Chronic Pelvic Pain:
A Functional Nutrition Approach

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Founder, The Integrative Women’s Health Institute
What is Functional Nutrition?

• Truly, it is currently still in development. I am a member of the first class of doctoral students in functional nutrition.

• There are nutritionists (RD, CCN, and CNS) + graduate education at accredited universities with an integrative focus and/or through Continuing Education with a functional medicine perspective on nutrition.
“Functional medicine provides a new model of healthcare delivery and practice that addresses the drivers of chronic diseases such as cardiovascular disease, diabetes, cancer, autoimmune and allergic conditions, digestive, mood, and cognitive disorders by translating existing research into clinical practice through the lens of systems biology.”

Functional Medicine

- **Discipline neutral practice perspective.**

- The belief that most chronic disease is preventable and most reversible with an individualized, integrative approach addressing genetics, diet, nutrition, environmental exposures, stress, exercise, and psycho-spiritual needs.

- Much of chronic disease is preceded by a period of declining function in one or more of the body’s systems.

Root Causes from a Functional Nutrition Approach

• In our chronic pelvic pain patients often their systems (such as digestive/ detox/ immune/ musculoskeletal/endocrine) been declining for a period of time, plus there is usually a trigger for the current problem, mediators sustain the symptom and underlying cause.

• Antecedents

• Triggers

• Mediators
Antecedents

• The Origins of Illness: Congenital or Developmental

• Genetic/ Family History (Detox gene and estrogen receptor gene polymorphisms in endometriosis)

• Intrauterine environment (Mother with gestational diabetes or dysbiosis during pregnancy)

• Exposure to sexual abuse in childhood and greater pelvic pain disability


Triggers

- Provocation of Illness: Initiates an acute illness or the emergence of symptoms.
- Lactose intolerance and pelvic pain after pregnancy. (Dairy exposure and pregnancy as possible triggers.)
- Celiac disease and endometriosis (Gluten exposure as a possible trigger.)

Caserta D, Matteucci E, Ralli E, Bordi G, Moscarini M.

Celiac disease and endometriosis: an insidious and worrisome association hard to diagnose: a case report.
Caserta D, Matteucci E, Ralli E, Bordi G, Moscarini M.

Risk of endometriosis in 11,000 women with celiac disease.
Stephansson O1, Falconer H, Ludvigsson JF.

Lactose intolerance and long-standing pelvic pain after pregnancy: a case control study.
Granath A1, Hellgren M, Gunnarsson R.
Mediators

• Formation of Illness: Anything that produces symptoms, damage to tissues, or the types of behaviors associated with being sick.

• Continuing to eat a diet high in inflammatory foods and low in flavonoids, plus lack of exercise.

• Continued chronic stress/ elevated cortisol levels.

• Fear of Pain
Common Pelvic Pain Diagnoses

- Endometriosis
- Vulvodynia (Vulvar Vestibulodynia)
- Interstitial Cystitis (Painful Bladder Syndrome)
- Chronic Yeast Infections/ Bacterial Vaginosis/ UTI or other similar chronic infections (dysbiosis)
- IBS/ Constipation
- Pelvic Floor Dysfunction
- Ovarian Cysts/ Fibroids/ Premenstrual Syndrome
Potential Root Causes from a Functional Nutrition Approach

- Genetic/Epigenetic
- Digestive
- Autoimmune/Inflammatory
- Dysregulated stress response
- Other hormonal imbalances (insulin resistance, sex hormone imbalances)
- Musculoskeletal: pudendal nerve irritation/injury, & pelvic floor muscle dysfunction (realm of pelvic specialist physio)
Genetic/ Epigenetic

- Research is beginning to detail genetic risks for pelvic pain conditions.
- Some of these genetic risks, specific to pelvic pain, have to do with methylation pathways and enzymes involved in neurotransmitter conversion and breakdown.
Genetic/ Epigenetic

• **GCH1** is the rate limiting enzyme in the biosynthesis of 6(R)-L-erythro-5,6,7,8-tetrahydrobiopterin (BH4). BH4 is an essential cofactor in the synthesis of several pain modulators including catecholamines, serotonin and nitric oxide.

• Among patients currently being treated for *(provoked vestibulodynia)* PVD, there was a significant interaction effect of **GCH1-gene polymorphism and hormonal contraceptive (HC) therapy** on coital pain ($p = 0.04$) as well as on pressure pain thresholds on the arm ($p = 0.04$).
The probability of PVD was also elevated in participants carrying the 1438G- and 102C-alleles of the serotonin receptor 5HT-2A gene.

The G-/C- genotypes were also associated with more concomitant bodily pain in addition to the dyspareunia, but not with experimental pressure pain thresholds or coital pain ratings.
Genetic/ Epigenetic

- In a meta-analysis of 10 articles, involving 1770 cases and 2057 controls.

- **COMT 158G/A** and **CYP1B1 432C/G** polymorphisms were found to contribute to the risk of *endometriosis* and adenomyosis.

- However, when the data were analyzed by ethnicity, the risk was associated in **Asian populations, but not Caucasian populations**.
Genetic/ Epigenetic

- Glutathione Transferase Polymorphisms and Endometriosis:

- A 2014 meta-analysis found that null genotypes of GSTM1 and/or GSTT1 contribute to risk of endometriosis.

- In a second 2014 meta-analysis, a subgroup analysis by ethnicity was done… significantly increased risks were found among Caucasians and Asians for null GSTM1 genotype, and Asians for null GSTT1 genotype, but no correlation was noted in Caucasian populations for GSTT1 polymorphism.

Zhu H1, Bao J2, Liu S1, Chen Q3, Shen H1.

Ding B1, Sun W2, Han S2, Cai Y3, Ren M3.
Genetic/ Epigenetic

• Other studies also find that region/ ethnicity and other factors may be involved…

• Italian women with the GSTP1 wild-type genotype in the presence of medium-high blood levels of PCB153, total PCBs, or of high levels of PCB180 significantly increased the risk of endometriosis.

• An association between endometriosis and the glutathione S-transferase (GST) M1 null mutation has been reported in French and Slavic populations (not British populations.)
Genetic/ Epigenetic

- There are other underlying genetic factors associated with IBS, fibromyalgia and other conditions that tend to coexist with urogynecologic and musculoskeletal pelvic pain conditions.

- Example: COMT polymorphisms associated with IBS

Karling P1, Danielsson Å, Wikgren M, Söderström I, Del-Favero J, Adolfsson R, Norrback KF.
Add Nutrients to Support healthy BH4, NT, and antioxidant levels

Long-term vitamin C treatment increases vascular tetrahydrobiopterin levels and nitric oxide synthase activity.
d'Uscio LV1, Milstien S, Richardson D, Smith L, Katusic ZS.
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Case Study: Vulvodynia + IBS
28 yo woman, 12 year h/o VVD, lifetime/ familial IBS

- Nutrition Recommendations based on some genetic markers include:
  - Elevated serum homocysteine (10.5 μmol/L) and MTHFR C677T Methylcobalamin (sublingual 2000mg), later consider need for B9, likely need for B6 (CBS C699T)
  - N-acetyl-cysteine and other glutathione precursors.
  - Be sure that she can absorb micro and macronutrients from food and supplements.
  - Start with optimizing digestive health.
Common Digestive Issues in CPP

- Intestinal permeability/ food sensitivities (overlaps with immune system)
- Gut dysbiosis (overlaps with immune system)
- Nutrient deficiencies
- Visceral Pain of IBS/ IBD overlap with bladder, gynecologic pelvic pain
- Lack of chewing/ poor digestion (overlaps with HPA Axis response/ high stress)
Poor Digestion and Pelvic Pain

• It’s not enough to simply apply a survey list of foods that many patients with pelvic pain (or IC) often find irritating. It’s important to understand why these foods are irritants.

• Is her digestive system functioning optimally?
Based on a Survey of 104 Patients Who Met The Criteria for IC

- 90.2% of subjects indicated that consuming certain foods or beverages made their symptoms worse.

- The most bothersome foods: coffee, tea, soda, alcoholic beverages, citrus fruits and juices, artificial sweeteners, and hot pepper.

Most Bothersome:
- Coffee/Tea
- Soda
- Alcoholic beverages
- Citrus
- Tomatoes
- Spicy Foods
- Sweeteners

Least Bothersome:
- Water
- Milk
- Fruits (non-citrus)
- Vegetables
- Animal proteins
- Bland carbohydrates

Table 1. Foods IC Patients Claim as Most and Least Bothersome

<table>
<thead>
<tr>
<th>Foods Identified as Most Bothersome to IC Patients</th>
<th>Foods Identified as Least Bothersome to IC Patients</th>
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<tbody>
<tr>
<td>Coffee (caffeinated)</td>
<td>Water</td>
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<tr>
<td>Coffee (decaffeinated)</td>
<td>Milk, low-fat</td>
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<tr>
<td>Tea (caffeinated)</td>
<td>Milk, whole</td>
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<tr>
<td>Cola soda</td>
<td>Bananas</td>
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<tr>
<td>Noncola soda</td>
<td>Blueberries</td>
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<tr>
<td>Diet soda</td>
<td>Honeydew melon</td>
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<tr>
<td>Caffeine-free soda</td>
<td>Pears</td>
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<tr>
<td>Beer</td>
<td>Raisins</td>
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<td>Red wine</td>
<td>Watermelon</td>
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<tr>
<td>White wine</td>
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<td>Champagne</td>
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<tr>
<td>Grapefruit</td>
<td>Broccoli</td>
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<tr>
<td>Lemons</td>
<td>Brussels sprouts</td>
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<tr>
<td>Oranges</td>
<td>Cabbage</td>
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<tr>
<td>Pineapple</td>
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<td>Grapefruit juice</td>
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<td>Equal</td>
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<td>Pretzels</td>
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<td>Popcorn</td>
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Abbreviation: IC, interstitial cystitis.
Source: Shorter et al.41

Surveys for Male CP/CPPS

- 286 questionnaires to men meeting NIH criteria for CP/CPPS (33% response rate)

- Of the 95 responders, 33 also met the NIDDKD criteria for IC/PBS

- 43.5% reported that certain foods and beverages increased their pain.

Most Bothersome Foods
(similar in men w/CPP and women w/IC)

- Spicy foods
- Coffee/ Tea (caffeinated found to be worse)
- Hot peppers/ Chili
- Citrus Fruits/ Vinegar
- Alcoholic beverages
Surveys for Male CP/CPPS

- Interestingly, 11% never or rarely eat the foods that they know cause them pain.
- 47% reported often eating foods that they know will increase their symptoms.
- This is not just about knowing which foods are bothersome to each patient, but also supporting them with skilled coaching to implement dietary changes.

Herati AS1, Shorter B, Srinivasan AK, Tai J, Seideman C, Lesser M, Moldwin RM.

What Could Be Some Possible Mechanisms?

- Digestion and absorption begin in the brain...
  *What is she thinking when she’s eating?*

- Fear of eating foods that might harm is a big factor and creates stress around eating.

- Confusion… will this worsen my symptoms?, social fear around food, eating disorders (and subclinical eating disorders), eating on the run
What Could Be Some Possible Mechanisms?

- **Leaky gut:** In the case of autoimmune disease such as celiac disease, a *disruption of the intestinal barrier* allows *environmental triggers* (such as gluten) to pass through, *triggering the immune response* that can lead to autoimmunity and chronic systemic inflammation.

- **Dysbiosis**
Factors affecting mucosal immune system resulting in intestinal barrier dysfunction, autoimmunity and nervous system abnormalities

Dietary Proteins & Peptides  Antibodies  Drugs & Xenobiotics  Physical Stress  Infections  Cytokines  Neurotransmitters  Enzymes

INTESTINAL BARRIER DYSFUNCTION

FOOD ALLERGY & INTOLERANCE

 IMMUNE SYSTEM ABNORMALITIES

AUTOIMMUNITY

INFLUENCE ON THE BLOOD-BRAIN BARRIER AND NEUROAUTOIMMUNITY

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You are What You Absorb

- **Mouth**: salivary amylase
- **Stomach**: Intrinsic factor + B12, and protein + pepsin, need HCl (very low pH)
- **Duodenum** (higher pH): bile salts mix with triglycerides, and pancreatic enzymes released, iron absorbed
- **Jejunum**: many nutrients absorbed - Calcium, folate, free fatty acids, fat soluble vitamins, B12 (at the end), some water and sodium absorbed.
- **Ileum**: water, sodium, B12, intrinsic factor, Bile acids recycled.

**Short Bowel Syndrome**
The short bowel syndrome resulting in dehydration and malabsorption occurs as a result of massive intestinal resection, especially of the ileum with or without the colon. Resections of up to 100 cm of ileum cause diarrhea, because there are progressively greater degrees of bile salt malabsorption. Malabsorbed bile salts enter the colon where they cause water secretion by activating cyclic adenosine monophosphate. When the resection exceeds 100 cm, there is progressively more fatty acid loss in the colon, which also adds to water secretion and diarrhea. There is also malabsorption of vitamin B12. In addition, there is loss of energy in the form of increased fat loss. However, as the length of the resection increases, there is malabsorption of all macronutrients, namely, fat, carbohydrate and protein. The malabsorbed carbohydrate entering the colon is fermented to produce flatulence and diarrhea. In addition, there is malabsorption of vitamins and trace elements such as zinc.
• **ALL of these nutrients are needed for optimal health**

- Related to pelvic pain:
  - Estrogen metabolism
  - Liver detoxification process
  - Nourishment and optimal functioning of gut and bladder mucosal membranes

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*http://pamtremble.blogspot.com/2008/05/where-are-nutrients-absorbed.html*
Causes of Intestinal Permeability

• Gliadin exposure (even in those without active celiac disease or gluten sensitivity, but in those patients it’s the worst effect.)

• NSAIDs - cause a marked reduction in probiotic bacteria in the gut

• Fluid restriction + exercise
Stress and Self-Medication Harm Digestion
Specific Intestinal (Bladder?) Barrier Healing Strategies

- **Reduce Stress**: The stress of public speaking increased salivary cortisol levels and increased intestinal permeability on a 2 h lactulose-mannitol urinary excretion test.
Nutritional Support to Decrease Stress

- Increase omega-3 fatty acids:

- In chronically stressed men, omega-3 fatty acids and phosphatidylserine restored normal cortisol response.

- Omega-3 fatty acid supplements decrease dysmenorrhea pain intensity.

- Pregnant women living in urban low-income environments who received 450mg DHA reported reduced perceived stress and lower levels of stress hormones in the third trimester.
Nutritional Support to Decrease Stress and Pain

- **Reduce sugar:** In obese, Latin American and African American adolescents (male and female), cortisol is significantly associated with elevated visceral adipose tissue in the presence of a high sugar diet.

- In women with PCOS, after GnRH agonist stimulation, testosterone was higher after hyperinsulinemia.

- **Women with PCOS with high serum testosterone, are more likely to report dyspareunia, urgency, nocturia, and bladder/pelvic pain**
Nutritional Support to Decrease Stress and Pain

- **Supplement with zinc:** used to improve intestinal lining integrity after stress-induced intestinal permeability in pigs.

- **Supplement with antioxidants** including lycopene, epigallocatechin gallate (EGCG from green tea), ellagic acid (from pomegranate)

- **Supplement with selenium**

**References**


Effects of supplemental zinc amino acid complex on gut integrity in heat-stressed growing pigs.
Sanz Fernandez MV, Pearce SC, Gabler NK, Patience JE, Wilson ME, Socha MT, Torrison JL, Rhoads RP, Baumgard LH.


Effects of a dietary supplement on chronic pelvic pain syndrome (Category IIIA), leucocytospermia and semen parameters.
Lombardo F1, Fiducia M, Lunghi R, Marchetti L, Palumbo A, Rizzo F, Koverech A, Lenzi A, Gandini L.
Address Dysbiosis

- **What is dysbiosis?** Abnormal levels of pathogens in the gut/vaginal microbiome as compared with levels of commensal bacteria.

- Pathogenic bacteria in the gut when overabundant compared with healthy bacteria, may trigger aberrant toll-like receptor (TLR) signaling (the TLR’s no longer effectively recognize commensal vs pathogenic bacteria), critically contributing to acute and chronic intestinal inflammatory processes.

How the Intricate Interaction among Toll-Like Receptors, Microbiota, and Intestinal Immunity Can Influence Gastrointestinal Pathology.  
Frosali S1, Pagliari D1, Gambassi G1, Landolfi R1, Pandolfi F1, Cianci R1.

Effect of commensals and probiotics on visceral sensitivity and pain in irritable bowel syndrome.  
Theodorou V1, Ait Belgnaoui A2, Agostini S1, Eutamene H1.
The Supportive Role of The Gut Microbiota

**Protective Functions**
- Pathogen displacement
- Nutrient competition
- Receptor competition
- Production of anti-microbial factors

**Metabolic Functions**
- Control of epithelial cell differentiation and proliferation
- Metabolism of dietary carcinogens
- Synthesis of vitamins
- Fermentation of non-digestible dietary residue and epithelial-derived mucus
- Ion absorption
- Salvage of energy

**Structural Functions**
- Barrier fortification
- Induction of IgA
- Apical tightening of tight junctions
- Immune system development

Front Physiol. 2011; 2: 94.
Nutritional Support to Optimize Gut Microbiota Composition

- Begins in utero/ at birth with healthy maternal microbiome and vaginal delivery (or attempted)

- Breastmilk

- **Fermented foods** - clinically, I find that local, homemade fermented veggies (sauerkraut) and dairy/ coconut milk products are most effective.

References:


Nutritional Support to Optimize Gut Microbiota Composition

- **Prebiotics** - food for the commensal bacteria

- Eating **pistachios** has been found to increase the number of beneficial butyrate producing bacteria and reduce the number of lactic acid producing bacteria.

- **Resistant starch**: May be protective against colon cancer even in high red meat diets. (raw potato starch, plantain flour, green banana flour, and cassava/tapioca starch.)
Probiotic Supplements: Are They Safe?

- Lactobacilli, Bifidobacteria, and other commensal microorganisms are generally regarded as safe.

- Safety can be compromised and a risk of bacteremia can emerge when probiotics are administered in high doses in immunodepressed or in patients suffering from severe illnesses.

- Lactobacillus delbrueckii (normally commensal species)… *the cause* of chronic UTI in a published case study of an 85 year old woman.
Probiotic Supplements

- Beneficial but modest effect of probiotic treatments in different meta-analyses

- Further investigations are needed in order to establish optimal regimens (the most effective probiotic species and strains, individual or mixture administration [synergistic effect]) as well as to identify subgroups of patients most likely to benefit from these treatments.

Effect of commensals and probiotics on visceral sensitivity and pain in irritable bowel syndrome. Theodorou V1, Ait Belghaoui A2, Agostini S1, Eutamene H1.
Specific Probiotic Strains that May Reduce Visceral Sensitivity and Pain

- Lactobacillus farciminis
- L. paracasei NCC2461
- Bifidobacterium infantis 35624: It is of particular interest that in this trial B. infantis 35624 treatment normalized the low IL-10/IL-12 ratio (Th1 profile/ low regulatory immunity) characterizing the IBS patients before treatment, suggesting that the anti-nociceptive effect of this strain is linked to a decrease of the IBS inflammatory tone.
- Fermented milk containing B. lactis CNCM I-2494
Other Pelvic Health Impacts of Specific Probiotic Species

• A standard dose of 1.3 billion CFU twice daily of Lactobacillus acidophilus LAC-361 and Bifidobacterium longum BB-536 reduced severity of diarrhea post pelvic radiation.

• An association between prevalent hrHPV infection and a decreased abundance of Lactobacillus sp. with increased abundance of anaerobes particularly of the genera Prevotella and Leptotrichia.
Case Study: Digestive Recommendations
Vulvodynia + IBS
28 yo woman, 12 year h/o VVD, lifetime/ familial IBS

• This patient was vegan for personal reasons.

• 3-week elimination diet, avoiding meat, fish, dairy, soy, all grains (except quinoa), peanuts, corn, sugar, and artificial sweeteners.

• Eliminated caffeine and limited alcohol to 1 drink per day or less with food.

• Continued to eat eggs and legumes (except for peanuts).

• Patient was instructed to not limit calories and to eat when she felt hungry.
Case Study: Digestive Recommendations
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- Elevated lactoferrin (8.3 mg/mL) and calprotectin (65 μg/g) + Low secretory IgA (<0.1 mg/dL)
- Signs of bowel inflammation and low immune function in the bowel mucosa
- TruFiber prebiotic plus Probiotic (Prescript Assist)
Case Study: Digestive Recommendations
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- Low pancreatic elastase (122 μg/mL)
- Inefficient digestive enzyme function
- Betaine HCL + digestive enzymes - not well tolerated by this patient.

The Impact of Inflammation: Most Are Eating Plenty of Sugar
According to the U.S. Centers for Disease Control and Prevention, 47% of people with arthritis have one comorbid condition such as heart disease, chronic respiratory conditions, diabetes, or stroke. It is possible that those who survive into their 70s and 80s are less likely to have such chronic pain conditions.
Anti-inflammatory Recommendations

• **Anti-inflammatory diet** high in polyphenols, omega-3 fatty acids, probiotics, prebiotics, and clean protein sources.

• How to figure out the best anti-inflammatory diet for your specific patient? Use elimination diet as assessment tool.
Nutritional Support for CPP

- **Elimination Diet:** In a study of 21 patients with migraine + IBS pain (double-blind, randomized, controlled, cross-over clinical trial) - used IgG antibody testing against 270 food allergens.

- Elimination diet (based on IgG testing) vs usual diet

- Significant reductions in pelvic/ abdominal pain, migraines, and improvements in QOL.
IWHI Elimination Diet

- Caffeine, alcohol, dairy, soy, gluten, peanuts, shellfish, sugar/ sweeteners, eggs, beef (especially factory farmed), nightshade vegetables, onions, baker’s yeast, and sometimes grains/ legumes, citrus,& nightshades.

- Remove for 21-28 days, add back for 3-4 days (2-3 servings per day of high quality source) and look for symptoms - pain, skin issues, poor sleep, weight gain digestive issues, headaches, brain fog, etc.

- [http://integrativewomenshealthinstitute.com/professional-resources/ipps-cpp-cleanse-fall/](http://integrativewomenshealthinstitute.com/professional-resources/ipps-cpp-cleanse-fall/)
Nutritional Support for CPP

- **Dietary supplement**: a synergic combination of highly antioxidant substances including lycopene, EGCG, ellagic acid, selenium, and zinc (studied in men with NIH Category III: Chronic Prostatitis without infection or chronic pelvic pain syndrome (CPPS) (IIIA - Inflammatory))

Nutritional Support for CPP

- **Lycopene** reduces levels of adhesion phenotype markers in normal peritoneal and adhesion fibroblasts. *May be helpful pre-/post- surgically for women with abdominal and pelvic surgeries at high risk for adhesions.*


Fletcher NM1, Awonuga AO, Saed MG, Abu-Soud HM, Diamond MP, Saed GM.
Nutritional Support for CPP

- **Melatonin:** (40 women with Endometriosis related CPP)
  
  - Compared with placebo, melatonin (10mg for 8 weeks) reduced daily pain scores by 39.80% and dysmenorrhea by 38.01%.
  
  - Melatonin improved sleep quality, reduced the risk of using an analgesic by 80%, and reduced brain-derived neurotrophic factor levels independently of its effect on pain.

Nutritional Support for CPP

- Healthy Omega-6:Omega-3 Fatty Acids Ratio (SAD 16:1, optimal 1-3:1)

- Omega-3 fatty acid supplements decrease dysmenorrhea pain intensity.

  - Cross-over clinical trial on 36 girls aged 18-22 years, randomly assigned to 2 groups of 18. - Group A received 15 mL fish oil daily (550 mg EPA; 205 mg DHA) while Group B received placebo. After 3 months, the treatment regimens were swapped.

  - Significant pain relief after 3 months of supplementation with fish oil (VAS score 20.9 compared with 61.8 for the placebo (P= 0.001). Also a marked

  - Significant reduction in low back pain and abdominal pain (P < 0.05)

  - Significantly fewer rescue doses of ibuprofen while using fish oil.

- Levels of omega-6 polyunsaturated fatty acids are high in patients with chronic pain.

References:


Nutritional Support for CPP

• Dietary Fat and Endometriosis Risk: An analysis of 12 years of prospective data from the Nurses' Health Study II

• During the 586,153 person-years of follow-up, 1,199 cases of laparoscopically confirmed endometriosis were reported.

• The women in the highest fifth of long-chain omega-3 fatty acid consumption were 22% less likely to be diagnosed with endometriosis compared with those with the lowest fifth of intake.

• Those in the highest quintile of trans-unsaturated fat intake were 48% more likely to be diagnosed with endometriosis.

Anti-inflammatory Recommendations

• Suppression of toll-like receptor mediated inflammation with exercise and by normalizing gut dysbiosis.

• 66 women meeting with IC/BPS completed self-report measures of pain as part of the Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP)

• One SD increase in TLR-4 inflammatory response was associated with a 1.59 greater likelihood of endorsing extra-pelvic pain (p=.019).
Case Study: Nutrient Support Recommendations
Vulvodynia + IBS
28 yo woman, 12 year h/o VVD, lifetime/ familial IBS

- Painful menstruation - 1g QD Omega-3 fatty acid EPA/DHA
- Low (insufficient) vitamin D,25-OH (31 ng/mL) - Vitamin D3 (5000 IU QD)
- Low magnesium, RBC (3.3 mg/dL) - Magnesium (360 mg daily)

Case Study: Nutrient Support Recommendations
Vulvodynia + IBS
28 yo woman, 12 year h/o VVD, lifetime/ familial IBS

• Final food plan: vegan + avoid soy, goat dairy (pt. reported even better long term improvement with reduction in gluten and all dairy), nutrient dense

• Continued omega-3 fish oil, vitamin D3, vitamin B12, probiotic, magnesium, and fiber.

• Patient in a new sexual relationship + pain free with occasionally f/u with physical therapy. IBS resolved.

Summary

- Functional Medicine/ Nutrition is discipline neutral and focuses on root cause resolution for women (and men) with chronic pelvic pain.

- Some genetic SNPs can increase risk for pelvic pain conditions and help to determine supplemental nutrient needs.

- Instead of “IC diet” handouts, consider why certain foods are problematic for certain clients - stress? inflammation? dysbiosis? food sensitivities?

- Use elimination diet as an assessment tool, antioxidant foods/ supplements, look for evidence re: specific probiotic strains

- Restore digestive function and nutrients.

- Consider hormonal involvement: cortisol dysregulation, low estrogen/ elevated estrogen: progesterone, elevated testosterone + PCOS, low melatonin.
Thank You!

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- Pelvic Pain Elimination Diet Resource: http://integrativewomenshealthinstitute.com/professional-resources/ipps-cpp-cleanse-fall/