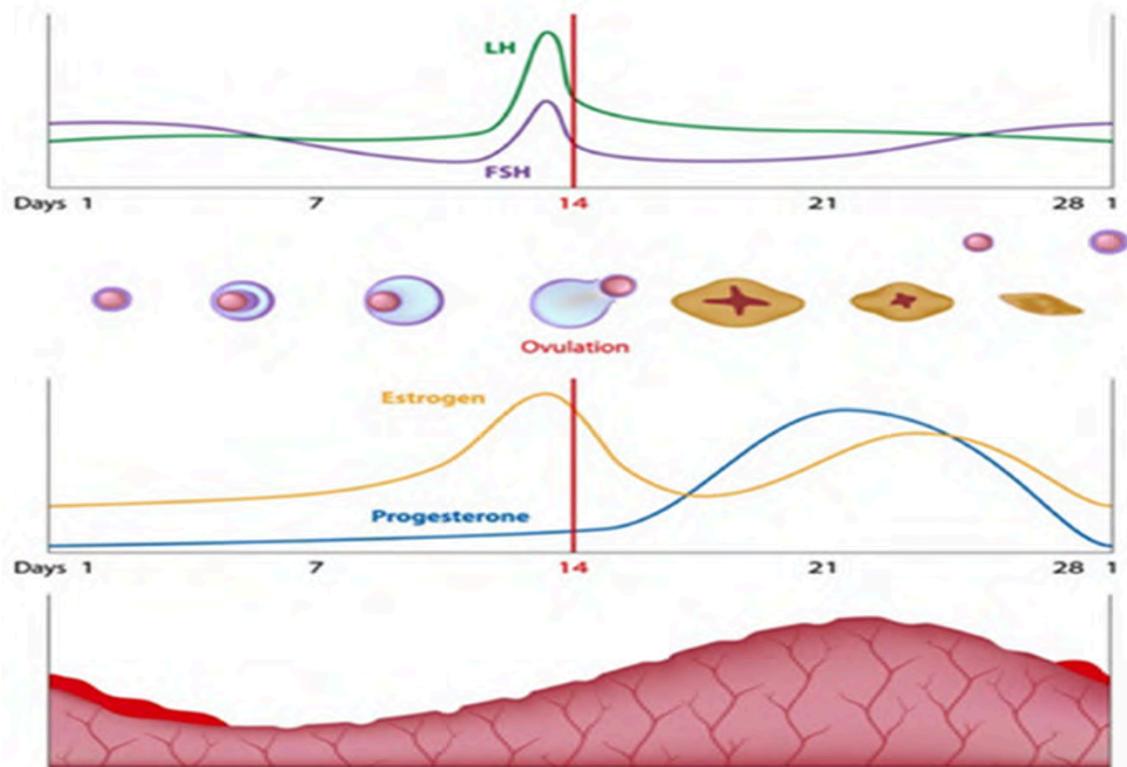
Strategy:

- Increase blood/circulation after menses is over: Dong Quai, White Peony, Nettle Leaf
- Warming herbal teas during menses (Ginger, Cinnamon, Prickly Ash, Turmeric, Garlic)
- Warming foods, nourishing soups & stews. Congee
- No raw or cold foods, salads, dairy, these all stagnate the blood
- Apply warm compress abdomen & back
- Avoid tampons or menstrual cups as these seem to make pain worse

THE MAIN HORMONES AND THEIR ROLES WITHIN THE REPRODUCTIVE SYSTEM

Progesterone | Estrogen | Prolactin | Androgens/Testosterone

Estrogen tells cells to grow | Progesterone tells cells to mature



Progesterone Functions

- Informs cells to mature
- Maturation of endometrial lining
- Prepares lining for implantation
- Inhibits lactation during pregnancy
- increases immune response to allow the body to accept the pregnancy with terminating it.
- Muscle relaxant
- Calming, neuroprotective from stimulating effects of Estrogen

Low Progesterone: Signs/Symptoms

- Symptoms start right after ovulation of breast tenderness, then heavy menses, cramping during menses, spotting prior to menses
- Belly weight gain, low libido, heavy or irregular cycles, cravings, chronic constipation
- Severe hot flashes and/or night sweats
- Poor Immune health

- Insomnia
- Cervical mucus stays continual, clear, stretchy fertile mucus.
- Progesterone decreases cervical fluids, if sufficient, the mucous changes to a tackier, thicker, dryer consistency after ovulation
- Low progesterone = estrogen dominance
- Low temperature during the luteal phase
- Luteal phase of the cycle is shorter than the follicular phase

High Progesterone: Not common

- Affects thinking patterns, foggy,
- Feelings of being overwhelmed and irritated
- Digestive problems, raises insulin levels, fluid retention, breast swelling
- Occurs typically from birth control pills, progesterone creams, progesterone dominate IUDS, fertility medications

Progesterone Production is necessary for receptive uterine lining for implantation

- It is signaled after the egg is released, triggered by LH surge
- Then is produced from corpus luteum
- Lesser amounts are produced in the adrenal glands or fat tissues
- Progesterone serum levels need to be above 10ng/ml 7 days after LH surge

Progesterone Support

Progesterone is produced in high amounts in ovaries (corpus luteum), small amount in adrenals and is synthesized from Pregnenolone

Chronic stress is the leading cause of low progesterone & estrogen production. The body diverts pregnenolone to produce higher amounts of cortisol to help you get through stress. This is referred to as the “Pregnenolone Steal”.

Blood & Blood Circulation play a role in progesterone balance. The Corpus luteum needs adequate blood flow to keep secreting progesterone for 2 weeks after ovulation. Chronic Pelvic congestion may influence this.

Progesterone is not present in foods however some foods and nutrients seem to promote its production:

- The key nutrient to progesterone production are the array of B-complex
- Gamma Linoleic Acid (GLA) based EFA oils provide compounds to assist the body to progesterone
- Vitamin E increases luteal blood flow for corpus luteum (100 mg/day). Also found in certain nuts / seeds
- Vitamin C taken in low dose, higher doses of Vitamin C may increase cervical fluid acidity (500 mg/day)
- Zinc encourages ovulation can be found in certain nuts and seeds.
- Arginine widens & relaxes blood vessels for blood flow to corpus luteum (3-6g/day) turkey, chicken, chickpeas
- Magnesium also helps with estrogen dominance by extension will improve progesterone balance.

Estrogen Function

Tells cells to grow and is mainly produced by the ovaries with smaller amounts in the adrenals. Follicle Stimulating Hormone stimulates the ovaries to produce Estrogen and this promotes vaginal lubrication and a positive emotional state.

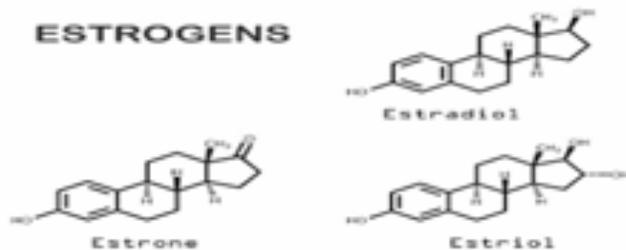
During menses estrogen is the lowest on Day 1 equaling lower energy, as estrogen increases during the menstrual cycle the energy levels improve with the peak being before ovulation. As estrogen drops after ovulation associated concerns of depressed feelings, low energy, anxiety, headache, easily angered, low self-esteem, rapid heartbeat, insomnia, night sweats, vaginal dryness, UTI's, brain fog may be more evident.

The Types of Estrogen

Estrone (E1): Mainly considered the “menopausal” estrogen, weaker

Estradiol (E2): Most potent, mainly produced during the reproductive years

Estriol (E3): During pregnancy by placenta during & what is mainly used in bioidentical hormone production



High Estrogen Symptoms

- Excessive bleeding with Clotting
- Headaches, migraines, gas, bloating, acne
- Blood Sugar imbalances
- Emotional imbalances: more anger than depression
- Breast Distention and fluid retention
- Gallbladder dysfunction (bile gets thick)
- Thyroid impaired conversion T4 to T3 (higher T4)
- Lining of uterus overgrows and breaks down in a disordered way
- Without ovulation, estrogen continues to build up lining and without progesterone from corpus luteum the lining continues to bleed.
- Estrogen dominance often associated with fibroids, endometriosis, PCOS, and infertility problems

General Strategies to Reduce High Estrogens

- Address Liver Function: conjugates and releases estrogens
- Increase elimination thru stool & urine with fiber, cruciferous vegetables, thin bile, reduce excess fat
- Botanical liver support

- Check detoxification pathways (MTHFR+)
- Reduce toxic load: personal care products, eat organic reduce all xenoestrogen exposure
- Block aromatase conversion of testosterone to estrogen with Sulpherofane, Calcium-D-glucarate, magnesium, Sulphur foods, B6

Low Estrogen

- Associated with low cholesterol
- Evaluate FSH function
- Thyroid panel
- Stress – check cortisol levels “pregnenolone steal” producing cortisol instead of estrogen
- Low estrogen often associated with low serotonin which is often associated with adrenal stress
- Strengthen with herbs to nourish the ovaries and blood builders

Prolactin

A reputable test should be done 3-4 hours after waking

- High Prolactin suppresses cycle resulting in potential PCOS with associated high estrogen, low progesterone, higher insulin, testosterone/DHEA
- Contributing factors of higher prolactin may be associated with thyroid concerns, excess alcohol intake, medications (synthetic birth control, antacids, psychiatric medications and blood pressure medications).
- Chaste tree (Vitex) binds to dopamine receptors and prevents the release of prolactin from the pituitary
- Zinc is known to decrease prolactin levels beef, turkey, beans
- Vitamin B6 deficiency may be associated with Prolactin increases

Androgens: precursors for estrogens , androstenedione, testosterone and dihydrotestosterone (DHT)

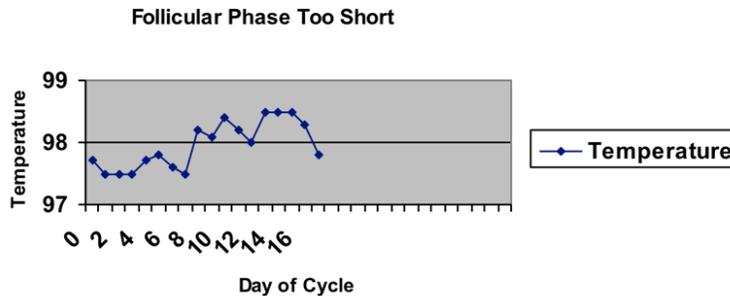
- Higher LH levels increase androgen production: associated with leptin resistance
- Testosterone is produced in small amounts in ovaries and adrenals
- This small amount is essential for hormonal health (memory, reduces breast tenderness, reduces bone loss, muscle)
- Testosterone will convert into estrogens or DHT (dihydrotestosterone)
- DHT (Dihydrotestosterone) does not convert to estrogens like testosterone. Elevated levels in systems with ovaries cause hair follicles to shrink, or pattern baldness.

POSSIBLE CYCLE LENGTH DISHARMONIES: SHORTER VS LONGER

The timing of the cycle and levels of hormones will affect cycle length, easiest to detect with BBT readings.

Shorter Cycle Possibilities

- Deficiency of progesterone: ovulation occurs normally but not enough progesterone in the system to form the corpus luteum
- Lower level of estrogen will also affect the LH surge

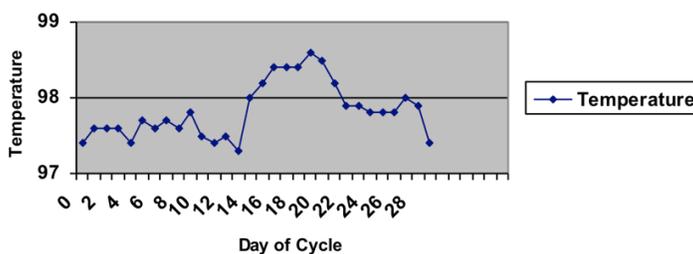


Note: Ovulation on Day 8 could indicate the release of immature egg. When ovulation is provoked prematurely in most instances this leads to a shortened menstrual cycle.

Shorter cycle with longer or heavier flow

- There may be Estrogen excess or deficient Progesterone to balance estrogen levels
- There may be Liver congestion not breaking down estrogen
- Progesterone drops after ovulation – ovulation ok but progesterone levels drop 10 days after ovulation

Early Decline of Luteal Phase: Temperature rapidly declines from its peak shortly after ovulation

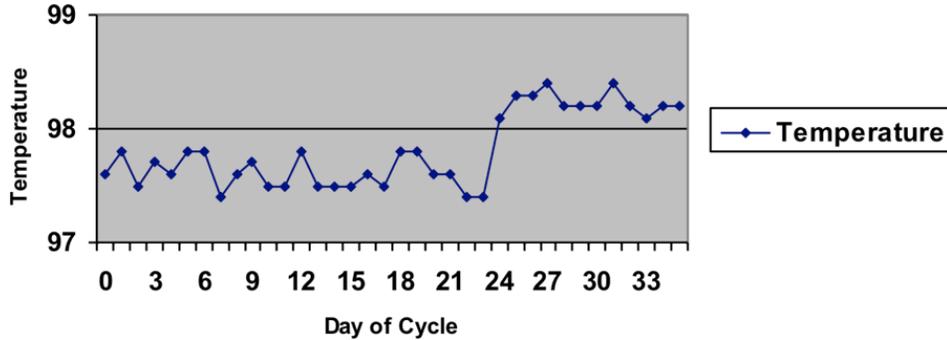


Longer Cycle

A longer cycle is often associated with incomplete surges for ovulation or late ovulation. In cases of low estrogen the cycle goes longer to get the sufficient amount for the LH surge

In the graphic we see ovulation day 24 due to the longer time needed to get follicle to the correct size. With low estrogen this process takes longer. When the follicular phase is consistently too long, more than 14 to 20 days, and the luteal phase is consistently less than 10 days, ovulation is often late, or in severe cases, it is missed altogether. The end-result is usually infertility.

Follicular Phase Too Long



Follicular Phase - Low Estrogen Characteristics

- Longer menstrual cycle
- Longer to build up a thick enough endometrium for menses
- Deficient Blood
- Adrenal exhaustion, high level of cortisol, “pregnenolone steal” not enough hormones

Follicular Phase - High Estrogen Characteristics

- High estrogen levels or high relative to progesterone level
- Menses is usually long and heavy, thickened lining, often cramping and clotting
- Anovulatory cycle, deficient progesterone

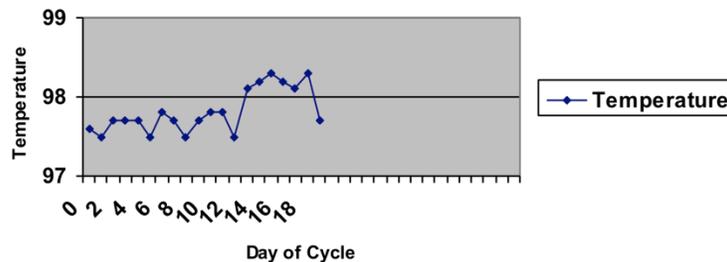
Luteal Phase

Normal cycle length with associated low progesterone, the output is low throughout the luteal phase, not enough to balance the effects from estrogen resulting in a short luteal phase.

Shortened Luteal Phase

- Low progesterone with lower LH “weak ovulation”
- Follicle producing the egg did not mature properly
- Low progesterone not enough to maintain length for full luteal phase
- The luteal phase is less than 10 days.

Short Luteal Phase



PRE-MENSTRUAL SYNDROME: LUTEAL PHASE OVULATION TO MENSES

PMS Categories: Guidelines for grouping of symptoms.

- PMS A Anxiety
- PMS C Cravings
- PMS D Depression
- PMS H Hydration

PMS A: Anxiety

Associated with:

- Elevated estrogen
- Low progesterone
- Short cycle: estrogen levels quickly reached
- Agitation, irritability, nervousness,
- Insomnia often skin problems.
- Liver congestion - not able to process hormones
- Blocks utilization of B vitamins, creating unstable blood sugar
- The elevated estrogen over stimulates neurotransmitters in brain

Excess Estrogen and its effects on the emotions:

- Increases: Adrenalin (anxiety), Nor-adrenalin (irritability) and Serotonin (nervous tension, palpitations)
- Decreases Dopamine (influencing the ability to relaxation)
- Emotions can be experienced after ovulation due to continued high estrogen, low progesterone
- Possible elevated prolactin levels if breast distention is evident as well.
- Chronic stress lowers progesterone

PMS A Strategies:

Vitex angus-castus / Chaste Tree is a foundational herb in this scenario. High estrogen indicate high prolactin levels with excess or deficient bleeding often with either a too short cycle or a too long cycle.

Also Include

- Nervous system & anxiety support: Milky Oats, Skullcap, Blue Vervain
- Liver support to increase hormone clearance
- Bitters: Angelica, Artichoke, Dandelion, Burdock, Yellow Dock, Turmeric
- Eliminate estrogen & xeno estrogens in the diet, avoid constipation, lifestyle & diet changes
- Address nutrition with B vitamins consider MTHFR snip testing or homocysteine levels to determine methylation

PMS C: Cravings – Carbohydrates: Hypoglycemia Hormonally Induced

Insulin sensitivity increases week before menses and sugar moves out of the blood into cells quickly which causes a fluctuating hypoglycemic reaction. Cravings for sugar & carbs increase with an associated increase in appetite, headaches, dizziness, fatigue, palpitations, jittery feelings and moodiness.

FACTS

- Blood sugar fluctuations cause insomnia
- Prolonged stress causes fluctuations in blood sugar
- Low prostaglandins leads to excessive insulin release
- High insulin levels stimulate catecholamine neurotransmitters causing irritability
- Carb craving often indicator of need for “feel good” neurotransmitters
- Progesterone activity is naturally higher in second phase of cycle increasing a sedative effect which may increase interest in sweets for energy.

PMS C: Strategies

- Include Nervous system tonics: Stress inhibits the body’s utilization of insulin
- include meditation and/or Qi Gong
- Balance diet, sugar regulation, digestive function: Monitor Hemoglobin A1c levels
- Regulate prostaglandins, increase Essential Fatty Acids
- Use botanicals if indicated for blood sugar regulation such as Cinnamon, Fenugreek, Blueberry or Bilberry Leaf
- Increase insulin sensitivity – Magnesium and/or Chromium supplementation
- Daily intake of exercise regulates blood sugar
- Cycle has potential to reregulate with dietary/lifestyle corrections
- True hypoglycemia the symptoms will be for entire the month and not only pre-menstrual

PMS D – Depression

- This form of PMS is often associated with low estrogen in relationship to excessive progesterone
- Starts the week prior to menses as cyclical depression
- When bleeding/menses starts resolution to the depression occurs
- Low estrogen causes rapid breakdown of neurotransmitters that offer the “happy” brain chemicals
- Excessive progesterone acts as depressant with more sedative quality often associated with confusion, withdrawal, an increase in crying, memory loss and forgetfulness.

PMS D Strategies

- Typically, Synthetic Birth Control or Progesterone Cream might be cause, look at whole picture
- Often associated with anemia, deficient water/hydration & mineral status
- Adrenal and nervous system support

- Correct dietary deficiencies - Unstable blood sugar contributes to depression
- Movement & Creativity
- Encourage Estrogenic Action during the 1st half of cycle Red Clover, Hops, Licorice, Black Cohosh, Dong Quai
- Include uplifting herbs: Rosemary, Lemon Balm, Roses, St. John's Wort, Holy Basil
- Suggest a counselor if indicated

PMS H – Hydration

Elevated aldosterone level results in low progesterone, when typically progesterone inhibits aldosterone. In cases of low progesterone fluids tend to elevate and accumulate.

Symptoms include: Water retention, edema, abdominal bloating, breast tenderness, occasionally high blood pressure

- Excessive salt, stress, magnesium deficiency, chronic stress all increase aldosterone
- Clients may gain 3 to 15 lbs (1 – 5 KG) of water weight
- Prolactin might be elevated if client complaint is breast tenderness or pain, due to its role in breast tissue stimulation.
- This type of PMS may be associated with month Higher Blood pressure

PMS H Strategies

- Regulate cycle, encourage progesteronic activity
- Include Chaste Tree, especially if high prolactin signs are evident
- Reduce estrogenic activity by improving liver clearance and addressing diet
- Reduce fluid congestion, increase circulation Dandelion Leaf, Nettle Leaf, Parsley, Gingko
- Eliminate foods high in salt
- Include a Magnesium supplement as higher aldosterone causes depletion
- Green Juicing may be helpful. Include dandelion leaf, parsley leaf, celery, cucumbers.

References and Resources

- Adams, Kerry, Mentorship, 35 hour program within DWCHS 2017 – 2019.
- AHPA Botanical Safety Handbook, CRC Press, 2nd ed., 2013
- Brown, Ben Apprenticeship 2013 – 2016
- Criollo, Julieta, Medicinal Herbs Quick Reference Guide, Revision 7, Published by Author, 2017
- David Winston's Centre for Herbal Studies (DWCHS) Clinical Herbalist Training. [Performance]. Clinical Herbalist Training Program
- Garran, Thomas Avery, Western Herbs in Chinese Medicine, Passiflora Press, 2019
- Garran, Thomas Avery, Western Herbs According to Chinese Medicine: A Practitioners Guide, Healing Arts Press, 2008
- Holmes, Peter The Energetics of Western Herbs: A Materia Medica Integrating Western and Chinese Herbal Therapeutics, Volume I, Fourth Edition 2007
- Hoffman, David, Medical Herbalism Healing Arts Press, 2003.
- Kelville, K, Hobbs, C. Women's Herbs, Women's Health, Botanica Press, Loveland Colorado, 1998
- Maya, Bev,
- Mills, S. & Bone, K., Principles and Practice of Phytotherapy, Churchill Livingstone, 2nd ed., 2013,
- Nissim, R., Natural Healing in Gynecology, Pandora, 1999 (out-of-print, but available via Amazon and ABE)
- Proceedings from the Kootenay Herb Conference 2014, 2016, 2018, The Island Herb Gathering 2017, 2019 and the Cycle Charting Workshops Emery Herbals 2017 and 2018, Canadian Herb Conference 2020 including teachings of Krista D. Poulton, Bev Maya, Kirsty Bredin, and Ember Peters
- Riddle, J., Eve's Herbs, A History of Contraception and Abortion in the West, Harvard Univ. Press, 1997
- Romm, A., Botanical Medicine for Women's Health, Elsevier, 2008
- Stansbury, J., N.D., Herbal Formularies for Health Professionals. Chelsea Green Publishing, 2018
- Trickey, R., Women: Hormones and The Menstrual Cycle, Allen & Unwin, 2011
- Ross, Jeremy, Combining Western Herbs and Chinese Medicine: A Clinical Materia Medica, Greenfields Press 2010
- Tierra, Lesley, Tierra Michael, The Professional Herbalist Course, Curriculum Materia Medica
- Tilgner, Sharol, Herbal ABC's the Foundation of Herbal Medicine, Wise Acres LLC 2018
- Turner, Nastasha, ND The Hormone Diet, Random House, Toronto, Ontario, 2009
- Weschler, Toni, MPH. Taking Charge of Your Fertility, Harper Colins, New York, 2015
- Winston, David, Maimes, Steven, Adaptogens: Herbs for Strength, Stamina, and Stress Relief, Herbal Therapeutics Inc. 2007 / 2019
- Wu, Yan, Fischer, Warren, Practical Therapeutics of Traditional Chinese Medicine, Paradigm Publications, 1997