Standard Process

Decoding PMOS: Nutritional and Botanical Pathways to Hormonal Health

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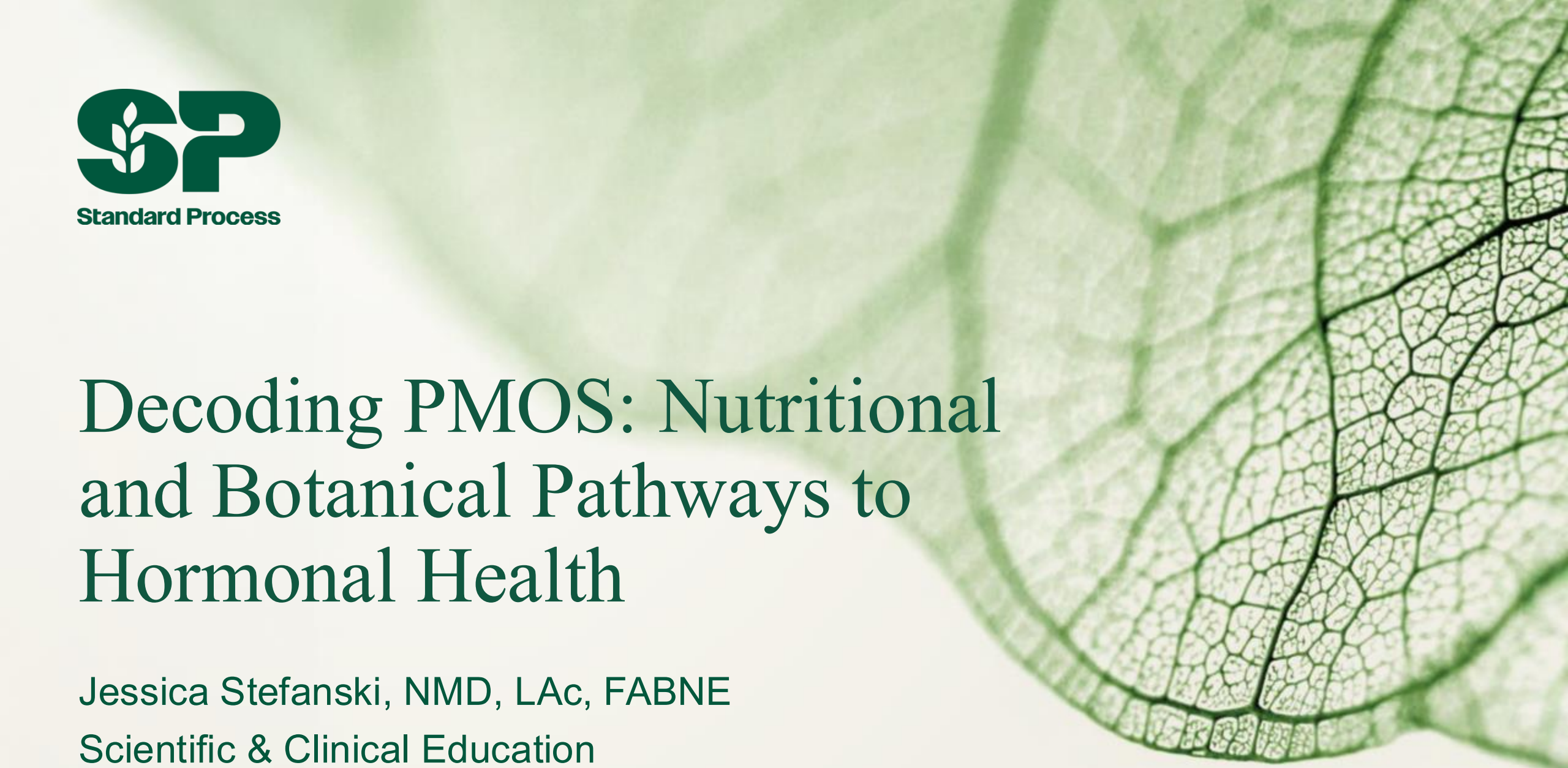


From PCOS to PMOS: New Name, New Framework

- May 12, 2026 — *The Lancet* published a global consensus renaming polycystic ovary syndrome (PCOS) to **polyendocrine metabolic ovarian syndrome (PMOS)**
- 56 leading academic, clinical, and patient organizations, and thousands of women with PCOS, weighed in
- Affects more than 170 million women worldwide — roughly 1 in 8
- The old name contributed to delayed diagnosis, fragmented care, and stigma, while curtailing research and policy framing

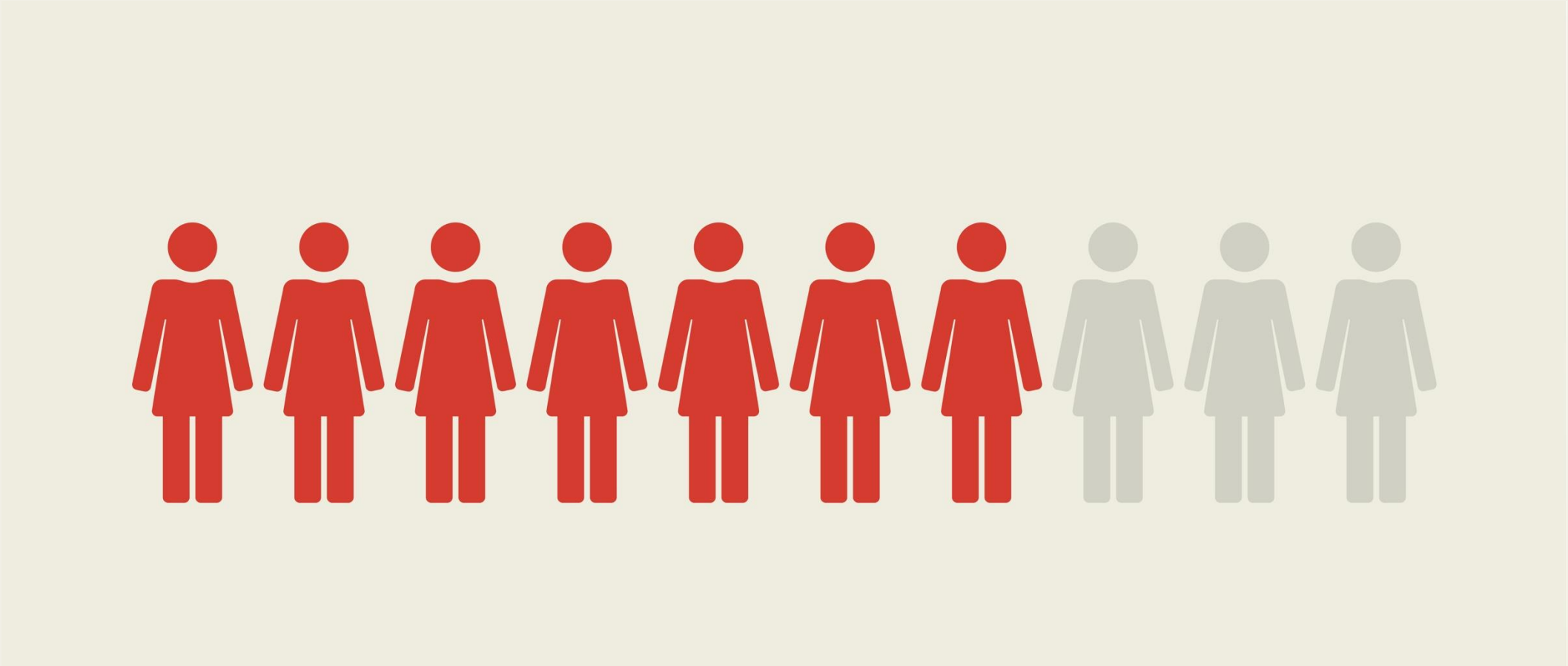
Polycystic Ovary Syndrome (PCOS)

Polyendocrine Metabolic Ovarian Syndrome (PMOS)

Too focused on ovarian pathology, not enough emphasis on endocrine and metabolic features

Recognition of the involvement of multiple endocrine organs, metabolic dysfunction, and ovarian pathology

PMOS patients are dissatisfied



What's Driving PMOS: A Self-Reinforcing Loop

Insulin resistance

Androgen excess

HPA axis dysregulation

Adipose tissue as an endocrine organ

Low-grade chronic inflammation

PMOS is a Whole-Body Condition

Metabolic: insulin resistance, blood sugar, weight gain, fatty liver

Skin/Hair: acanthosis nigricans, skin tags, hirsutism, acne, hair thinning

Reproductive: irregular or absent periods, heavy/painful periods, ovulatory dysfunction, infertility

Adrenal/Stress: dysregulated cortisol, fatigue

Digestive: IBS, SIBO, GERD

Mood/Cognitive: anxiety, depression, brain fog, poor memory

Eating behavior: disordered eating patterns, including binge eating

Conventional Treatment Limitations

Oral contraceptives — suppress symptoms but don't correct insulin resistance or underlying endocrine-metabolic drivers

Metformin — addresses insulin resistance, limited by GI tolerability

Spironolactone — targets hirsutism and acne without touching the metabolic root issues

GLP-1 receptor agonists — address weight and metabolic issues, GI side-effects common, cost, discontinuation can lead to loss of benefits

A Systems Problem Needs a Systems Solution

PMOS is driven by an interconnected loop: insulin resistance, androgen excess, HPA axis dysregulation, and adipose-driven inflammation

Symptom suppression without root-cause correction means therapy is often lifelong, and symptoms return at discontinuation

Nutrition and botanicals can target multiple upstream nodes

The opportunity: root-cause, multi-system support

What I’ve Learned in Practice

Create a partnership and set expectations — PMOS is a long game

Empathy over assumptions — every patient's PMOS presentation and lived experience is different

Don't focus solely on weight loss — an overly narrow focus can undermine trust and miss other meaningful progress

Emphasize nourishment and healing — not restriction

Teach patients to monitor symptoms and track cycles properly — self-tracking turns an abstract diagnosis into something actionable

Targeted Treatment Strategies

Insulin sensitization

Androgen modulation

HPA axis support

Anti-inflammatory/adipokine support

Address nutrient deficiencies

Foundational Nutrition

Protein and fiber emphasis — blunts post-meal glucose/insulin spikes

Anti-inflammatory dietary pattern — whole foods, variety of colorful produce, fatty fish, olive oil, fermented foods, traditional foods

Minimize ultra-processed foods

Intermittent fasting can be helpful in insulin resistance

Address binge eating triggers

Insulin Sensitization: The Upstream Lever

Inositol

Raises SHBG and lowers total and free T

Helps normalize cycle length

Improves oocyte and embryo quality

Comparable to metformin without the GI side effects

Greff et al., Reprod Biol Endocrinol, 2023

Insulin Sensitization: The Upstream Lever

Berberine

Improves insulin sensitivity — promotes glucose uptake comparable to metformin in several trials

Lowers androgen levels — reduces testosterone production, improves acne and other androgen-driven symptoms

Supports fertility outcomes — associated with improved ovulation rates and pregnancy outcomes in PMOS

Ionescu et al., Life (Basel), 2023

Androgen Modulation: Calming the Hormonal Noise

Zinc

Inhibits 5-alpha-reductase, helping normalize testosterone and DHT levels

Contributes to improvement in hirsutism and acne

Anti-inflammatory and antioxidant support

Nasiadek et al., Nutrients, 2020

Androgen Modulation: Calming the Hormonal Noise

White Peony Root + Licorice Root

Traditional Japanese Kampo formula

Lowers testosterone and raises SHBG

Appears to act on ovarian theca and granulosa cell steroid production vs blocking the conversion of testosterone to DHT

Arentz et al., BMC Complement Altern Med, 2014

Androgen Modulation: Calming the Hormonal Noise

Spearmint

Reduces free and total testosterone, DHEA, androstenedione

Improves hirsutism

Well-tolerated and can support GI comfort

Ateeq, J Acad Nutr Diet, 2024
Grant, Phytother Res, 2010

HPA Axis Support: Cortisol, Stress, and Adrenal Health

Ashwagandha

Adaptogen — modulates the HPA axis, supporting more balanced cortisol output under chronic stress

May modulate DHEA-s, an adrenal androgen precursor

Improves perceived stress and anxiety scores

Lopresti et al., Medicine (Baltimore), 2019

Inflammation and Adipose Signaling

Turmeric/Curcumin

Inhibits NF-κB signaling, thereby modulating adipokine expression — inflammatory cytokines released by adipose tissue (including IL-6 and TNF-α)

Significantly reduces CRP

Improves insulin sensitivity, with significant reductions in fasting glucose, insulin, and HOMA-IR

Poor oral bioavailability is a known limitation

Shen et al., Front Endocrinol, 2022

One Mineral, Multiple Mechanisms

Magnesium

Insulin sensitization — supports glucose uptake and insulin receptor function; magnesium deficiency is associated with worse insulin resistance in PMOS populations

HPA axis/stress/sleep support — supports healthy cortisol regulation, GABA activity, muscle relaxation, and is commonly depleted under chronic stress

Piuri et al., Nutrients, 2021

New Name, New Opportunity

PMOS reframes this condition as a polyendocrine, metabolic, whole-body syndrome — not just an ovarian one

That reframe exposes integrated, reinforcing systems that drive pathology: insulin resistance, androgen excess, HPA axis dysregulation, and adipose-driven inflammation

Nutrition and botanicals are uniquely able to address a range of underlying multi-system mechanisms

Questions?

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