Chiropractic Care for Women’s Wellness

Kristina Petrocco-Napuli, DC, MS
drkrispn@icloud.com
twitter @drkrispn
Facebook: Dr. Kristina Petrocco-Napuli

Objectives

• Discuss the pathophysiology associated with pain and the impact on the female population.
• Recognize the most common conditions which present in chiropractic practices and discuss assessment and treatment options.
• Correlate clinical judgment and presenting conditions to assist in developing quality patient care treatment plans.
• Demonstrate various assessment and treatment options, including orthotics, for conditions associated with the female patient.
• Discuss patient centered and integrative models of care surrounding female patients.

Utilization and Perspectives on Pain

Half of the US population has had an experience with a chiropractor...14% within the last 12 months...women are more likely to use chiropractic treatment - Palmer Gallup Poll 2015

American Society of Anesthesiologists: When Seconds Count

https://www.asahq.org/whensecondscount/patients%20home/pain%20management/womens%20pain

Women’s Pain Update

While women are more likely than men to suffer from fibromyalgia, they don’t report more pain from the condition—however, men are more likely to cope with pain by avoiding activity.

• 12.1% women and 8.8% men report greater pain
• Most severe symptoms are limited to joint pain
• Men are more likely to report mood impact
• More women are likely to report physical incapacity
• Less severe symptoms are more likely to impact sleep
**WOMEN REPORT More Pain AFTER SURGERY**

In a study of more than 22,000 people having one of 30 different types of surgeries – from appendectomy to knee replacement – women reported slightly more intense pain after surgery than did men.

**POST-OPERATIVE PAIN**

Source: Anesthesia, Nov. 2014.

**Pain DURING PREGNANCY**

More than 1 in 2 pregnant women are prescribed epidural anesthesia for pain during pregnancy, according to a study of more than 530,000 women.

**Most common reason is back pain**

Source: Anesthesia, Nov. 2014.

**Help FOR PAINFUL PERIODS**

Massaging rose oil into the abdomen can ease painful periods.

Seventy-five women with painful periods were divided into three groups. All received their treatments:
- **Group 1**: rose oil
- **Group 2**: unscented almond oil
- **Group 3**: no oil

They reported how much pain they had before and after massage.

- Pain was reduced in the first period, but there wasn’t much difference between the groups.
- In the second period, women who used the rose oil experienced much less pain than those in the other two groups.


**foot pain MAY BE LINKED to depression**

In a study of 3,321 people, women with severe foot pain were three times more likely to have symptoms of depression than women without foot pain.

Why? Likely because foot pain = less activity.

Source: Archives of Internal Medicine, Nov. 12, 2012.

**Use of Complementary Health Approaches in the U.S.**

10 most common complementary health approaches among children—2012:

<table>
<thead>
<tr>
<th>Approach</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga, Tai Chi, Qi Gong</td>
<td>33.9%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Mindfulness冥想</td>
<td>15.2%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>10.9%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Traditional Chinese Medicine</td>
<td>9.8%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Massage</td>
<td>8.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Meditation</td>
<td>6.2%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Myofascial Release</td>
<td>6.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Chiropractic</td>
<td>5.2%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Homeopathy</td>
<td>3.9%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Naturopathy</td>
<td>3.5%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

***This includes our teenage women***

**Diseases/conditions for which complementary health approaches are most frequently used among children—2012**

<table>
<thead>
<tr>
<th>Condition</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head or neck pain</td>
<td>60.4%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Low back or spine pain</td>
<td>54.6%</td>
<td>53.8%</td>
</tr>
<tr>
<td>Nerve or joint pain</td>
<td>40.7%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Anxiety or Stress</td>
<td>37.0%</td>
<td>34.4%</td>
</tr>
<tr>
<td>ADHD</td>
<td>33.0%</td>
<td>31.4%</td>
</tr>
</tbody>
</table>

***This includes our teenage women***
Perspectives on Pain

An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

...Pain is always subjective....

...It is unquestionably a sensation in a part or parts of the body, but it is also always unpleasant and therefore an emotional experience.

---

Mechanisms of Pain

<table>
<thead>
<tr>
<th>Physiological Mechanisms of Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nociceptive Pain</td>
</tr>
<tr>
<td>Non-nociceptive pain</td>
</tr>
<tr>
<td>Somatic Pain</td>
</tr>
<tr>
<td>Visceral Pain</td>
</tr>
<tr>
<td>Neuropathic</td>
</tr>
</tbody>
</table>

---

Nociceptive Pain | Non-Nociceptive Pain
--- | ---
Somatic Pain | Neuropathic
- Skin, muscles, bone and joints
- Transmitted along sensory fibers
- Common pain descriptors: sharp or dull

Visceral Pain | - Transmitted through sympathetic fibers of ANS
- Common pain descriptors: poorly localized, dull or crampy
- Correlated with: Nausea, vomiting, sweating and strong emotional reaction

---

Perspectives on Pain

43% of US adults have common chronic pain conditions:
- Approx 100 million people in the US (excludes children)
- Most common type: musculoskeletal (back, joint)
- Multiple sites of pain

---

Chronic Pelvic Pain: Females

- Intermittent, or constant pain in lower abdomen or pelvis
- Not occurring exclusively with menstruation, intercourse or with pregnancy
- Duration > 6 months
- Localized to: anatomic pelvis, anterior abdominal wall, lumbarosacral back or buttocks
- Sufficient severity to cause functional disability or lead to medical care

---

Gynecological/GI/Urological | MSK | Neurological
--- | --- | ---
- Endometriosis
- Adenomyosis
- Secondary Dysmenorrhea
- Pelvic Congestion
- IBS
- Chronic Constipation
- Interstitial Cystitis
- Adhesions
- Leiomyoma/Fibroids
- Myofascial Pain
- Chronic Widespread Pain (FMS)
- Pelvic Floor Dysfunction
- Pudendal Neuralgia
- Visceral Hyperalgesia
Estimated Prevalence of Pelvic Pain

- CPP: 36/1000
- Chronic Back Pain: 41/1000
- Asthma: 37/1000


Chronic Pelvic Pain: Special Populations

- Veteran’s and Active Duty
  - Large number of troops serving in Iraq/Afghanistan (more than 2 million by 2020)
  - Even larger number of females serving the country
  - CPP: Duty and MST


Most Common Conditions of the Female Veteran

<table>
<thead>
<tr>
<th>Condition</th>
<th>Overall %</th>
<th>&lt;40 years</th>
<th>40-64 years</th>
<th>65+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>32.7</td>
<td>7.9</td>
<td>37.2</td>
<td>67.1</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>30.8</td>
<td>9.1</td>
<td>36.5</td>
<td>54.2</td>
</tr>
<tr>
<td>Depressive Disorders</td>
<td>27.1</td>
<td>31.4</td>
<td>14.0</td>
<td>30.6</td>
</tr>
<tr>
<td>Lumbosacral Spine Disorders</td>
<td>22.1</td>
<td>21.8</td>
<td>24.4</td>
<td>14.4</td>
</tr>
<tr>
<td>Skin Disorders</td>
<td>18.3</td>
<td>16.3</td>
<td>19.4</td>
<td>18.7</td>
</tr>
<tr>
<td>Tendinitis</td>
<td>18.3</td>
<td>13.9</td>
<td>22.0</td>
<td>14.3</td>
</tr>
<tr>
<td>Ulcerology</td>
<td>17.0</td>
<td>14.1</td>
<td>21.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Joint disorders, lower extremity</td>
<td>17.4</td>
<td>17.0</td>
<td>19.0</td>
<td>12.9</td>
</tr>
</tbody>
</table>


Chronic Pelvic Pain: Special Populations

Taking a Military History
http://www.va.gov/OAA/pocketcard/FactSheet.asp

PTSD and Low Back Pain


Biomechanical Impact?

Biomechanics of the Pelvis: Forces

Biomechanics are unique in that motion is limited and there is impact both from the spine and extremities.

Biomechanics of the Pelvis

Sacrum and sacroiliac joints separately and then as a unit

Looking Above and Below...
When biomechanics go wrong....

Pronation
Supination
Observation

• Gait Assessment
  – Pronation/Supination
• Postural Assessment
  – Pes Planus
  – Knee Hyperextension
  – Pelvic Obliquity
  – Lordosis/Kyphosis

**Assessment of patient weight bearing and non-weight bearing**

Biomechanics of the Pelvis: Assessment

Functional Testing
• Active Straight Leg Raise (ASLR)
• Hip Extension
• R/O Hip Pathology
• Sacrum vs Sacroiliac vs Lumbosacral Motion

https://www.youtube.com/watch?v=K-kdZK96L9U


Soft Tissue Referral of Pain

Soft tissue and fascia as a pain generator
  - Improper muscle contraction
  - Muscular imbalances
  - Soft tissue adhesions
  - Thoraco-lumbar fascia
  - Pain referral patterns: iliopsoas, iliacus, multifidii, Quadratus lumborum, Abdominals

***Pyramidalia***
  - Intrapelvic Structures

Myofascial Trigger Points and Referral Patterns

- Improper muscle contraction
- Muscular imbalances
- Soft tissue adhesions
- Thoraco-lumbar fascia
- Pain referral patterns: iliopsoas, iliacus, multifidii, Quadratus lumborum, Abdominals

***Pyramidalia***
- Intrapelvic Structures
**Sacroiliac Joint Referral Patterns**

- Posterior: Innervated by posterior rami L5-S2 spinal nerve roots
  - Pain to gluteal region and posterior aspect of thigh, dermatomal pattern
- Anterior: Innervated by posterior branches from L3-S2 spinal nerve roots and Superior Gluteal Nerve L5-S2
  - Groin and Anterior Thigh

**Visceral Referral Patterns**

**Physiological Journey**

- Tweens/Teens/Young Adults:
  - Menstrual issues arise
  - Hormonal changes cause imbalance
  - Emotion
- Reproductive Years:
  - Maintain balance
  - Contraception for treatment of pain
  - Diet and lifestyle changes
- Perimenopause
- Menopause
  - Hormonal change
  - Diet and lifestyle

**Tweens/Teens/Young Adults**

- Posture (pelvic tilt/lordosis)
- Menses
- Assessment and evaluation:
  - Biomechanical dysfunction with close attention to sacral motion and postural faults
- Treatment focus is on mobility of pelvis and stretching/strengthening of the region

**Building Bone**

- 40% of bone mass is built during adolescence
- Must have adequate production of hormones
  - Sex hormones
  - Thyroid hormone,
  - Growth hormone
  - Insulin growth factors

---

[Image: https://commons.wikimedia.org/wiki/File%3AChild_development_stages]
Precocious Puberty An Epidemic?

- Significant decline in the age of girls and boys into puberty…
- Ave age is 8-13 and may take 1.5-6 years to complete
  - Breast budding and pubic hair being the first sign
- African American and Hispanic girls reach puberty sooner than their white equivalents
- Slight decline in age of menarche
  - 1975 ave age 12.75
  - Today ave age 12.5

**After bud development it takes on average 2-3 years for menarche to occur**

Precocious Puberty An Epidemic?

Three main concerns:
1. Childhood obesity
2. Ingestion of animal proteins
3. Exposure to endocrine-disrupting chemicals (EDC’s)

Childhood Obesity and Animal Proteins

Many factors impacting our children:
- Increased portion sizes becoming a norm
- Inactivity due to technology (ave 7hrs a day, no more than 1-2hrs)
- Persuasive advertising for unhealthy foods
- Socioeconomic challenges

Estrogen loves adipose tissue!

Other Nutritional Considerations
- Girls require about 2,200 calories per day
  - Girls 15 Milligrams of iron
- Boys up to 3,000
  - Boys 11 Milligrams of iron

Calorie needs calculator
https://www.bcm.edu/onc-apps/bodycompl/energy/energyneeds_calculator.htm

Supertracker: food and activity
https://www.supertracker.usda.gov

Waterlogged App
Precocious Puberty An Epidemic? Endocrine-Disrupting Chemicals (EDC’s)

EDC’s have impact in three ways:
1. Mimic naturally occurring hormones like estrogen, androgens and thyroid hormones
2. Increase or decrease natural hormone levels
3. Alter natural production of hormones.

**Largest impact on precocious puberty**

K. Petrocco-Napuli, DC, MS

---

Flood of Chemicals

- Triclosan
- Bisphosphonol-A
- Phthalates
- Benzophenone
- Dichlorophenols

10 Americans

https://youtu.be/0-kc3AIM-LU

Foods: estrogen and testosterone

K. Petrocco-Napuli, DC, MS

---

<table>
<thead>
<tr>
<th>Endocrine Disrupting Chemicals</th>
<th>Use</th>
<th>Product List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzophenone</td>
<td>Widely used in household and personal care products to protect from UV light exposure.</td>
<td>Lip balm, nail polish, cosmetics, baby sunscreens, shampoos, conditioners, fragrances, hair sprays and moisturizers</td>
</tr>
<tr>
<td>Dichlorophenols</td>
<td>Used as an intermediate in making insecticides, herbicides, preservatives, antioxidants and disinfectants.</td>
<td>Pesticides and chlorinated water</td>
</tr>
<tr>
<td>Parabens</td>
<td>Typically utilized in personal products in order to extend their “shelf life” and prevent microbial growth.</td>
<td>Cosmetics, tanning lotions, shampoos, conditioners, lotions, toothpastes, moisturizers and deodorants</td>
</tr>
<tr>
<td>Triclosan</td>
<td>Antimicrobial agent which was originally utilized as a surgical scrub.</td>
<td>Antibacterial soaps, detergents, deodorants, toothpastes, cosmetics, plastics and fabric</td>
</tr>
</tbody>
</table>

Phthalates

- Used to make plastics flexible and lubricants in cosmetics.
- Plastic food and beverage containers, perfumes, hair spray, deodorants, fragrances, nail polish, insect repellent, carpeting, vinyl flooring, shower curtains, raincoats, plastic toys and car steering wheels, dish detergent and paper shifts (new car smell-phalates).
- Traces found in cow’s milk, meats and some cheeses.

Bisphosphonol-A (BPA)

- Used to make polycarbonate plastic (highly shatter resistant, lightweight, clear, high heat and electrical resistance) and epoxy resins.
- Most notably known for plastic water bottles, but it can also be found in the lining of cans, receipts, plastic utensils and containers.

K. Petrocco-Napuli, DC, MS

---

Recommendations

Skin Deep: Cosmetics Database
http://www.ewg.org/skindeep/

Environmental Working Group
http://www.ewg.org

Think Dirty
http://www.thinkdirtyapp.com

K. Petrocco-Napuli, DC, MS

---

The Impact of Precocious Puberty

- Increased cumulative exposure to estrogen, increased risk
  - breast cancer
  - polycystic ovarian syndrome

It has been identified that menstruation before the age of 12 raises the risk of breast cancer by 50%.

There is also some question on how this will impact fertility in the future, as the window from the age of menarche to pregnancy is much greater in length.

K. Petrocco-Napuli, DC, MS

---
We MUST educate our patients and parents!

Dysmenorrhea: YOU can have impact!
- 16 females ave age 26
- Drop Table Technique
- Treated a total of 6 times over 2 months
  - Lumbosacral bilateral or unilateral flexion
- Decreased in abdominal and low back symptoms


Effect of thong style flip flops on children’s barefoot walking and jogging kinematics
Journal of Foot and Ankle Research 2013 Chard et al

Other Musculoskeletal Causes of Pelvic Pain
- Posture: Anterior Pelvic Tilt/Pelvic Obliquity
- Soft tissue referral/trigger points
- Fascia
- Fashion or Function?:
  - Lower Extremity influences
- Joint Hypomobility: L/S, Sacrum and SI joint

“Half of all mental health disorders in adulthood start by age 14, but most cases are undetected and untreated”
~World Health Organization
Medication Use

- 6% of teens report use of psychotropic drug use in the past month
- Anti-depressants (3.2%)
- ADHD Drugs (3.2%)
- Antipsychotics (1.0%)
- Anxiolytics, sedatives and hypnotics (0.5%)
- Antimanics (0.2%)

Females are more likely to use antidepressants


Sleep

- Juvenile Primary Fibromyalgia Syndrome (JPFS)
- 2-6% children, mc adolescents
- MC diagnosed between ages 13-15

Symptoms:
- Widespread diffuse pain
- Cognitive Disturbances/Fibro Fog
- Headache
- Depression/Anxiety
- Sleep Disturbances
- IBS
- Fatigue
- Pelvic Pain or Cramping

Chronic Widespread Pain: Juvenile Fibromyalgia

Table 1: Yumus and Maid (2) diagnostic criteria for juvenile primary fibromyalgia syndrome

<table>
<thead>
<tr>
<th>Major Criteria</th>
<th>Minor Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Generalized muscular pain at three or more sites for three or more months.</td>
<td>6. Fatigue</td>
</tr>
<tr>
<td>2. Morning stiffness.</td>
<td>7. Weight loss</td>
</tr>
<tr>
<td>3. Symptomatic condition</td>
<td>8. Fatigue</td>
</tr>
<tr>
<td>4. Minor laboratory tests</td>
<td>9. Morning fatigue</td>
</tr>
<tr>
<td>5. Three or more typical tender points</td>
<td>10. No weight loss</td>
</tr>
</tbody>
</table>

Symptoms of three of the following features:
- Chronic anxiety or tension
- Headache
- Fatigue
- Chronic headache
- Insomnia/fatigue syndrome
- Soft tissue swelling
- Numbness
- Pain modulation by physical activity
- Pain modulation by waxing and waning
- Pain modulation by anxiety or stress

Fibromyalgia Integrative Training for Teens (FIT)

Treatment Options:
- Cognitive Behavioral Therapy (CBT)
- Fibromyalgia Integrative Training for Teens (FIT)
  - Targets: Gait, Posture, Balance and movement mechanics
  - Manipulation
  - Nutrition
Chronic Widespread Pain: Chronic Fatigue Syndrome

Chronic Fatigue Syndrome
- Most common to occur in adolescents approx. 2-2.3%
- Typically occurs after flu or mono like illness

Symptoms:
- Widespread pain
- Sore Throat, Swollen Lymph Nodes
- Joint pain
- Weight Changes
- Headaches
- Sensitivity to Temperature
- Difficulty Concentrating
- Fatigue
- Sleep difficulties
- Allergies
- GI problems
- Urinary difficulty

**Must be present for 3mo or greater**

K. Petrocco-Napuli, DC, MS

Educating Parents and Teens: Choosing the Right Footwear

- School Aged Children
  - Flexible
  - Well ventilated shoe
- Teens/Sports
  - Get fitted at a sports store for athletic wear
  - Socks need to worn
  - Watch for signs of wear
  - Flip Flops/Heels/Slip On Shoes

Female Anatomy What’s the Difference?

- Wider Pelvis
- Shorter Legs
- Femurs: Oblique
- Increased leg to body weight
- Increased fat deposition of fat on thighs
- Greater Carrying Angle
- Greater Q Angle
- Spine Flexibility

Childhood /Adolescent Growth

- Hips: rate of growth is = for males and females
- Males: shoulders and thoracic cage grow more rapidly
Anatomical Impact

- Wider Pelvis
- Shorter Legs
- Femurs: Oblique
- Increased leg to body weight
- Increased fat deposition of fat on thighs
- Greater Carrying Angle

Tweens and Teens

- Overuse injuries
  - Patellofemoral Pain Syndrome
  - Stress Fractures
- Female Athlete Triad
- Sacroiliac Dysfunction
- Anterior Cruciate Ligament
- Dysmenorrhea

Adult Females

- Patellofemoral Pain Syndrome
- Female Athlete Triad
  (eating disorders, amenorrhea, decreased bone mineral density)
- Anterior Cruciate Ligament
- Pelvic Floor Dysfunction
- Pregnancy
  - Collegiate Athletes (10-15%)

Tweens and Teens

- Overuse injuries
  - Patellofemoral Pain Syndrome
  - Stress Fractures
- Female Athlete Triad
- Sacroiliac Dysfunction
- Anterior Cruciate Ligament
- Dysmenorrhea

Young dancers in a growth spurt are at most risk for injury
Reproductive Years

- Assessment and evaluation:
  - biomechanical dysfunction of pelvis and soft tissue as a contributory pain generator
- Treatment varies based on condition
  - Patterns of pelvic hypomobility are significant for determination of plan
- Pregnancy


The Pregnant Patient

- Important history questions regardless of presenting condition:
  - Gravida (how many)/Para(pregnancies carried to gestational age)
  - Which week of pregnancy
  - Depending on trimester:
    - What are they experiencing? Both normal and abnormal. (morning sickness, edema, headaches, etc)
    - Are they feeling the baby move? Are they kick counting?
  - Nutrition
    - What are they eating and are they supplementing?
    - Who is on their birthing team? And have they thought about their birthing plan?
  - Ob/Midwife/Doula

"pregnant patients had higher forefoot pressure ....with standing and walking......significant increases in contact times under the forefoot and longer floor contact times were found"

Foot Ankle Int. 2010 Feb;31(2):153-7
Karadag-Saygi E1, Unlu-Ozkan F, Basgul A.

Pregnancy Leads to Lasting Changes in Foot Structure

- Arch height and rigidity decreased
- Increased in foot length, width and arch drop
- First pregnancy had most significant impact

Most Common MSK Conditions During Pregnancy
- Lumbopelvic Pain (Huang et al, more likely increased hip extension and knee adduction, decreased knee extension and ankle plantarflexion)
- Wrist pain (carpal tunnel like symptoms)
- Rib Pain
- Hip Pain
- Foot/Heel/Calf Pain

Common Pregnancy Induced Lower Extremity Complaints
- Swelling and Edema
- Plantar Fasciitis
- Metatarsalgia
- Foot and Leg Cramps
- Varicose Veins

Common Pregnancy Induced Lower Extremity Complaints
- Swelling and Edema:
  - Late in pregnancy
  - Must rule out preeclampsia and DVT if unilateral

Common Pregnancy Induced Lower Extremity Complaints
- Plantar Fasciitis: (10% of general population)
  - Increased weight gain
  - Inflammation
  - Relaxin
  - Footwear
  - Increased pain when taking first steps out of bed**

Common Pregnancy Induced Lower Extremity Complaints
- Metatarsalgia
  - Pain in the ball of the foot
  - "walking on pebbles" "bruised feeling"
  - Increased pain when weight bearing
  - MC 2nd, 3rd and 4th
- Foot and leg cramps
  - Second through third trimester of pregnancy
  - Calcium and magnesium
Common Pregnancy Induced Lower Extremity Complaints

Varicose Veins
- Superficial swollen veins
- Sore, itchy
- Legs can be tired and achy

Considerations in Treatment

• Taping (Low back, SI, Edema, Plantar Fascia)
• Instrument assisted soft tissue
• Manipulation
• Diet
• Exercise

Educating Pregnant Patients on Foot Health

• Control weight gain
• Avoid high heels
• Exercise
• Drink Fluids and avoid salt
• Elevate feet
• Shop for shoes late in the day

****Comfort and support are key!

Exercise During Pregnancy

American College of Obstetrics and Gynecology

Support

Posterior Pelvic Pain Since Pregnancy: (PPPP)

• Specific syndrome or non-specific lumbopelvic pain with pain onset during pregnancy or the birthing process
• Present typically 6 months or more after pregnancy
• Pain location is lumbosacral region
• May report “catching of the leg”

K. Petrocco-Napuli, DC, MS 96
Pubic Symphysis Diastasis

- More common than we think as practitioners
- Complication from delivery OR pregnancy
  - MC: 44% 2nd trimester
  - 15% 3rd trimester
  - 2% postpartum
- Diagnosis: Plain Film or MRI
- Pain with Weight bearing and hip abduction Clinically
- Tenderness over pubic symphysis and SI joints
- Limited ROM

K. Petrocco-Napuli, DC, MS

Pubic Symphysis Diastasis

Pain Anteriorly
- Standing
- Walking
- Climbing Stairs
- Rolling Over in Bed

Pain Posteriorly
- L/S
- SI and/or Buttock
- FA Joint

Treatment: trochanteric pregnancy belt, pelvic blocking, pelvic floor exercises
Avoid: Standing or Squatting
Sleep with a pillow between legs and try to be seated when doing things


Pubic Symphysis Diastasis

Diastasis Recti

- Patient may report: pooch or mommy tummy
- Separation of recti bellies at linea alba
- Onset is during pregnancy
- MC: 3rd trimester (66%)
- 35% are immediately postpartum

K. Petrocco-Napuli, DC, MS

Diastasis Recti

- Risk: C-Section
  - Multiple Gestation
  - Increased Maternal age
  - Increased Baby Size
  - Increased Weight Gain
- Diagnosis: Sit up test
- Correlative with Pelvic Floor Dysfunction
- Treatment:
  - Seated and Standing Core Stabilization

Reproductive Years

- PCOS, Endometriosis, Adenomyosis, Pelvic Congestion Syndrome, Pelvic Floor Dysfunction
- Ginger, NAC, Evening Primrose Oil
- Fem-dophilus
- Foods that decrease inflammation

K. Petrocco-Napuli, DC, MS

Pelvic Floor Dysfunction

Clinical Conditions:
- Urinary incontinence
- Fecal incontinence
- Pelvic prolapse
Average Age: 45-69 years
Increased prevalence from 28.1 million in 2010 to 43.8 million in 2050

K. Petrocco-Napuli, DC, MS

Societal Impact

- Foods and hormones
- Household Products
- Fashion
- Sports and Exercise
- Seated Posture

Wearing high heels causes strain and discomfort to the lower extremities...and increases the workload on hip flexors during gait


Estrogen Dominance

- Early as age 35
- More estrogen relative to progesterone
- May heighten near perimenopause approaches

Increased heel height  Pronation  Increased risk for pelvic and lumbar spine pain

"Arch-support mechanism for high-heeled shoes would be effective for reductions of heel pressure and impact force or medial forefoot pressure, and for an improvement in footwear comfort"


Estrogen Dominance

Signs and Symptoms

- Decreased sex drive
- Irregular or otherwise abnormal menstrual periods
- Bloating
- Breast swelling and tenderness
- Fibrocystic breasts
- Headaches
- Trouble sleeping/insomnia
- Mood swings
- Weight and/or fat gain (abdomen and hips)
- Cold hands and feet
- Thyroid dysfunction
- Sluggish metabolism
- Foggy thinking, memory loss
- Fatigue
Why Estrogen Dominance

- Excess body fat
- Stress (high amounts of cortisol, insulin, and norepinephrine which lead to adrenal exhaustion)
- A low-fiber diet with excess refined carbohydrates and deficient in nutrients and high quality fats
- Impaired immune function
- Environmental agents

Estrogen Dominance Correlations

- Allergies
- Autoimmune disorders
- Breast Cancer
- Uterine Cancer
- Infertility
- Ovarian Cysts
- Increased Blood Clotting

Reduce Estrogen

1. Fiber, fiber, fiber
2. Increase antioxidants and bioflavinoids
3. Excess body Fat
4. Detoxify Liver
5. Decrease Stress
6. Progesterone Cream

Peri-Menopause

- Assessment and evaluation
  - biomechanical dysfunction of pelvis and soft tissue as a contributory pain generator
- Postural faults have a stronger correlation as well as soft tissue findings
- Weight gain
- PCOS, Endometriosis, Adenomyosis, Pelvic Congestion Syndrome, Pelvic Floor Dysfunction
- Ginger, NAC, Evening Primrose Oil, Vit D, Omega-3 and B Vitamins
- Foods that decrease inflammation

Peri-Menopause Symptoms

- Hot Flashes
- Breast Tenderness
- Increased PMS
- Decreased Libido
- Fatigue
- Irregular Periods
- Vaginal Dryness
- Urine Leakage with Coughing/Sneezing

Peri-Menopause

- In 40’s can last 4-8 years prior to menopause
- If menopause begins before age 45 it is considered early
Bone Loss…

[Graph showing bone mass throughout the life cycle]

Bone Loss…

[Image of bone density chart]

Menopause

- Average age of the US woman is 51 years old.
- Earlier in smokers, nulliparous, high altitudes.
- Perimenopause begins 3-5 years prior.
- Large physiological transition.
- Assessment and evaluation for biomechanical dysfunction of pelvis and soft tissue as a contributory pain generator with considerations of the aging spine.
- Pelvic Floor Dysfunction likelihood increases.

Menopause Symptoms

(Some)

- Hot flashes
- Urinary Incontinence
- Breast Changes
- Thinning of the Skin
- Bone loss
- Cholesterol Changes
- Weight Changes
- Memory Loss
- Difficulty Sleeping

Exercise for Menopause

- Decrease fat and assist in balancing estrogen/progesterone ratios.
- Reduce stress.

Menopause

- Acupuncture: hot flashes.
- Phytoestrogens: Red clover, Soy: hot flashes.
- Black Cohosh: Hot flashes, irritability, mood swings and sleep disturbances (lots of drug interactions...ie: lipitor).
- DHEA: Hot flashes and decreased sexual drive.
- Flax, B-100, Vit E, Evening Primrose Oil.

Post-Menopausal At Risk Conditions
- Diabetes
- Joint Pain
- Hepatitis C
- Gout
- UTI's
- Vaginal Atrophy
- Gum Disease

Potential CAM Treatment Team Considerations
- Acupuncture
- Massage Therapy
- Counseling
- Naturopathy
- Yoga

Commonly Used Manipulation and Soft Tissue Treatment Methods
- Thompson Drop Table Technique
- Diversified manipulation
- Activator Technique
- Instrument Assisted Soft Tissue Mobilization
- Kinesiotaping

Questions?

Contact Information
Kristina L. Petrocco-Napuli, DC, MS
drkrispn@icloud.com
Facebook Dr. Kristina Petrocco-Napuli
Twitter @drkrispn
References


K. Petrocco-Napuli, DC, MS 128

K. Petrocco-Napuli, DC, MS 130

K. Petrocco-Napuli, DC, MS 132

K. Petrocco-Napuli, DC, MS 127

K. Petrocco-Napuli, DC, MS 129

K. Petrocco-Napuli, DC, MS 131
References


Proctor ML, Smith CA, Fanghui CH, Stames RW. Transcutaneous electrical nerve stimulation and acupuncture for primary dysmenorrhea. Cochrane Database Syst Rev. 2002;2(1)


• http://www.prevention.com/health/side-effects-menopause
• https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4139057/ Osteoporosis in Premenopausal Women
• https://www.nof.org/prevention/general-facts/what-women-need-to-know/