Herbal Therapies for Insulin Resistance

- *Trigonella foerum-graecum* (fenugreek)
  - Interferes with absorption and digestion of sugars
Herbal Therapies for Insulin Resistance (Cont.)

- Cinnamon (Cinnamomum casia)
  - Improves glucose utilization and increases insulin receptor sensitivity
  - Dose: 1–6 grams powdered cinnamon (1/4 to 1 tsp) or 200–300 mg cassia extract.
  - Cinnamomum zeyanicum and Cinnamomum verum do not work.
  - Possible side effects: GI
    - Ibid., Ring.
Herbal Therapies for Insulin Resistance (Cont.)

- Gymnema sylvestre
  - Improves insulin sensitivity and interferes with the absorption of glucose
  - Has a trophorestorative action of the beta cells of the pancreas
  - Also reduces total cholesterol, triglycerides, and LDL. May increase HDL.
Herbal Therapies for Insulin Resistance (Cont.)

- Gymnema sylvestre (cont.)
  - Suppresses the sweet taste of the taste buds and if taken before eating it will mask sweet detection and decrease the desire for sweet foods and caloric intake for 90 minutes after taking.
Detoxification

- Test patient for toxic metals and chelate if needed.
- Detoxify patient from any other toxin.
- May need to detoxify the liver and GI tract.
Acupuncture can have a positive affect on PCOS patients since it influences the sympathetic nervous system, endocrine system, and neuroendocrine system.

Weight Loss Surgery

- Study on women with PCOS having bariatric surgery.
  - Resolution of menstrual irregularity in 100%
  - Improvement in hirsutism in 75%
  - Resolution of type II diabetes and ability to stop drugs for HTN in 78%
  - Ability to stop medication for hyperlipidemia in 92%
Weight Loss Surgery (Cont.)

- Weight loss surgery is associated commonly with nutritional deficiencies.
- Make sure you replenish the nutrients.
- May need to give nutrients transdermally or use nutrients that are specially designed for weight loss surgery patients.
Conclusion

- High doses of niacin
  - Can worsen insulin sensitivity
  - If using niacin recheck FBS, fasting insulin, and HGBA1C on a regular basis.
- There are a lot of treatment modalities to offer women with PCOS.
Reference

Bacterial Vaginosis
Bacterial Vaginosis

- Disturbed bacterial flora
  - Due to infection
  - Due to hormonal imbalance
Bacterial Vaginosis (Cont.)

- Treatment
  - Lactobacillus/garlic suppositories
  - Oral probiotics
  - Herbal suppositories: myrrh, echinacea, slippery elm, goldenseal root, marshmallow, geranium, and yarrow in polybase for five nights
  - Vag Pak suppositories: anhydrous magnesium sulfate, glycerin complex, hydrastis tincture, thuja oil, tea tree oil, bitter orange oil, vitamin A (as palmitate) 100,000 IU, ferrous sulfate in polybase for two nights. Wait one week and repeat for two nights.
Bacterial Vaginosis (Cont.)

- Treatment (cont.)
  - Boric acid suppositories 600 mg qhs x one week
  - Clindamycin 2% vaginal cream for 2–3 days
  - Clindamycin with lactobacillus suppositories, one to two times/day for 7–14 days
  - Systemic immune builders
    - Oregon grape
    - Garlic
    - Goldenseal
Menstrual Migraines
Menstrual Migraines

Causes

- Estrogen/progesterone levels drop just before cycle
- Estrogen levels dropping and progesterone levels elevating at ovulation
- Fluctuating levels of estrogen at menopause
- Progestins
Estrogen Levels and Headaches

Estrogen and headaches

- Declining estrogen can cause vasoconstriction which can increase migraine pain
- Lower estrogen levels decrease a woman’s pain threshold which makes nerve ending more sensitive to pain-causing stimuli
- Decreasing estrogen levels cause an increase in NE which decrease blood flow to the parts of the brain that can produce an aura experienced by many migraine suffers. This can intensify migraine pain.
- Declining estrogen levels can lower beta-endorphins which help relieve pain.
Estrogen Levels and Headaches (Cont.)

- Estrogen and headaches (cont.)
  - Falling estrogen levels can cause a rebound in dopamine, which can increase pain.
  - Lower estrogen levels decrease serotonin levels at serotonin receptor sites which are paramount in decreasing migraine pain. When serotonin levels fall, blood vessels in the brain can spasm which can cause a migraine headache.
  - Estrogen withdrawal influences functions of microglia
  - Estrogen withdrawal modulates the synthesis of neuropeptides
Reference

Treatment of Menstrual Migraines

- ERT with progesterone if estrogen levels are low or fluctuating peri-menopausally.
- Progesterone supplementation if progesterone levels are low.
  - Days 14–25 of cycle
  - Days 10–25 of cycle if headache occurs at ovulation
  - Days 14–22 higher progesterone dose and lower dose of progesterone days 23–25 if pain occurs just before cycle
- Coenzyme Q-10 200–300 mg qd
- Magnesium glycinate 400–600 mg days 14–end of cycle
Reference

Treatment of Menstrual Migraines (Cont.)

- Transdermal magnesium
  - Magnesium chloride 10%
  - #15–30 mL
  - Apply one to two mL to affected area
Treatment of Menstrual Migraines (Cont.)

- Relaxation techniques
- Biofeedback
- Acupuncture
- Avoid food triggers
  - Chocolate
  - MSG
  - Meats with nitrates
  - Dried fruits with sulfites
  - Aged cheese
  - Alcohol
Vaginal Dryness
References

Vaginal Dryness

- Vaginal dryness is the reduction in lubrication of the luminal surface of the vagina.
- Can occur at any age
- May occur due to low estrogen levels
  - Peri-menopause or menopause
  - Due to BCP
- Occurs in 14 to 31% of the population of all women
Vaginal Dryness (Cont.)

- Occurs in 50% of postmenopausal women
- 63% of women with breast cancer have vaginal dryness.
Vaginal Dryness

- Two types
  - Simple
    - Vagina and neurovasculature are healthy and working
    - Resolution of dryness resolves the symptoms
  - Complex
    - Multifactorial
      - Diabetes
      - HTN
      - Vaginal atrophy
      - High-tone pelvic floor dysfunction
    - Resolution of dryness may not resolve the symptoms
      - Ibid., Wilhite.
Vaginal Atrophy

- Also called atrophic vaginitis
- Is an inflammatory condition of the vagina and outer urinary tract
- Associated with thinning and shrinkage of the tissue
- Also associated with decreased lubrication
- Occurs in 43% of postmenopausal women in the U.S. but the rate varies in other countries
  - Ibid., Wilhite.
Diagnosis

- Sx described by patient
- Physical findings
  - Thinning of vaginal tissue
  - Disappearance of vaginal rugae so that the vaginal canal appears smooth and pale
  - Petechial hemorrhages may be present
  - Blood–tinged vaginal discharge
  - Vaginal pH (which is 4.5 in the reproductive years) increases to 6.0 to 7.5 at menopause if the patient is not hormonally sound. This may increase her risk of vaginal infection.
    - Ibid., Flint.
Differential diagnosis

- Other causes of vaginal bleeding, irritation, and itching
  - Sexually transmitted diseases
  - Hormonal imbalances
  - Malignancy
  - Sjogren’s syndrome
  - Diabetes
  - Ibid., Flint.
Vaginal Lubrication

- Vaginal lubrication is made up of ultra-filtered blood so it relies on a healthy blood flow to the area.
- There are no glands in the vagina.
- Blood pressure pushes fluid from the capillaries through intracellular junctions between vaginal epithelial cells. The resultant vaginal transudate is composed of water and very small proteins that combine at the vaginal surface along with dead epithelial cells.
  - Ibid., Wilhite.
  - Ibid., Nappi.
Sufficient pelvic blood flow is a matter of the bioavailability of nitric oxide (NO).

Nitric oxide causes vasodilation through a cyclic guanosine monophosphate cascade.

Therefore vaginal lubrication is very dependent on the availability of NO.

The enzymatic activity of NO synthase is increased by estrogen and other sex hormones.

NO by itself is not enough for its effect. There are many mechanisms that can suppress the production of NO.

It is important the NO levels be normal. Too high of levels are not good either.

Elevated levels of NO produce inflammation which can lead to free radical production.


Low inflammation supports the bioavailability of NO in aiding lubrication.

- Ibid., Wilhite.
Manipulation of Nitric Oxide Production

- Production of nitric oxide
  - Sufficient L-arginine from the diet (Mediterranean)
    - Nuts (peanuts, almonds, walnuts, hazelnuts)
    - Fruits (berries)
    - Chocolate
    - Fish or chicken
    - Seeds (sunflower, flaxseed)
  - Enough calcium in the diet
    - Ibid., Wilhite.
Manipulation of Nitric Oxide Production (Cont.)

- Facilitation of the activity of nitric oxide synthase
  - Hormones
    - Estrogen
    - Soy phytoestrogens
    - Testosterone
  - Medications and supplements
    - Niacin
      - Recouples nitric oxide synthase
    - Angiotensin converting–enzyme inhibitors
    - Angiotensin II receptor blockers
    - Ginseng
Manipulation of Nitric Oxide Production (Cont.)

- Facilitation of the activity of nitric oxide synthase
  - Other
    - Presence of high-density lipoprotein
    - Reduction of hyperglycemia
      - Ibid., Wilhite.
Manipulation of Nitric Oxide Production (Cont.)

- Prolonged activity of nitric oxide and cyclic guanosine monophosphate
  - Phosphodiesterase–5 inhibitors (sildenafil, tadalafil, vardenafil)
Manipulation of Nitric Oxide Production (Cont.)

- Bioactivity of nitric oxide
  - ASA
  - Vitamin D
    - Decreases inducible nitric oxide synthase
  - Ginkgo
    - Decreases inducible nitric oxide synthase and NO scavenger
  - Red wine, plant polyphenols and flavonoids
- Other
  - Moderate exercise on a regular basis
    - Ibid., Wilhite.
Risk Factors for Vaginal Dryness

- Decreased estrogen
  - Postpartum status, breast-feeding
  - Menopause
  - Premature ovarian failure
  - Oophorectomy
  - Pelvic radiotherapy
    - Ibid., Wilhite.
Risk Factors for Vaginal Dryness (Cont.)

- Other medical conditions
  - Untreated hypertension
  - Diabetes
    - Type I
    - Type II
  - Metabolic syndrome
  - Pituitary disorders
Risk Factors for Vaginal Dryness (Cont.)

- Other medical conditions
  - Neuropathies (particularly autonomic neuropathy)
  - Dermatoses
    - Psoriasis
    - Lichen sclerosis
    - Sjogren syndrome
      • Ibid., Wilhite.
Risk Factors for Vaginal Dryness (Cont.)

- Prescription medications
  - Antihistamines and decongestants
  - Antidepressants
    - SSRIs
    - Atypical
    - TCAs
  - Anti-estrogen therapy for chemotherapy
  - Anti-estrogen therapy for endometriosis or fibroids
  - Chemotherapy
  - Diuretics
  - Progesterone predominant oral contraceptives
    - Ibid., Wilhite.
Risk Factors for Vaginal Dryness (Cont.)

- Unwise behaviors
  - Dehydration including the use of ETOH
  - Use of douches, very hot baths, or strong detergents and dehydrating soaps
  - Use of highly absorptive tampons
  - Use of male condoms with not enough external lubricant
  - Lack of sufficient arousal before intercourse
  - Smoking
    - Ibid., Wilhite.
Topical vaginal lubricants

- Water-based lubricants
  - Increase moisture but if they have a high pH then they can also dehydrate so have the patient choose a vaginal lubricant that hydrates and glides but does not have a high pH. The following lubricants have a high pH.
    - Astroglide
    - Surgilube
    - KY jelly
    - Ibid., Wilhite.
Metabolic Therapies for Vaginal Dryness (Cont.)

- Topical vaginal lubricants (cont.)
  - Polymer–based lubricants
    - Silicone–based
    - Oil–based
      - Both seal in moisture
      - But may be hard to remove from the skin
Metabolic Therapies for Vaginal Dryness (Cont.)

- The type of oil makes a difference
  - Petroleum-based oils are strong solvents and may dissolve latex
  - Oils that contain fatty acids (olive, avocado, coconut) are weaker solvents and do not degrade latex
    - Olive oil can become rancid
    - Avocado may stain the sheets green
    - Coconut is hard to clear the vaginal lumen with long-term use
  - Ibid., Wilhite
Metabolic Therapies for Vaginal Dryness (Cont.)

- Topical vaginal lubricants (cont.)
  - Liquid silk lubricant
    - Has both water-based (moisturizing) and moisture sealing (dimethicone)
    - Made with propylene glycol and parabens which can cause skin irritation
    - Dose: Massage into vulva and vagina PRN up to TID
    - Very useful for lichen sclerosis and psoriasis
      - Ibid., Wilhite.
Metabolic Therapies for Vaginal Dryness (Cont.)

- Topical vaginal lubricants (cont.)
  - Pink silicone lubricant
    - More useful as a moisture sealer than moisturizer
    - More useful than water-based lubricants to reduce friction during intercourse
    - Contains aloe which may cause a dermatitis in some patients
    - pH is more acidic and some patients get irritation
      - Ibid., Wilhite.
Topical vaginal lubricants (cont.)

- Liquid organic silk lubricant
  - Water-base with silicone
  - Preserved with phenoxyethanol
  - pH is a little high which works well for some women and others it may be irritating
  - Massage into the vulva and vagina PRN up to TID
  - Contains aloe which may be irritating to some women
    - Ibid., Wilhite.
Vaginal renewal program
- Use of vibrating vaginal wand, manual massage and water-based lubricant
- Helps patients recondition the health and flexibility of the skin of the vulva and vagina by increasing blood flow through dilation
- Reduces friction tearing of the skin
- Increases blood flow to the vulva and vaginal canal
- Suggested for the following type of women
  - Just starting the effects of low hormonal function
  - Who have had pelvic radiation therapy
  - Vaginal atrophy who have skin tearing and pain with intercourse
  - Ibid., Wilhite.
Metabolic Therapies for Vaginal Dryness (Cont.)

- Vaginal renewal program (cont.)
  - Can use with topical estrogen which may be more effective than estrogen or the vaginal renewal program alone
  - If the pelvic floor muscles are not flexible then send patient to physical therapist that specializes in pelvic floor conditioning.
  - Vaginal renewal program is C/I for patients with vaginismus
    - Ibid., Wilhite.
Smoking

- Smoking can cause changes in the endothelial health that enhance oxidative stresses.

- Smoking is a risk factor for vaginal dryness.

- Encourage the patient to stop smoking.
  - Ibid., Wilhite.
Metabolic Therapies for Vaginal Dryness (Cont.)

- Exercise program
  - Good method to help decrease the rate of vascular aging.
  - Increases the function of small vessel blood flow and increases perfusion of the vagina
  - Affects nitric oxide positively
  - Improves endothelial and CV health
  - Improves lubrication if the patient exercises before intercourse
References

Metabolic Therapies for Vaginal Dryness (Cont.)

- **Diet**
  - Eating a Mediterranean diet is ideal for patients with vaginal dryness since it decreases inflammation.

- **Nutrients**
  - Vitamin D
  - EPA/DHA
  - Calcium citrate
  - Niacin
  - L-arginine

- **Botanicals**
  - Ginkgo
  - Ginseng

- **Medications**
  - Estriol
  - Phosphodiesterase-5 inhibitors
Nutrients

- Vitamin D
  - Has an important role in assisting dietary calcium
  - Manipulates calcium at neural membranes
  - Helps the formation of the calmodulin cofactor needed for NO production
  - Is also a free radical scavenger
  - Elevates the bioavailability of NO after production
  - Dose: according to lab levels
  - Do not give large doses to patients with
    - Active cancer
    - Granulomatous diseases like sarcoid, TB, etc.
    - Hyperparathyroidism
      - Ibid., Wilhite.
Nutrients (Cont.)

- EPA/DHA
  - Helps to absorb vitamin D
  - Acts as a lipid-based antioxidant
  - Decreases inflammation
  - Helps neural function
  - Dose: 2,000–4,000 mg
Nutrients (Cont.)

- EPA/DHA
  - Side effect
    - Is a blood thinner so do not go above 3,000 mg if the patient is on
      - Blood thinners that are prescription
      - Vitamin E
      - Ginkgo
      - High dose garlic
      - SSRIs
      - ASA
      - Ibid., Wilhite.
Nutrients (Cont.)

- Calcium citrate
  - Need extracellular calcium for NO production
  - Dose: 250 mg PO
Nutrients (Cont.)

- Niacin
  - Helps reverse endothelial dysfunction
  - Dose: 1,000 mg BID to TID
  - May cause niacin flush: start with 100 mg and move slowly upward
  - At first, it may exacerbate vulvar dermatoses due to recoupling of NO production which causes a temporary increase in inflammation.
Nutrients (Cont.)

- L-arginine
  - Acts as the protein substrate for NO production
  - Dose: 500–1,000 mg qd
  - Possible side effects
    - Hyperglycemia
    - Hypotension
    - Nausea
  - Try and use foods high in arginine first before supplementing
  - Too high levels can inhibit NO production
  - C/I
    - Kidney disease
    - Ibid., Wilhite.
Botanicals for Vaginal Dryness and Atrophy

- Support tissue integrity, epithelial thickness, moisture, and tone
  - Phytoestrogen, estrogen–like effects
    - Dioscorea villosa (Wild yam)
    - Glycine max (Soy)
    - Humulus lupulus (Hops)
    - Linum usitatissimum (Flax seeds)
    - Medicago sativa (Alfalfa)
    - Panax ginseng (Ginseng)
    - Trifolium pratense (Red clover)
    - Turnera diffusa (Damiana)
  - Ibid., Flint.
Botanicals for Vaginal Dryness and Atrophy

- Soothe, moisten, and heal tissue
  - Vulnerary
    - Calendula officinalis (Calendula)
    - Hypericum perforatum (St. John’s wort)
    - Lavandula officinalis (Lavender)
    - Symphytum officinale (Comfrey)
  - Emollient
    - Calendula officinalis (Calendula)
    - Hypericum perforatum (St. John’s wort)
    - Lavandula officinalis (Lavender)
    - Symphytum officinale (Comfrey)
    - Ibid., Flint.
Botanicals (Cont.)

- Ginkgo (Ginkgo biloba)
  - Acts on nitric oxide vasodilation
  - Modulates NO second messenger action
  - Scavenges excess NO
  - Inhibits NO production under inflammatory conditions
  - Inhibits platelet activation
  - Dose: 60 mg BID of extract 50:1 (can increase to 120 mg BID)
  - C/I:
    - Is a blood thinner so do not use with prescription blood thinners
    - Have caution if used with ASA, NSAIDs, high dose garlic
      - Ibid., Wilhite.
Ginseng (Panax ginseng)

- Facilitates endothelial NO release
- Is an antioxidant
- Dose: 1 to 2 grams root tea infusion TID
- Possible side effects
  - May cause agitation
  - Can cause insomnia
  - May be a phytoestrogen

Botanicals (Cont.)

- Alfalfa
  - Is a phytoestrogen
  - Contains
    - Genistein
    - Biochanin A
    - Daidzein
  - May have a beneficial effect on estrogen
  - Has been suggested for vaginal dryness
Botanicals (Cont.)

- **Calendula**
  - As a cream applied BID
    - Soothes vaginal tissue
    - Heals minor abrasions
    - Helps to prevent infection
      - Antibacterial
      - Antiviral
  - Suggested by ESCOP and the German Commission for skin and mucosal injuries and abrasions
References

Botanicals (Cont.)

- Hops
  - Has estrogenic effects since it contains 8-prenylnaringenin
Botanicals (Cont.)

- Hops (cont.)
  - Has strong estrogen receptor–binding bioactivity
    - Ibid., Liu.
Botanicals (Cont.)

- Hops (cont.)
  - Helps with vaginal dryness
  - May also help with hot flashes and night sweats
  - May decrease insomnia (has a sedating effect)
    - Ibid., Liu.
Botanicals (Cont.)

- Hops (cont.)
  - May interfere with barbiturates
  - May cause exacerbate depression
    • Ibid., Flint.
Botanicals (Cont.)

- Red clover
  - Contains phytoestrogens
    - Formononetin
    - Biochanin A
    - Daidzein
    - Genistein
  - May help with vaginal dryness
  - May help with other menopause symptoms
    - Ibid., Flint.
    - Ibid., Oerter.
    - Ibid., Overk.
Ginseng (Panax ginseng) (cont.)

- Case report showed that ginseng orally was effective for vaginal dryness.
- Case report revealed that ginseng transdermally was also effective for vaginal dryness.
  - Ibid., Low Dog.
Botanicals (Cont.)

- Comfrey
  - Moistens, heals, and soothes irritated and inflamed tissue
  - Some of its components have anti-inflammatory activity and tissue healing.
    - Allantoin
    - Rosmarinic acid
      - Wichtl.
  - Used as a vaginal salve comfrey oil has been shown to increase epithelial cell growth and tissue integrity.
Comfrey

- German Commission E approves topical use of comfrey only on unbroken tissue
- Use for only 4–6 weeks
  - Ibid., Flint.
Botanicals (Cont.)

- Not recommended
  - Black cohosh orally has not worked for vaginal dryness
Botanicals (Cont.)

- Not recommended (cont.)
  - Topical genistein has not worked for vaginal dryness
Botanicals (Cont.)

- Not recommended (cont.)
  - Damiana (Turnera diffusa)
    - Blocks progesterone receptors without receptor activation
    - May boost estrogen activity
Medications

- Natural prescription hormone replacement
  - Estrogen transdermally
    - Helps maintain muscle tone of the vagina and urethra which reduces vaginal irritation
    - Prevents drying and thinning of the vaginal tissues and improves symptoms that are already present
  - Estriol vaginal cream also has been found to be helpful.
    - May use with vaginal renewal program
Medications (Cont.)

- Compound estriol vaginal cream or suppository 1–2 mg.
- Sig: insert vaginally nightly for two weeks, Monday and Thursday for two weeks and then PRN
Medications (Cont.)

- Progesterone
  - Helps prevent incontinence
  - Too much can cause incontinence
Phosphodiesterase-5 inhibitors

- Reduce insulin resistance in endothelial capillaries
- Prolongs vasodilation which has a good effect on genital perfusion
Medications (Cont.)

- Phosphodiesterase-5 inhibitors (cont.)
  - Possible side effects
    - Nausea
    - Headache
    - Nasal congestion
    - Renal impairment
    - Hepatic impairment
    - Hypotension
    - Change in vision
    - Ototoxicity
  - C/I
    - With nitrates
    - With alpha1 blockers
      - Ibid., Wilhite.
Medications (Cont.)

- Phosphodiesterase-5 inhibitors (cont.)
  - Oral form is not recommended for vaginal dryness
    - Ibid., Wilhite.
Medications (Cont.)

- Hyaluronic acid 5 mg suppository compounded
- Insert qhs x 2 weeks, Monday and Thursday for two weeks and then PRN
Medications (Cont.)

- Compounded vaginal lubricants
- Glycerin 15%/Vitamin E 0.2% vaginally
Dysmenorrhea
Dysmenorrhea

- Occurs in 50% of women
- Primary dysmenorrhea does not stem from a physical abnormality.
- Secondary dysmenorrhea is usually caused by endometriosis or uterine fibroids.
Risk Factors for Menstrual Cramps

- Women who begin cycle before the age of 12 and have longer menstrual cycles
- Age (under the age of 20)
- Women who have never delivered
- Heavy bleeding during cycles
- Overweight (doubles the risk)
- Smoking
- History of depression
- History of anxiety
- Women under the age of 20 that try and lose weight
Symptoms of Dysmenorrhea

- Pain in lower abdomen that may radiate to the lower back and thighs
- Nausea
- Vomiting
- Loose stools
- Sweating
- Dizziness
Causes of Dysmenorrhea

- Elevated levels of prostaglandin 2
  - Women with dysmenorrhea produce 8–13x more than women who do not have dysmenorrhea
- Higher prostaglandin 2 levels may be associated with lower progesterone levels just before menstruation
- Pain only occurs if the patient has ovulated
Treatment of Dysmenorrhea

- Acupuncture
- Biofeedback
- Homeopathy
- Therapeutic massage
- Stress reduction
- Prescription medications
  - Antidepressants
  - BCP
  - Progesterone
  - Diuretics
Treatment of Dysmenorrhea (Cont.)

- Avoid foods that are high in arachidonic acid that will increase prostaglandin 2
  - Eating foods the patient is allergic to
  - Butter
  - Corn and palm oils
  - Coconut oil
  - Soybean oils
  - Eggs
Treatment of Dysmenorrhea (Cont.)

- Avoid foods that are high in arachidonic acid that will increase prostaglandin 2
  - Meats
    - Beef
    - Pork
    - Turkey
    - Chicken
Treatment of Dysmenorrhea (Cont.)

- Eat foods that increase prostaglandin 1 and 3 because they are antispasmodic and will decrease pain
  - Cold water fish such as salmon, tuna, halibut, and sardines
  - Flax
  - Pumpkins seeds
  - Sesame seeds
  - Sunflower seeds
Treatment of Dysmenorrhea (Cont.)

- Supplements
  - Calcium 600–100 mg
  - Magnesium glycinate 400–600 mg
  - EPA/DHA 2,000 mg
  - Vitamin E 200–400 IU
  - Vitamin C and rutin 1,000 mg of vitamin C
  - Niacin plus B complex vitamins
Treatment of Dysmenorrhea (Cont.)

- Herbal therapies
  - Valerian
    - Is a sedative and antispasmodic
  - Crampbark
    - Uterine relaxant and antispasmodic
  - Black haw
    - Uterine relaxant
  - Black cohosh
    - Uterine relaxant
  - Pine bark extract
    - 30 mg BID
  - Rose tea
Vulvodynia
Vulvodynia

- Vulvodynia is chronic vulvar pain with no known etiology.
- Two forms
  - Generalized
    - Pain in different areas of the vulva at different times
    - May be constant or intermittent
    - Touch or pressure may aggravate symptoms
  - Vulvular vestibulitis syndrome
    - Pain in the vestibule (entrance to vagina)
    - Often a burning sensation
    - Occurs only due to touch or pressure such as intercourse
Possible Causes of Vulvodynia

- Foods may trigger vulvodynia
  - Alcohol
  - Apples
  - Bananas
  - Caffeine
  - Chocolate
  - Citrus foods
  - High oxalate foods
  - Lentils
  - Lima beans
  - Sharp cheeses
  - Spicy food
Possible Causes of Vulvodynia (Cont.)

- Foods may trigger vulvodynia (cont.)
  - Sweeteners
    - Aspartame
    - Saccharin
  - Tobacco
  - Tomatoes
  - Yogurt
- Chemical preservatives in foods or medications
  - PEG is a particular problem (usually used in creams)
- Dyes that contain tartrazine
Possible Causes of Vulvodynia (Cont.)

- Hormone imbalance
  - Estrogen
  - Testosterone
Therapies for Vulvodynia

- Lifestyle
  - Avoid potential irritants eg., strong soaps, douches
  - Use dermatologically mild soaps
  - Do not use fabric softener on panties
  - Use white unscented toilet paper
  - Avoid hot tubs or pools that contain chlorine
  - Avoid perfumed tampons and pads
  - Wear loose fitting panties and avoid panty hose
  - Pat vulva with cool water after urinating
  - Avoid strong spermicides
  - Avoid activities that put pressure on vulva such as bicycling or horseback riding
Therapies for Vulvodynia (Cont.)

- Relieve pain
  - Relaxation techniques
  - Use Sitz baths
  - After intercourse apply ice pack to area
- Medications
  - Local lidocaine
  - Estrogen cream
  - Tricyclic antidepressants
  - Anticonvulsants
  - Nerve blocks
  - Interferon injections
Therapies for Vulvodynia (Cont.)

- **Integrative Therapies**
  - Physical therapy to strengthen pelvic tissues
  - Exercises to decrease muscle spasms
  - Biofeedback
- **Surgery**
  - Vestibulectomy (nerve fibers are cut)
- **Balance hormones**
Decreased Sexual Interest in Women
Causes of Decreased Sexual Interest in Women

- Low testosterone
- Low estrogen
- Low progesterone
- Low DHEA
- High or low cortisol
- Hypothyroidism
Treatments for Decreased Sexual Interest in Women

- Fix the hormonal imbalance
- Stress reduction techniques
- Scream cream
- Local testosterone
Scream Cream

- Formulation contains
  - Aminophylline 30 mg/ml
  - Isosorbide dinitrate 3.72 mg/ml
  - L-arginine 60 mg/ml
  - Pentoxifylline 50 mg/ml
  - Directions: apply 1 ml to the clitoris one hour prior to intercourse. Works as a vasodilator.
Scream Cream #2

- Aminophylline 3% cream plus arginine 6% cream in emollient cream base
- Sig: apply 0.25 mL topically to clitoris 30 minutes before planned intercourse.
Local Testosterone

- Apply 4 mg local testosterone cream to clitoris 30 minutes before planned intercourse.
- Can add testosterone 1–2 mg to scream cream.
Incontinence
Incontinence

- Causes of incontinence
  - Bladder has estrogen receptors
    - As estrogen levels decline, incontinence may occur
  - Progesterone innervates smooth muscles like the bladder
    - Low progesterone levels can lead to incontinence
  - Excess caffeine can cause urgency and/or incontinence
  - Dyes that contain tartrazine (such as FD&C yellow #5)
    - Can be in foods, drinks, medications, and vitamins
Incontinence

- Treatment
  - Estrogen or progesterone replacement in patients that are deficient
  - Avoid caffeine
  - Avoid tartrazine
  - Vinpocetine 10–20 mg BID
Obtaining CE

If you would like to receive continuing education credit for this activity, please visit:

http://pcca.cds.pesgce.com