

Tame the Flames of PCOS: a unique integrative approach



Felice L. Gersh, M.D.

Integrative Medical Group of Irvine

Attending Faculty

OBGYN Department

Keck USC School of Medicine

Speaker Disclosure

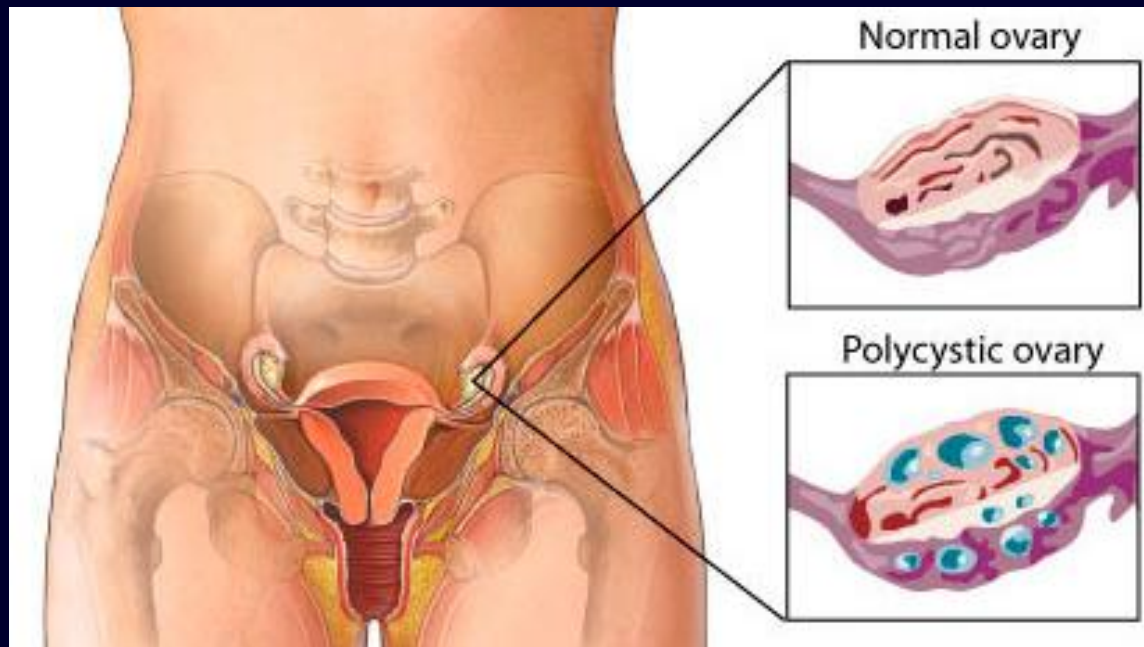
- Consultant and Speaker for Cleveland HeartLab, Inc.
- Speaker for Pure Encapsulations

Lecture Overview

- What is Polycystic Ovary Syndrome?
- What are the symptoms and manifestations of PCOS?
- How do you diagnose it?
- What is wrong with the conventional approach to treating PCOS?
- What is the integrative approach to treating PCOS?
- What lies ahead for PCOS women?

Polycystic Ovary Syndrome (PCOS)

A hormonal disorder, becoming obvious after puberty, in women of reproductive age - Named for the finding of small cysts developing in the outer edge of each ovary.

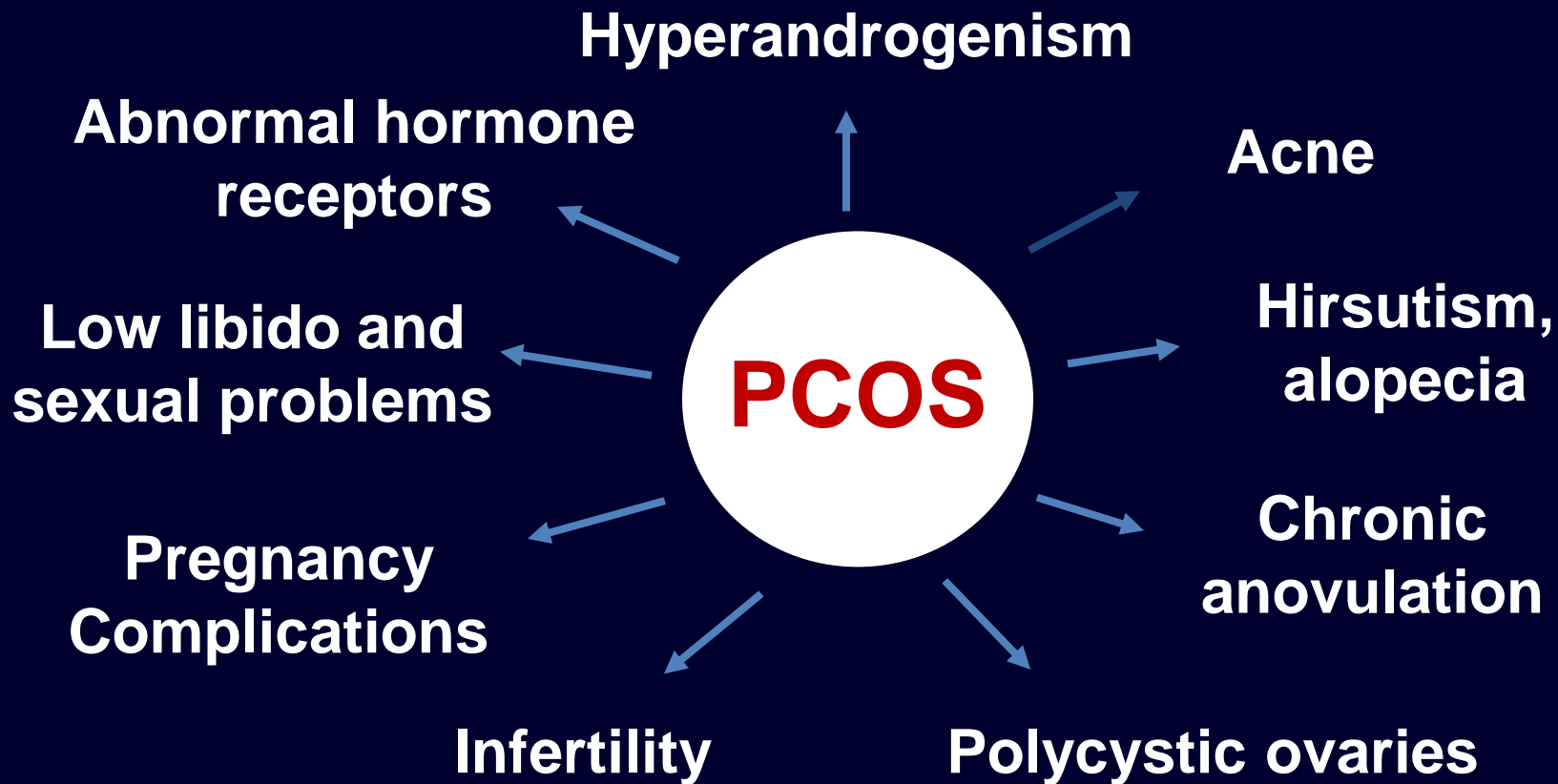


<https://www.womenshealth.gov/publications/our-publications/fact-sheet/images/pcos1.jpg>

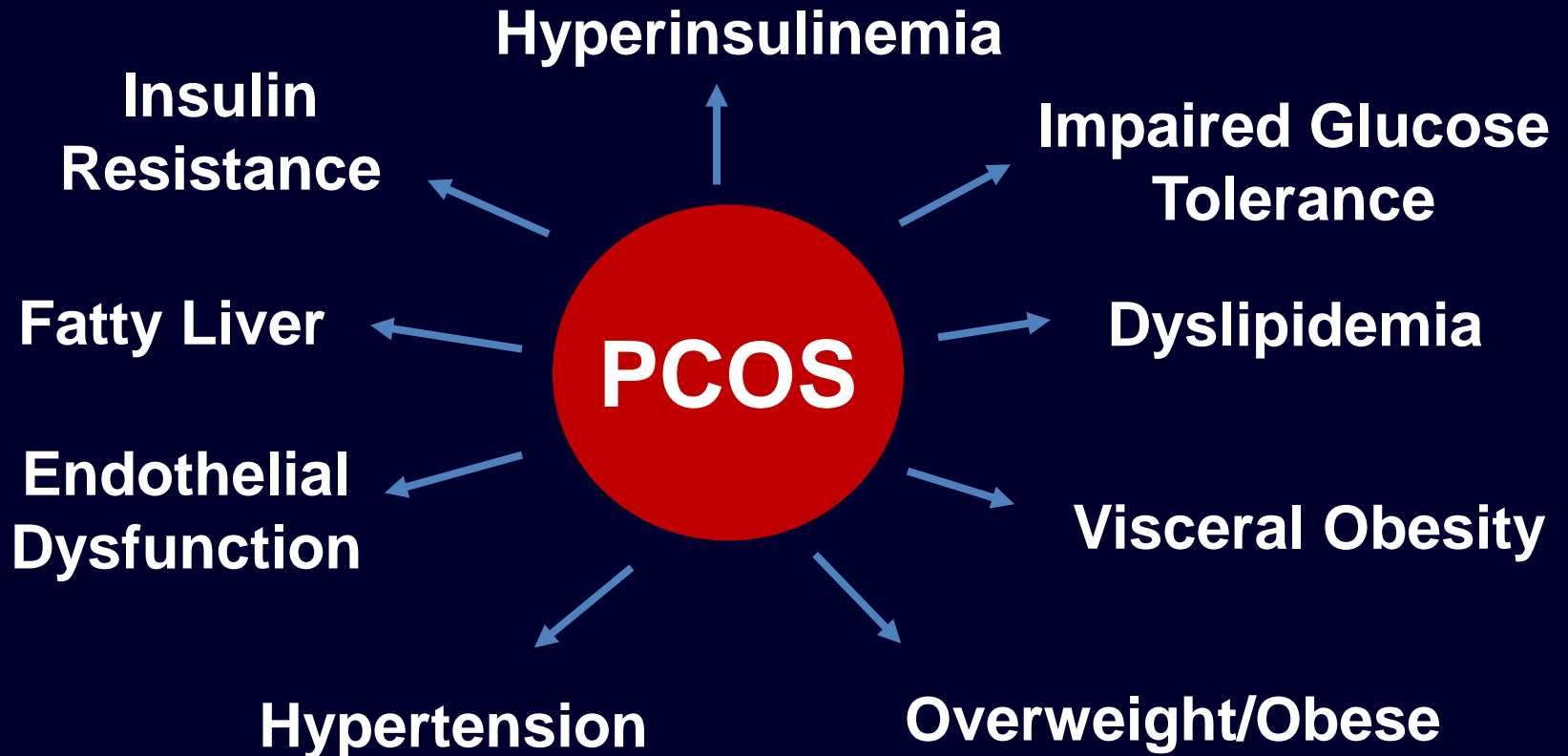
PCOS is a global epidemic

- The most common endocrine dysfunction of women - affects up to 25% of women
- A life-long disease with enormous medical, emotional, and financial consequences
- High risk for diabetes, metabolic syndrome, & infertility...and 80% are overweight/obese
- Affects women of all ages...actually manifests in childhood, and also affects relatives and men!

Hormonal/Reproductive Effects of PCOS



Metabolic Effects of PCOS



Use of fasting blood to assess the prevalence of insulin resistance in women with polycystic ovary syndrome. (2004) Fertil. Steril
Prevalence and predictors of dyslipidemia in women with polycystic ovary syndrome. (2001) Am. J. Med.

Association of PCOS with other inflammatory-related conditions

- Autoimmune disease (especially thyroid)
- Skin tags and darkened skin (acanthosis nigricans)
- Gastrointestinal problems (IBS, leaky gut)
- Arthritis and tendinitis
- Depression, anxiety, stress
- Vaginal infections
- Sleep dysfunction and OSA
- Cancer

New ideas on the causes of PCOS

- Complex interaction between genetics and the environment (epigenetics)
- Exposure to endocrine disruptors
- Abnormal hormone receptor functioning
- Oxidative stress beginning in-utero
- Gut inflammation and systemic inflammation
- Prenatal hormonal fluctuations within the womb

Is PCOS an inflammatory process? Fertil Steril. 2012
January

Dysbiosis of Gut Microbiota

- Poor diet leads to gut mucosal permeability
- Passage of lipopolysaccharides from Gram negative colonic bacteria into systemic circulation
- Activation of the immune system with release of inflammatory cytokines-interferes with insulin receptor function, increases ovarian production of androgens and alters normal follicle development

Bisphenol A (BPA)

- Widespread industrial compound used in the synthesis of polycarbonate plastics
- Found in cash register receipts, plastic bottles, can liners, dental sealants, airline boarding passes
- In experimental animals, neonatal exposure results in a PCOS-like syndrome in adulthood

EHP Sept. 2010. Bisphenol A exposure during pregnancy disrupts glucose homeostasis

Bisphenol A and PCOS

- Reduces number of oocytes and lowers successful number of births
- Creates major and permanent changes in gene expression-differences only apparent after estrogen exposure
- Affects the estrogen receptors-alpha, beta, cell membrane
- Negatively affects mitochondrial function

Neuroscience May 2010. Corticosterone regulated actions in the r
at brain are affected by perinatal exposure to low dose bisphenol A

EHP Sept 2010. Neonatal exposure to bisphenol A and reproductive and endocrine alterations resembling the polycystic ovarian syndrome in adult rats

Estrogen deficiency and chronic inflammation

- Estrogen is the master of metabolic homeostasis
- BPA alters estrogen receptor function
- BPA alters estrogen production and function, along with progesterone production, melatonin receptor function, and thyroid receptor function

A doctor in a white lab coat with a blue stethoscope around their neck is pointing their right index finger towards a chalkboard. The chalkboard has a wooden frame and contains the text 'Oxidative stress and inflammation are driving risk!'. The doctor's left hand is holding the top right corner of the chalkboard frame. The background is a plain grey color.

**Oxidative stress
and inflammation
are driving risk!**

Inflammatory Laboratory Tests

- F2-Isoprostanes
- Oxidized LDL
- Hs CRP
- Myeloperoxidase
- PLAC
- Adiponectin
- Homocysteine
- Micro-albumin
- **TELOMERES**

Additional testing

- Apo A1 and B
 - TSH, Free T3, Free T4
 - Anti-TPO, TGB Ab
 - Insulin, 2 hr OGTT
 - Uric Acid
 - 25 OH Vitamin D
 - B12
 - Omega 3 Index
- DHEA-S
 - Testosterone
 - Estradiol
 - Progesterone
 - SHBG
 - Anti-Mullerian Hormone
 - FSH and LH
 - MTHFR

Conventional treatment options

- There are problems with some of the most commonly used pharmaceuticals for PCOS
- Oral Contraceptives-gut health, blood clotting, CVD risk
- Metformin-gut health, B12 levels, an endocrine disruptor, marginal fertility agent
- Accutane-depression, IBS, works in 1/3 long term
- Antibiotics-alters the foundational microbiome
- Bariatric surgery-nutritional deficiencies

An integrative approach works best!

PCOS patient

Gynecology

Naturopathy

Lifestyle
educator

Internal Medicine Practitioner
TCM Practitioner/Acupuncturist
Aesthetician, Fitness Trainer
CBT/Hypnotherapist

Stress reduction/Meditation/Guided imagery
Therapeutic massage therapist/Aromatherapy
Vascular, pelvic and abdominal US technicians

A practical approach to the PCOS patient

- Detailed history and physical exam
- Laboratory testing-inflammatory markers, hormones, metabolic markers, nutritional and gut health status
- Lifestyle changes: Nutrition, stress, sleep (check for OSA), exercise, acupuncture, guided imagery, hypnosis, massage, CBT
- Supplements: Berberine, Myo-inositol, NAC, Green Tea, Resveratrol, Spearmint tea, Alpha Lipoic Acid, Probiotics, Chromium, Methylated B Complex, Vitamin D+K2, Detox and gut support,
- Necessary pharmaceuticals
- Skincare, emotional support, “Earthing”
- Bio-identical hormones, (Rhythmic Hormones)

Nutrition to support the gut microbiome

- All “real” foods and organics-no GMO, antibiotics, hormones, pesticides, preservatives, high fructose corn syrup, artificial anything
- Resistant starch vegetables: root vegetables, beets, turnips, yams, rutabagas, parsnips carrots, radishes
- Cruciferous vegetables and Leafy greens
- Berries, tart apples, pomegranates
- Low protein (limit animal protein and highest quality-only “wild” style)
- Healthy fats only and not too much!

Secrets to health for PCOS women

- Intermittent fasting options
- Breakfast at 2/3 of calories, lunch 1/3, no more than 100 calories for dinner
- Fiber supports the microbiome...fat does not
- Fermented foods
- Limit dairy, no sweets, no wheat (gluten), no GMO, no processed foods

Integrative approach: Nutraceuticals

- Resveratrol
- Green tea
- Alpha Lipoic Acid
- Chromium
- Berberine
- N-acetyl cysteine
- Myo-inositol

Additional supplements

- Vitamin D+K2
- Omega 3/Krill Oil
- Multivitamin with iodine
- Nutraceuticals for weight loss
- Spearmint tea
- Grape seed extract
- Ashwaganda, Rhodiola, Holy Basil, Ginseng

Detoxification Protocol

- Herbs to support liver detoxification pathways
- L glutamine
- Aloe Vera
- Chlorella
- Psyllium fiber, Flaxseed
- Probiotic blend
- Amino acids, Sulforaphane, DIM
- Calcium D glucarate, Mild thistle

Stress reduction-an essential element

- Guided imagery
- Aromatherapy
- Cognitive Behavioral Therapy
- Hypnotherapy
- Transcendental Meditation
- Mindfulness Meditation
- Yoga

Fitness

- Fitness assessment and Exercise prescription
- Start slowly-avoid injury
- 2008 Guidelines from the American College of Sport's Medicine: 150 minutes per week of moderate intensity aerobic exercise and 2-3 sessions of resistance training
- Work towards high intensity interval training

Sleep-the essential ingredient

- At least a 50% chance each patient has sleep apnea
- Many have sleep disturbances
- Circadian rhythms malfunctioning
- Melatonin less responsive

Rhythmic hormone therapy

Rhythmic hormone therapy re-establishes the hormonal milieu needed for proper cellular signaling and to overcome the dysfunction of the receptors

Goal: Re-establish metabolic homeostasis

Possibly the Ultimate Solution!

Concerns for the future

- PCOS is a global epidemic effecting 25% women (and men)
- Essential to obtain proper testing so as to properly diagnose, monitor, and treat
- Conventional therapies are limited and not curative; some have significant risks
- Prevention for future generations a grave concern- endocrine disruptors are ubiquitous and nearly unavoidable

An Integrative approach to treating this epidemic is the best approach!!

Thank You!



Felice L. Gersh, M.D.

mail@integrativemgi.com

www.integrativemgi.com