SPECIAL ISSUE

Women’s Health

Management of Recurrent Pregnancy Loss
Natural Approaches to Breast Health

Resilience to Stress: A Conversation with Aviva Romm, MD
Integrative Help for Eating Disorders
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SPECIAL ISSUE WOMEN’S HEALTH
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MEGAN CHMELIK graduated from Metropolitan State University of Denver with an undergraduate degree in integrative therapeutic practices, an educational program designed to prepare students for advanced studies in complementary medicine, in particular naturopathic medical school. Chmelik will attend the National College of Natural Medicine (NCNM) this fall. She has been employed as a receptionist at the Denver Naturopathic Clinic, a private practice owned by Jacob Schor, ND, FABNO, and Rena Bloom, ND, for the past year while completing her undergraduate studies.

JENNIFER JOHNSON, ND, LAC, is a naturopathic physician and licensed acupuncturist practicing in Portland, Oregon. She holds undergraduate degrees in biochemistry and biology from the University of Washington, and completed her graduate degrees at Bastyr University. Dr. Johnson is finishing her second year of residency in women's health under the mentorship of Tori Hudson, ND.

TINA KACZOR, ND, FABNO, is editor-in-chief of Natural Medicine Journal and a naturopathic physician, board certified in naturopathic oncology. She received her naturopathic doctorate from National College of Natural Medicine, Portland, Oregon, and completed her residency in naturopathic oncology at Cancer Treatment Centers of America, Tulsa, Oklahoma. She is the past-president and treasurer of the Oncology Association of Naturopathic Physicians and secretary of the American Board of Naturopathic Oncology. She has been published in several peer-reviewed journals. Kaczor is based in Eugene, Oregon.

JACOB SCHOR, ND, FABNO, is a graduate of National College of Naturopathic Medicine, Portland, Oregon, and now practices in Denver, Colorado. He served as president to the Colorado Association of Naturopathic Physicians and is now on the board of directors of both the Oncology Association of Naturopathic Physicians and the American Association of Naturopathic Physicians. He is recognized as a fellow by the American Board of Naturopathic Oncology. He serves on the editorial board for the International Journal of Naturopathic Medicine, Naturopathic Doctor News and Review (NDNR), and Integrative Medicine: A Clinician's Journal. In 2008, he was awarded the Vis Award by the American Association of Naturopathic Physicians. His writing appears regularly in NDNR, the Townsend Letter, and Natural Medicine Journal.

HEATHER WRIGHT, ND, FABNO, has worked at Cancer Treatment Centers of America in Philadelphia for 7 years. She earned her undergraduate degree in 1995 at St Lawrence University, New York, completed an internship in community medicine in east Africa, and worked in the Harvard Mallinckrodt Laboratory of Molecular and Cellular Biochemistry, Cambridge, Massachusetts. She earned her doctorate of naturopathic medicine from Bastyr University in 2005. Wright is currently vice president of the Oncology Association of Naturopathic Physicians.
MESSAGE FROM THE PUBLISHER

Caring for Women With Integrative Medicine

According to the US Department of Labor, women make 80 percent of all healthcare decisions in this country. They choose family health plans, schedule and execute doctor appointments, and manage the health of the entire family. But who is taking care of the health needs of women?

Integrative practitioners are.

The National Center for Complementary and Integrative Health reports that women with a higher than average education and higher income are the largest group of people using integrative medicine in the United States. It’s a huge and engaged audience that is inclined and open to complementary medicine. And that’s why we wanted to publish this special issue of the Natural Medicine Journal.

In this issue Jaclyn Chasse, ND, provides us with an excellent peer-reviewed paper on the important topic of recurrent pregnancy loss. We also feature abstracts and commentary on several botanicals including boswellia, urtica, and fenugreek. There is also a fascinating podcast with Carrie Decker, ND, discussing the integrative treatment of eating disorders, and another with leading women’s health expert Aviva Romm, MD.

We hope you enjoy and share this Women’s Health Special Issue. I’d also like to remind readers that we recently launched a new Natural Medicine Journal blog on our website. Please check it out and drop me a note to let me know how you like it. You can email me at Karolyn@impacthealthmedia.com.

As always, thanks to our wonderful authors, editors, and editorial review board for their commitment to quality content. We appreciate our entire team! And thank you, reader, for your support of our journal.

In good health,

Karolyn A. Gazella
Publisher, Natural Medicine Journal
Management of Recurrent Pregnancy Loss
A guide to evaluation and treatment

Jaclyn Chasse, ND

ABSTRACT
Recurrent pregnancy loss (RPL) is the spontaneous loss of at least 2 consecutive pregnancies in a nulliparous woman, or 3 consecutive pregnancies in a woman who has experienced a live birth. Although genetic abnormalities are responsible for the majority of early pregnancy losses, multiple, consecutive losses suggest other factors may be at play. Potential nonchromosomal causes include immune-mediated loss, thrombophilias, hormonal and metabolic issues, and stress. Women who meet criteria for evaluation of RPL should receive a medical workup that includes a thorough medical history and relevant testing, guided by stage of loss and suspected causes. Given that over half of cases of RPLs remain unexplained, a holistic approach to evaluation and treatment that includes addressing overall health and optimizing immune function may help lift barriers to successful live birth.

INTRODUCTION
Miscarriage and pregnancy loss can be a dark topic. Whether they treat infertility or not, most clinicians have seen women who have experienced a pregnancy loss, either elective or spontaneous, even if it was not the patient’s chief reason for the visit. Whether a practitioner is focused on primary care or on fertility and pregnancy, it is essential that every clinician understand the foundations behind miscarriage and pregnancy loss and know when and how to help a woman who has lost a pregnancy.

Spontaneous abortion (SAB) describes the sudden loss of a pregnancy and occurs in 15% to 25% of all clinically recognized pregnancies. Typically, this occurs early in the pregnancy, before 6 weeks gestation. Spontaneous abortion is not necessarily problematic from a medical perspective, but it is often disappointing and can result in significant mental and emotional trauma. Spontaneous abortions most often occur in instances in which genetic abnormalities prevent viability, which is why they often occur early. After a single miscarriage, the likelihood of achieving a healthy subsequent pregnancy is 76%, which is equivalent to the likelihood of healthy pregnancy in a woman who has never experienced a pregnancy loss. After 2 or more subsequent losses, the concern of an underlying factor other than genetic abnormalities contributing to a woman’s inability to carry to term increases, and a thorough naturopathic workup is warranted. Some patients will meet the criteria for recurrent pregnancy loss (RPL).

Recurrent pregnancy loss used to be defined as 3 or more consecutive spontaneous pregnancy losses. According to this definition, between 1% and 2% of women experience RPL. The definition has been refined and now applies to women with only 2 consecutive pregnancy losses if they have not previously had a live birth. The current definition allows for earlier workup in these patients. Patients experiencing RPL or late gestation losses require a deeper evaluation and level of management than those experiencing isolated miscarriage. This paper focuses on women experiencing RPL.

FIND THE ROOT CAUSE: EVALUATION
Although many factors contribute to RPL, the greatest risk factor is maternal age. Two known chromosomal causes include parental chromosomal structural abnormalities and antiphospholipid antibody syndrome (APS). Anatomic abnormalities can also play a role. While these causes are undisputed, other factors that may come into play include hormonal irregularity, untreated hypothyroidism, hyperprolactinemia, polycystic ovary syndrome, thrombotic disorders, and immunologic causes. There has been little research on the effects of these conditions on RPL, although theoretically they could impact the uterine environment in early pregnancy and therefore contribute to pregnancy loss. A cause is determined in only 50% to 60% of cases of RPL.

When assessing the possible cause(s) of RPL, the timing of the loss is a key piece of information to guide the clinical

(continued on page 8)
Can you really get all the nutrients you need in your diet? And are your patients getting everything they need in theirs? In this webinar, Tieraona Low Dog, M.D. makes a compelling case for the prevalence of marginal and frank nutrient deficiencies in modern times and their impact on human health.

**Key Learnings:**
- Participants will be able to describe the prevalence of specific nutrient deficiencies in the United States
- Participants will be able to identify three common drug-nutrient depletions/interactions
- Participants will be able to identify at risk populations when laboratory testing should be undertaken

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evaluation algorithm. Pregnancy can be divided into 3 stages—the preembryonic stage (conception through week 4), the embryonic stage (5-9 weeks’ gestation), and the fetal stage (weeks 10 through delivery):

• During the preembryonic stage, implantation occurs and the preembryo develops into a trilaminar disc of cells with a central neural axis, all before the first missed menstrual period.

• In the embryonic stage, the trilaminar disc folds to become cylindrical and the head and tail regions of the embryo are established; during this critical time, organogenesis begins with development of a beating heart and delivery of oxygen and nutrients through the umbilical cord and placenta.

• The fetal stage begins when maternal blood contacts villous trophoblast cells and progresses through gestation.

The majority of all pregnancy losses, including SAB and RPL cases, occur in the preembryonic and embryonic stages. In a study of 200 women with suspected normal pregnancies, a 13% pregnancy loss rate was reported; 87% of those losses occurred during the preembryonic and embryonic states, while only 13% occurred after 10 weeks’ gestation.¹ Some of the key contributing factors to pregnancy loss by stage of pregnancy are listed in Table 1.

Preembryonic and embryonic losses are most commonly associated with genetic factors. As this is the time for early organogenesis, many genetic abnormalities that impact protein synthesis, and thus organ synthesis, can hinder development to a point of nonviability of the embryo. Other factors that contribute to loss at this phase include defects in endometrial thickening, low progesterone, and thrombotic events. Maternal age also plays a role, as age contributes to other genetic factors; increased reactive oxygen species, oxidative stress, and poor nutrient status can affect the health of the DNA in egg and sperm, contributing to an increased incidence of genetic abnormality.

In fetal losses (gestational age 10 weeks or greater), the likelihood of genetic factors contributing to pregnancy loss decrease, and the likelihood of other underlying concerns

Table 1. Role of Autoimmunity in Infertility and Pregnancy Loss

<table>
<thead>
<tr>
<th>Fetal stage</th>
<th>Timing</th>
<th>Key milestones</th>
<th>Contributing factors to loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-embryonic</td>
<td>LMP to week 4</td>
<td>Implantation</td>
<td>Genetic, implantation-related (thrombotic, thin uterine lining, low progesterone)</td>
</tr>
<tr>
<td>Embryonic</td>
<td>Week 5-9</td>
<td>Organogenesis, O₂ and nutrients through placenta</td>
<td>Genetic, hormonal (eg, low progesterone)</td>
</tr>
<tr>
<td>Fetal</td>
<td>Week 10–delivery</td>
<td></td>
<td>Autoimmune, thrombotic, anatomic</td>
</tr>
</tbody>
</table>

Abbreviations: LMP, last menstrual period

Studies have shown significant improvement in pregnancy outcomes in patients with RPL with provision of close monitoring and support by their provider. Naturopathic physicians are well-positioned to provide this additional care.
increases. It is recommended that any woman who loses a pregnancy after 10 weeks be evaluated for their pregnancy loss through workup of the patient, as well as genetic evaluation of the fetus. After 10 weeks, the most common contributing factors to loss are thrombotic disorders, anatomic problems with the uterus, and autoimmune factors.\(^1\)

**PATIENT EVALUATION FOR RECURRENT PREGNANCY LOSS**

If a patient meets the criteria for evaluation of RPL (see Figure 1), evaluation should begin with a complete medical history, including personal and/or family history of autoimmunity, metabolic disorders, pelvic infection, surgeries, and thrombotic disorders. It is also essential to document prior pregnancies and their outcomes as well as prior testing or procedures. This intake and history can be helpful to determine possible labs to consider to further evaluate the patient (see Table 2).

**GENETIC (CYTOGENIC) TESTING**

Today, relevant genetic testing is made available to patients experiencing pregnancy loss where the embryonic or fetal tissue can be recovered. About 60% of products of conception that are analyzed after sporadic early pregnancy loss are associated with chromosomal abnormalities, primarily trisomies. In women under age 35, the risk of miscarriage due to genetic abnormality is 9% to 12%. Once women are over 40, that risk increases to 50%. In cases of RPL, genetic origins only account for 2% to 5% of cases, indicating that while it is a common cause of spontaneous miscarriage, another factor may be at play if a couple suffers sequential losses.\(^1\)

Genetic testing, while more readily available, is still rudimentary and rarely helpful for developing a longer-term treatment plan. Still, it can help guide patients to genetic counseling for a deeper workup. Once both partners are evaluated independently, genetic counselors can predict the likelihood of having a healthy pregnancy given the couple’s specific genetic factors. Couples may be encouraged to consider in vitro fertilization (IVF) with preimplantation genetic testing (PGT) of the embryo, amniocentesis, or chorionic villus sampling to detect abnormality in offspring. Also, genetic counseling can help identify a cytogenetic cause with either partner suggestive that gamete donation (egg or sperm) could be helpful.\(^3\)

A systematic review revealed that IVF with preimplantation genetic diagnosis had a live birth rate of 31% to 35% per cycle, compared to 55% to 74% live birth rate per cycle with natural conception, so it may be the case that mother nature is still a better discerner of good quality gametes and embryos that will continue through pregnancy to live birth.\(^4\)

**Table 2. Labs to Consider According to Suspected Cause of Pregnancy Loss**

<table>
<thead>
<tr>
<th>Suspected cause</th>
<th>Labs to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic</td>
<td>Parental karyotype</td>
</tr>
<tr>
<td></td>
<td>Balanced reciprocal translocations,</td>
</tr>
<tr>
<td></td>
<td>Robertsonian translocations</td>
</tr>
<tr>
<td>Anatomic</td>
<td>HSG saline-infused hysteroscopy</td>
</tr>
<tr>
<td></td>
<td>Hysteroscopy 2D or 3D ultrasound</td>
</tr>
<tr>
<td>Endocrine</td>
<td>TSH w/antibodies</td>
</tr>
<tr>
<td></td>
<td>Insulin resistance</td>
</tr>
<tr>
<td></td>
<td>(fasting glucose, insulin, A1C)</td>
</tr>
<tr>
<td></td>
<td>Prolactin</td>
</tr>
<tr>
<td></td>
<td>Ovarian reserve testing</td>
</tr>
<tr>
<td></td>
<td>(FSH, AMH, antral follicle count)</td>
</tr>
<tr>
<td>Infectious</td>
<td>Not recommended unless evidence of chronic endometritis/cervicitis or patient is immunocompromised</td>
</tr>
<tr>
<td>Autoimmune</td>
<td>Anticardiolipin antibody levels</td>
</tr>
<tr>
<td></td>
<td>(IgG and IgM)</td>
</tr>
<tr>
<td></td>
<td>Lupus anticoagulant</td>
</tr>
<tr>
<td>Non-APS thrombophilias</td>
<td>Homocysteine</td>
</tr>
<tr>
<td></td>
<td>Factor V Leiden</td>
</tr>
<tr>
<td></td>
<td>Prothrombin promotor mutation</td>
</tr>
<tr>
<td></td>
<td>Activated protein C resistance</td>
</tr>
</tbody>
</table>

Abbreviations: AMH, antimullerian hormone; APS, antiphospholipid syndrome; FSH, follicle stimulating hormone; HSG, hysterosalpingogram; Ig, immunoglobulin; TSH, thyroid stimulating hormone.
Questions remain concerning the impact of methyltetrahydrofolate reductase (MTHFR) mutation and its impact on pregnancy and miscarriage. At this time, the current literature demonstrates that MTHFR does not occur with any greater frequency in patients with RPL than in the general population. Elevated homocysteine and B12 deficiency have been linked with increased risk of RPL, so there may be a relevant downstream link not due to the genetic mutation, but to downstream effects of that mutation.

TREATING PATIENTS WITH RPL DUE TO GENETIC MALFORMATION

There is little published data on whether or how to treat patients who are trying to conceive who have genetic abnormalities in their gametes. For any individual, there is a possibility of genetic abnormality, which makes identification of those who require intervention difficult. Studies have shown that markers such as glutathione levels have been linked to egg and sperm health, so supporting antioxidant status generally, and glutathione levels specifically, may be of benefit. It also makes sense to assess and remove any known exposures to teratogenic substances and to work with the patient through lifestyle adaptation to increase antioxidant intake. Starting with basics such as organic fruits and vegetables, prenatal vitamin support, and use of known antioxidants such as green tea, turmeric, and rosemary through the diet could be of benefit. Some studies have shown that prescriptive use of antioxidants such as N-acetyl cysteine (a known glutathione precursor) at a dose of 600 mg daily, taken with folate, significantly increased live birth rate over administration of folate alone.

IMMUNE-ASSOCIATED PREGNANCY LOSS

Much of pregnancy, especially early pregnancy, is a “black box” of biology, where we don’t have much information to work from. Research during this time is difficult, because most women are evaluated during or after a loss, and it’s very difficult to discern whether the observed uterine environment at that time is representative of what led to the pregnancy loss or is a result of the body’s innate “cleanup” process.

Incredible immunological changes that allow the embryo to go undetected by the mother’s immune system occur in early pregnancy, a necessary protection to keep the body from attacking that foreign tissue. While we don’t know the details of every immune interaction, the process is multifactorial and the well-regulated immune response is vital for the health of the pregnancy.

Both autoimmune and alloimmune reactions have been postulated and evaluated in association with recurrent pregnancy losses, but are hotly debated in scientific literature. Research in this area presents many difficulties. First, the literature is full of small, uncontrolled studies. Second, it is difficult to recruit patients with multiple pregnancy loss into randomized controlled trials. Third, peripheral measurements (serum, for example) may not adequately reflect the immunological state at the maternal-fetal interface. Lastly, it is difficult to distinguish between immune alterations that cause miscarriage and those that result from loss. Factoring in these variances, studies show a range of attribution ranging from 8% to 42% of RPL being tied to immunologic factors (mean 15% of cases).

Alloimmune responses refer to the mother’s immune reactions to the foreign embryonic/fetal tissue, and autoimmune responses refer to the mother’s immune system reacting with her own tissues (ie, endometrium). For alloimmunity, which is plausible, there are many tests available, but commercially available tests have not been proven to be clinically useful. Some of these include mucosal CD16-natural killer (NK) cell testing, cytokine profiles (measuring T helper cell [TH]1/TH2 balance), human leukocyte antigen (HLA) typing, anti-paternal leukocyte antibodies, and others. Ultimately, no tests are currently supported by scientific evidence.

Established science around autoimmunity does exist, and we know that it plays a role in many cases of RPL. Antibodies to phospholipids, nuclear antigens, thyroid proteins, histones, and single-stranded and double-stranded DNA have all been evaluated. Some antibodies are very worthwhile to test for, but panels are expensive, many are unproven, and they can be misleading, so caution is recommended when choosing labs for evaluating a patient with RPL.
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Irritable bowel syndrome (IBS) has traditionally been a diagnosis of exclusion. Now there is an inclusionary tool to include in your IBS diagnostic workup. The IBSDetex™ test from Quest Diagnostics is for post-infectious IBS-D and IBS-M. It’s a quick, simple, first-line diagnostic test.

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ANTIPHOSPHOLIPID ANTIBODY SYNDROME

One well-documented example of immune-mediated pregnancy loss is antiphospholipid antibody syndrome (APS). This condition is widely accepted, readily diagnosed, and effectively treated. In APS, autoimmune reactions trigger thrombotic events that impair blood flow to the embryo and fetus. It can harm placental development. Antiphospholipid antibody syndrome is worthwhile to test for both in early and in later pregnancy loss.

In early pregnancy loss, antiphospholipid antibodies may affect implantation by causing microthrombotic events within the spiral arteries that supply blood flow to the endometrium. It has been suggested that APS could, theoretically, affect even the earliest stages of implantation by interfering with the trophoblast-endometrial interaction, and may be a possible explanation for some cases of unexplained infertility. In later pregnancy losses related to antiphospholipid antibodies, the pathophysiology is often that the antibodies can cause placental damage, hindering the ability of the placenta to deliver nutrients and oxygen effectively to the fetus. It has also been suggested that one mechanism of APS is restriction of endothelial production of nitric oxide.

CLINICAL AND LABORATORY CRITERIA FOR APS EVALUATION

The clinical criteria for workup for APS includes a known history of vascular thrombosis and pregnancy morbidity factors, including (1) a history of 3 or more spontaneous abortions before 10 weeks’ gestation with exclusion of maternal anatomic and hormonal abnormalities and exclusion of chromosomal abnormalities; (2) the death of a morphologically normal fetus greater than 10 weeks; or (3) 1 or more premature births of morphologically normal neonates (<34 weeks’ gestation) due to severe preeclampsia or placental insufficiency.

Workup should include testing for lupus anticoagulant, anticardiolipin immunoglobulin (Ig)G or IgM, and anti-B2-glycoprotein 1. Note that antinuclear antibody or antithyroid antibody testing is not recommended as a part of this screening.

Diagnostic criteria include a positive plasma lupus anticoagulant, positive anticardiolipin antibody of the IgG or IgM isotype in serum or plasma present in a medium or high titre (>40 IgG phospholipid units [GPL] or IgM phospholipid units [MPL], or >99th percentile), and positive anti-B2-glycoprotein-1 IgG or IgM antibodies. Testing must be positive on at least 2 occasions tested at least 12 weeks apart (see Table 3).

Although we have a good understanding of APS as a single model for immune-mediated RPL, further research in this area may begin to uncover several additional autoimmune pathologies that influence both infertility and RPL. A retrospective study on IVF with intracytoplasmic sperm injection (ICSI) showed that patients with elevated antinuclear antibody (ANA) titres exhibited significantly lower rates of mature

Table 3: Summary of Immunologic Testing and Treatment for Immune-Mediated Recurrent Pregnancy Loss

<table>
<thead>
<tr>
<th>Description</th>
<th>Test</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proven/Validated</td>
<td>Lupus anticoagulant</td>
<td>Anticoagulant therapies</td>
</tr>
<tr>
<td></td>
<td>Anticardiolipin antibody (ACA)</td>
<td>Anticoagulant therapies</td>
</tr>
<tr>
<td></td>
<td>Anti B2-glycoprotein-1 antibodies</td>
<td>Progesterone supplementation</td>
</tr>
<tr>
<td>Promising</td>
<td>Antiphosphatidylserine Antibodies</td>
<td>Intravenous Immune globulin</td>
</tr>
<tr>
<td></td>
<td>NK cell testing</td>
<td>Prednisone/steroid/anti-inflammatory treatments</td>
</tr>
<tr>
<td>Potentially misleading</td>
<td>Extensive antibody panels</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parental HLA typing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Th1/Th2 profiling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANA Panels</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: ANA, antinuclear antibody; HLA, human leukocyte antigen; NK, natural killer cell; Th, T helper cell.
oocytes, fertilization, pregnancy, and implantation and higher rates of abnormal fertilization and early miscarriage. Effects were seen in patients with both high and low ANA titres, and parameters could be improved through application of prednisone plus low-dose aspirin. Studies like this one indicate that the complexities of the immune interactions in the reproductive tract are poorly understood, but likely have an impact.

**TREATMENT OF IMMUNE-MEDIATED RECURRENT PREGNANCY LOSS**

A number of therapies are used conventionally to manage APS in women. These include steroids, immunoglobulins, heparin, and aspirin. Steroids have been tested in several studies, and their use is not well-justified; still, they are prescribed often. Steroids (eg, prednisone) may increase the risk of gestational diabetes.

Heparin and aspirin are the treatments of choice for women diagnosed with APS. Heparin and aspirin in combination appear to perform better than aspirin alone. It is suspected that the additional benefit is unrelated to the clotting mechanism. One study of 70 women with APS showed that co-administration of both therapies led to a 74.3% live birth rate vs a 42.9% live birth rate in the aspirin-only group, while other studies have shown no advantage to adding heparin to the treatment protocol. A Cochrane review published in 2005 found that combined unfractionated heparin and aspirin therapy may be able to reduce pregnancy loss in women with APS by 54%. This same review commented that administration of prednisone and aspirin resulted in a significant increase in prematurity and an increase in gestational diabetes, but no significant benefit to live birth rate. It also noted that intravenous immune globulins did not demonstrate benefits but did increase the risk of pregnancy loss and premature birth when compared to heparin or heparin plus aspirin therapy.

Newer studies have also demonstrated a link between APS and nitric oxide insufficiency and oxidative stress. Both of these factors should be addressed through a plant-based anti-inflammatory diet.

When it comes to naturopathic treatment of APS or other immune-related pregnancy losses, I suggest an integrative treatment plan, using medications like heparin/aspirin in addition to nutritional therapies. One small prospective study in 30 women demonstrated that administration of fish oil produced the same positive pregnancy outcomes as low dose aspirin administration. Considering the severity of APS when it comes to the outcome of the fetus, it is essential that naturopathic and integrative clinicians refer to and offer patients access to treatments with a strong evidence base, including conventional therapies (see Table 3.)

**NATUROPATHIC THERAPIES FOR IMMUNE-RELATED PREGNANCY LOSS**

Once a diagnosis of RPL is established, it is recommended that naturopathic therapies be used to augment conventional therapies and support the couple to a live birth.

In cases of autoimmune-mediated pregnancy loss, there is no published data regarding naturopathic therapies either as standalone or adjunctive to conventional treatments. A few considerations should include recommending an anti-inflammatory diet, addressing stress, which can affect the immune response, and assisting with nutritional status of essential fatty acids like those from fish oil.

Immune-modulating botanical therapies such as turmeric, ginger, boswellia, and others could hold promise by decreasing overall autoimmune antibody production, but data is lacking to support a recommendation at this time.

**OTHER CAUSES OF PREGNANCY LOSS**

**THROMBOPHILIAS**

Another category of cause of pregnancy loss includes other (non-APS) thrombophilias, primarily factor V Leiden mutation (a procoagulant), prothrombin gene mutations, and protein C, protein S, and antithrombin deficiencies. Thrombophilias are first discovered during miscarriage and infertility workups. Screening for thrombophilias is warranted if the patient has a history of venous embolism in a setting of a
nonrecurring risk factor (eg, surgery) or has a first-degree relative with a known or suspected thrombophilia. Routine screening for thrombophilias in women with RPL is not currently recommended, but could be helpful in cases where no other diagnosis can be established.

Women with thrombophilias have an increased pregnancy risk including deep vein thrombosis and pulmonary embolism, preeclampsia and eclampsia, preterm labor, and placental abruption. For this reason, many women who are diagnosed with a thrombophilia choose not to carry children; if they do, they should be comanaged with an experienced hematologist.

ANATOMIC ABNORMALITIES

While not common, congenital uterine abnormalities are associated with second trimester loss, when the growing fetus begins to experience restriction. Relevant uterine abnormalities include unicornuate, bicornuate, didelphic, septate, and arcuate uteri. Assessment of uterine anatomy with ultrasound is recommended in recurrent early pregnancy loss as well as later pregnancy loss. The role of noncongenital uterine anatomic abnormalities such as fibroids, uterine polyps, and Asherman’s syndrome (intrauterine adhesions) in RPL has not been established.

HORMONAL AND METABOLIC FACTORS

Maternal endocrine disorders should be ruled out in every woman with pregnancy loss. These include diabetes, thyroid dysfunction, and prolactin abnormalities. Prolactin abnormalities are a commonly recognized cause of ovulatory dysfunction but can also affect the ability to retain a pregnancy. Elevated prolactin can alter the hypothalamic-pituitary-ovarian (HPO) axis, resulting in a shortened luteal phase and impaired folliculogenesis. In women with RPL and elevated prolactin, treatment with bromocriptine increased birth rate from 52.4% to 85.7%. Vitex, which binds directly to dopamine receptors in the brain, has also been shown to have a prolactin-lowering effect. One study demonstrated that 40 mg per day of dried vitex berry lowered prolactin equivalent to 5 mg per day of bromocriptine. Studies of vitex have not been conducted in patients with RPL, but it is a promising therapy.

Luteal phase defect, or a shortened luteal phase associated with lower progesterone levels, could also contribute to early pregnancy loss. If women have a menstrual cycle shorter than 26 days, and ovulation is suspected around day 14, the shortened luteal phase may not allow sufficient time for implantation. In those with luteal phase defect, the cytokine and vascular processes that trigger menstruation begin 3 to 4 days before the onset of menstruation. A fertilized embryo takes approximately 7 days to get to the endometrium, where it can implant. A shorter cycle can cause the timeframes to overlap so that the menstruation process begins prior to implantation.

In animal models of luteal phase defect, it has been observed that oxidative stress can be an underlying factor that impairs development of the corpus luteum, leading to low progesterone. In humans, melatonin (3 mg/d at 10pm) given through the luteal phase as an antioxidant increased serum progesterone concentrations compared to the unmedicated group.

STRESS

Pregnancy loss can induce significant stress, which is compounded when there are multiple losses and especially when workup discerns no clear explanation. Furthermore, significant stress itself can contribute to pregnancy loss. A
2002 prospective study of 61 patients with unexplained pregnancy losses found that the degree of baseline depressive symptoms, as assessed by questionnaire, predicted the likelihood of miscarriage.21

A provider’s care and support can have a significant impact on future pregnancy outcomes. In one study of 158 couples with more than 3 pregnancy losses without a known cause, women were entered into 2 treatment arms, to receive either standard obstetric (OB) care (n=42) or “TLC” care (n=116), which consisted of psychological support with weekly medical and ultrasound exams and instructions to take it easy. The live birth rate was 36% in the OB-only control group and 85% in the TLC group.22 At least 2 additional nonrandomized studies have shown significant improvement in pregnancy outcomes in patients with RPL with provision of close monitoring and support by their provider.23 Naturopathic physicians are well-positioned to provide this additional care.

CONCLUSION
There is still so much we have yet to understand about pregnancy loss, including the whys and hows. For about half of all cases of RPL, no clear etiology is uncovered.4 Early data suggests that gamete quality (egg and sperm), environmental exposures, inflammatory state of the mother, and other factors may be involved.24 While concrete published data on integrative therapies are lacking, holistic-minded practitioners possess the tools to provide a deeper evaluation of couples with RPL and help couples improve their overall health and nutrition status, which can optimize immune and metabolic functions, lifting barriers to a successful live birth.

REFERENCES
Inositol, Betaine, and Boswellia for Breast Health

Commonly used supplements may improve troublesome symptoms

Megan Chmelik

ABSTRACT & COMMENTARY

PRACTICE IMPLICATIONS

These results suggest that moderate doses of several commonly used supplements may improve symptoms that concern many of our premenopausal patients.

Despite the fact that breast pain (mastalgia) is commonly benign in nature, resulting from cyclic hormonal fluctuations or benign breast disease, it is a symptom that often raises significant concern for patients until further evaluation has been done. In addition to the emotional burden, mastalgia has been reported to affect activities of everyday living such as sexual activity and sleep. Therefore, there is need for a low-risk intervention to alleviate this symptom.

Several papers suggest that high breast density is a genetic, but potentially modifiable, risk factor for breast cancer. Antiestrogenic drugs, such as tamoxifen, have been successful in decreasing density and relieving mastalgia; however, accompanying adverse effects often outweigh the benefits. The formulation used in this study is promising because it offers the same outcomes without the unwanted side effects.

The design of the present study reveals that not all of the ingredients (B vitamins and N-acetylcysteine) are essential for achieving the documented benefits. However,
DIM is applied clinically to support healthy estrogen metabolism, through the production of 2-hydroxyestrone estrogen metabolites, rather than conversion of 16-hydroxyestrone estrogen metabolites.* The production of 2-hydroxyestrone has been identified as a key factor of endocrine balance in both men and women, by demonstrating a lower affinity for estrogen receptors.

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previous literature revealing the individual therapeutic effects of boswellia, betaine, and myo-inositol helps us understand how each may be effective in the treatment of mastalgia and other breast-related disorders. Boswellia has proven effective in the management of various chronic inflammatory diseases due to its ability to modulate inflammation, most notably by inhibition of 5-lipoxygenase. Betaine, commonly known for its use in treating hypochlorhydria, has also been shown to improve breast health. Several earlier papers have reported an inverse association between betaine intake and breast cancer risk. Myo-inositol, a chemical mediator of insulin, has been found to improve hormonal and metabolic parameters, especially in women with polycystic ovary syndrome (PCOS). There is also evidence that myo-inositol can modulate inflammatory and oxidative processes.

Given the popularity of myo-inositol for the management of PCOS, it raises the question of whether the creators of Eumastós considered the possible correlation between PCOS and the prevalence of benign breast disease (BBD) when formulating their product. There was no mention of such association by them or the authors of the paper; however, several, but not all, studies suggest a relationship.

In 2000, D’Amelio et al reported BBD in approximately 7% of women with normal-appearing ovaries, 57% of women with ovarian cysts, and 92% of women with diagnosed PCOS. In a similar study (n=93) conducted in 2009, Gumus et al also found BBD to be significantly more prevalent among women with PCOS (40%) compared to those without (12.5%). These studies demonstrate a clear correlation, but a 2005 clinical trial (n=240) by Soran et al suggests otherwise. In this study, rates of fibrocystic breast disease, lump thickening, fibroadenoma, calcification, pain, redness, discharge, and hyperplasia were equally present in both the experimental and control group.

In 2012, Ozkaya et al designed a study to determine if hyperandrogenemia (HA) acts as a protective factor against fibrocystic breast disease. Participants were categorized by PCOS phenotype (Group 1: PCO-anovulation; Group 2: HA-anovulation; Group 3: HA-PCO; Group 4: HA-PCO-anovulation) and then evaluated using various metabolic and hormonal parameters. Individuals in Group 3 had the lowest rates of fibrocystic breast disease, while those in Group 1 had the highest rates. These findings demonstrate an inverse correlation between hyperandrogenism and fibrocystic breast disease.

The authors of this present study (Pasta et al) conducted a very similar clinical trial just a month after this first (pilot) study was published. In the second study, 64 women with fibroadenomas, aged 30 years or younger, were recruited and randomized to 2 groups; one group received the same placebo used in the pilot study and the second group received the same proprietary formula (Eumastós). After 6 months, it was found that reductions in fibroadenoma median volume were more prevalent (38.88% vs 17.85%) and significant (17.86% vs 5.96%) in the experimental group.

These results further support the hypothesis that myo-inositol, boswellia, and betaine are beneficial to breast health when used in combination.

According to the findings of both clinical trials by Pasta et al, supplementation with divided doses of myo-inositol (800 mg), *Boswellia serrata* (200 mg), and betaine (700 mg) may be a valuable new therapy in treating patients with mastalgia, benign breast disease, and/or high breast density.

“Supplementation with divided doses of myo-inositol (800 mg), *Boswellia serrata* (200 mg), and betaine (700 mg) may be a valuable new therapy in treating patients with mastalgia, benign breast disease, and/or high breast density.”
be a valuable new therapy in treating patients with mastalgia, BBD, and/or high breast density. Furthermore, this combination may be particularly effective in treating those with PCOS and concomitant BBD.

REFERENCES
Urtica Benefits Women with Diabetes

Extract of stinging nettles lowers blood sugar

Jacob Schor, ND, FABNO

REFERENCE

DESIGN
An 8-week randomized placebo-controlled intervention trial

PARTICIPANTS
Fifty older women with type 2 diabetes mellitus were initially enrolled in the trial; 48 completed the trial, with 24 in each group. Average age was 62 in the intervention group and 60 in the control group. Mean body mass index (BMI) was between 23 and 24 kg/m² for the 2 groups. Mean length of time since diagnosis was about 13 years.

STUDY MEDICATION AND DOSAGE
Patients received either 5 mL of an alcoholic extract of dried aerial parts of *Urtica dioica* (stinging nettles) or placebo 3 times per day, after meals. The extract contained 45% ethanol and 55% water, with 2.7 grams of dry matter in 1 liter of extract.

OUTCOME MEASURES
Fasting glucose, triglycerides, levels of high density lipoprotein (HDL), low density lipoprotein (LDL), serum glutamic-pyruvic transaminase (SGPT), glutamic oxaloacetic transaminase (SGOT), nitric oxide (NO), and superoxide dismutase (SOD)

KEY FINDINGS
After 8 weeks of intervention, fasting plasma glucose, triglyceride, and SGPT levels significantly decreased in the treatment group. HDL, NO, and SOD levels increased significantly compared to the control group.

PRACTICE IMPLICATIONS
This study reminds us that some of the simplest tonic herbs may still be useful in treating women with diabetes. Though we are all familiar with Urtica, I suspect that many of us forget to suggest it to patients with diabetes. Urtica has a long and wide history of use in traditional medicine for treating diabetes.¹ We probably should use it more often.

Published research reports consistent benefits of urtica for type 2 diabetes in both animal models and human trials.

Urtica acts in multiple ways to lower blood sugar. Some studies suggest it lowers blood sugar by increasing insulin secretion from the pancreas.² Apparently it does this by protecting the beta cells in the islets of Langerhans, or alternatively by stimulating an increase in their number.³ Urtica also inhibits the enzyme alpha-glucosidase, slowing the digestion of carbohydrates. This is an action that urtica has in common with several other herbs including *Taraxacum officinale*, *Viscum album*, and *Myrtus communis*.⁴

According to Namazi et al, urtica also increases insulin sensitivity. In an 8-week randomized, controlled trial with 50 patients with type 2 diabetes, they reported significant differences in interleukin(II)-6, tumor necrosis factor (TNF)-alpha, high sensitivity C-reactive protein (hs-CRP), and fasting insulin in patients given urtica in divided doses of 100 mg/kg per day.⁵

In a human clinical trial published in 2013, Kianbakht et al reported benefit in treating people with insulin-dependent advanced type 2 diabetes using 1,500 mg of urtica per day in divided doses for 3 months (n=46). They reported significant improvement in fasting glucose, 2-hour postprandial glucose, and hemoglobin A₁c (HbA₁c) levels compared to placebo.⁶

(continued on page 22)
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This new study by Behzadi et al looked specifically at cholesterol levels and measures of liver function that they hoped would be improved by Urtica treatment. In rats, Urtica extracts have decreased 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase activity and lowered LDL. This benefit was not seen in this current study; rather, the opposite occurred. In this current study, Urtica was associated with decreases in SGPT, suggesting its use might be protective to the liver. The increases in NO observed in this study are seen as a positive improvement. Typically NO levels decrease in type 2 diabetes, a change associated with complications of the disease.

A significant drawback to this current study is that the authors did not report changes in HbA1c levels in study participants after the intervention. Levels were measured initially but not on follow-up. One might assume this test was omitted because of the relatively short duration of the trial, but it would have been appropriate nevertheless and the omission is noticeable.

REFERENCES
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Artificial Light at Night Increases Breast Cancer Risk

More breast cancer cases occur in high-light, urban areas

REFERENCE


PRACTICE IMPLICATIONS

This study is an ecological study—an observational study defined at the population or group level rather than individual level. To test whether exposure to electric LAN increases breast cancer risk in women, a measure of outdoor nighttime illumination, as detected by satellite image, was used as a surrogate for light exposure incident on the retina of women at night.

This is one of a number of similar published studies done in multiple locations around the world that suggest a correlation between artificial light at night and breast cancer risk. These findings have been consistent enough to raise the question whether simply living in an environment that is darker at night might lower breast cancer risk.

Richard Stevens, one of the authors of this current paper, first suggested that electric lighting might alter breast cancer risk in a paper he wrote in 1987. He theorized that exposure to LAN disrupted melatonin production and the circadian cycle. Because estrogen levels are inversely associated with melatonin, Stevens theorized that LAN would lead to greater estrogenic effects on breast tissue and eventually to higher cancer risk.

Epidemiologists at the time knew that breast cancer rates differed markedly between Western countries and Asia. The initial assumption was that the difference was due to high-fat diets in the West. And while correlations appeared to support this ‘fat story premise,’ cohort studies had not confirmed the theory.

Stevens’ hypothesis has been challenging to confirm as few populations remain that do not have electric lights, and those populations that do live without electricity have such dramatically different lifestyles from us that it is impossible to identify all the potential confounding influences on cancer risk.

Over the years, several key predictions have been tested and proven that confirm the initial Stevens hypothesis.
The first was that blind women, who do not tend to use indoor electric lighting, have a lower risk of BC.\textsuperscript{4} Secondly, several studies that have examined night-shift workers have found that women who work night shifts or who have more exposure to LAN regularly have higher risk of breast cancer.\textsuperscript{5-7} In a major meta-analysis of 16 prospective cohort studies published in 2015, Lin et al reported increased morbidity and all-cause mortality in breast cancer with number of years engaged in night work.\textsuperscript{8} Not all studies agree, though. Another 2016 meta-analysis out of the United Kingdom reported on 10 studies and found no association.\textsuperscript{9} These variations in results may be partially if not fully explained as due to variations in circadian genes that account for varying susceptibility to disruption.\textsuperscript{10,11}

In a recently published French case-control study (975 cases and 1,317 controls), the risk for ER+ and PR+ breast cancer doubled and the risk for HER2+ cancers nearly tripled in women working night shifts.\textsuperscript{12}

The idea that light at night, measured via satellite images, could be associated with breast cancer risk was first brought to our attention by a 2008 study by Itai Kloog and colleagues at the University of Haifa. They employed nighttime satellite photos taken by NASA to estimate the LAN levels in 147 communities in Israel. Breast cancer risk was affected by nighttime lighting. They found a strong positive association between LAN intensity and breast cancer rates. The breast cancer rate in communities with average night lighting was 37\% higher than in communities with the lowest amount of light; and in the most well-lit communities the rate was another 27\% higher. Thus they showed a 73\% higher breast cancer incidence in the highest LAN-exposed communities compared to the lowest LAN-exposed communities.\textsuperscript{13}

Kloog published similar findings on BC risk and LAN on a global level in 2010.\textsuperscript{14} Rybnikova confirmed these findings in 2015, finding the strongest associations between exposure to artificial light at night (ALAN) and breast cancer was in Western Europe, while in Southeast Asia and the Gulf States the effect was weaker.\textsuperscript{15}

Even so, a 2015 study reported light pollution was significantly associated with breast cancer risk in both urban and rural regions of South Korea; however, no association was found between ALAN and female lung, liver, cervical, gastric, or colon cancers.\textsuperscript{16} It does appear that prostate cancer may also be strongly linked to LAN. Other cancers are much less influenced or entirely unaffected by LAN.\textsuperscript{17,18}

The current Connecticut study data tell us that the communities that “are more highly lighted at night in Connecticut have higher breast cancer incidence.” Connecticut is far closer to home for most of us than Israel or South Korea, so this information in a way seems to make these other data more relevant.

Simple lifestyle changes that decrease nighttime light exposure may have clinically significant impacts on breast cancer risk. A June 2016 Israeli study reported that women who sleep with closed window shutters may reduce their BC risk by 18\% (OR=0.82, 95\% CI=0.68-0.99, \textit{P}<0.04). Those who use a reading lamp instead of brighter indoor lighting reduce risk by 19\% (OR=0.81, 95\% CI=0.67-0.97, \textit{P}<0.02).\textsuperscript{19} A November 2016 paper again analyzing data from Israel also reported a strong association between LAN and breast cancer and provides estimates of ‘dose effect.’ Light intensity (lux)
was calculated based on road length and street lamp brightness to the degree that the authors could approximate that light intensities above 16 lux were enough to affect melatonin levels and BC morbidity.20

Why LAN increases breast cancer risk is still not fully explained. Initially, theories focused on melatonin suppression and shifts in estrogen, but more recently attention has been drawn to circadian rhythmicity and its disruption.21 Light exposure at night and melatonin disruption contribute to genetic instability.22 Circadian cycles regulate cellular responses to DNA damage and the timing of the cell cycle, though these relationships are complex and difficult to generalize as good or bad.23,24

Whatever the mechanism, light at night should be considered a potential carcinogenic environmental pollutant and we should encourage patients to reduce exposure. By doing so, we may favorably impact incidence of breast cancer in the larger population.

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Fenugreek Standardized Extract for Menopausal Symptoms

Trigonella foenum-graecum improves symptoms and increases serum estradiol

Jennifer Johnson, ND, LAc

REFERENCE

STUDY OBJECTIVE
To assess the safety and efficacy of a proprietary standardized extract of Trigonella foenum-graecum husk (FenuSMART) in the management of menopausal complaints

DESIGN
Randomized, double-blind, placebo-controlled study

PARTICIPANTS
Participants were menopausal women aged 45 to 58 who had a menstrual period within the past 3 years but not within the previous 12 months. To be included, participants had to have moderate-to-severe menopausal symptom severity—determined by a Greene Climacteric Scale (GCS) mean score of ≥25—and a minimum of 3 hot flashes per day during the preceding 3 to 5 weeks. Potential participants were excluded if they reported prior use of hormone therapy, family history of breast cancer, personal history of cancer, hospitalization within the past 3 months, prevalence of cardiac risk factors, or current use of medications or supplements. Of 130 women who were screened for eligibility, 88 women were randomized into treatment and control groups.

INTERVENTION
The study intervention was a proprietary extract of Trigonella foenum-graecum husk containing the constituents protodioscin, trigonellin, and 4-hydroxyisoleucine at a drug extract ratio of 18:1 (w/w). Each capsule contained 250 mg of fenugreek husk extract; dosage was 500 mg twice a day after meals for 90 days. The placebo was food-grade microcrystalline cellulose in hard-shell gelatin capsules (identical to extract capsules).

STUDY PARAMETERS ASSESSED
Parameters assessed at baseline and 90 days included questionnaires related to menopausal symptom severity (GCS) and quality of life [36-Item Short Form (SF-36) Health Survey], anthropometric measurements (body mass index, mid-arm circumference, waist circumference, hip circumference, waist-to-hip ratio), blood pressure, and blood tests (serum estradiol, serum calcium, hemoglobin, and lipid panel).

PRIMARY OUTCOME MEASURES
The primary outcomes measured by this study were changes in GCS and SF-36 questionnaire scores and serum estradiol at 90 days compared both to baseline and control group.

KEY FINDINGS
Mean GCS total score decreased in the treatment group from 34.83 at baseline to 19.64 at 90 days (-15.19; 95% confidence interval: -17.81 to -12.57, P<0.001). Scores were significantly reduced in subsections of the GCS, including anxiety (58.9%), depression (47.7%), vasomotor symptoms (47.7%), mood swings (68.2%), insomnia (75%), headaches (53.9%), and vaginal dryness (56.3%). Mean SF-36 score improved in 73% of participants who received the intervention, compared with 32.5% of those who received placebo. In particular, there was an 11.9% increase in general well-being (P<0.05) and a 9% increase in mental health (P<0.05) compared to baseline.

Serum estradiol levels increased 120% in the treatment group over the course of the study, from 131.22 pmol/L at baseline to 288.46 pmol/L at 90 days (P<0.01). Serum calcium increased 2% in the treatment group, compared to an 8% decrease in the placebo group (P<0.05).

No adverse events were observed or reported over the course of the study.

PRACTICE IMPLICATIONS
Fenugreek seed has a long history of medicinal use. In traditional Chinese medicine, fenugreek seed acts as a warming kidney yang tonic. In Ayurveda, the hot pungent herb balances kapha and vata doshas. In Western herbal medicine, the herb is used for its carminative and galactagogue effects.

Research has identified benefits of fenugreek seed on metabolic measures, including blood glucose and lipids.1-7 More recently, studies have evaluated its effects on hormone-mediated conditions, such as low libido (male and female)8,9 and dysmenorrhea.10 The present study provides evidence that fenugreek husk extract improves a range of subjective symptoms of menopause and increases serum estradiol. These effects are surmised to be due to the action of steroidal saponins, alkaloids, and a nonproteinogenic amino acid on estrogen receptors that mediates estrogen and androgen activity.9,11,12

Based on the data presented, fenugreek extract appears to be a moderately effective intervention for a broad spectrum of menopausal symptoms. The participants in this study went from an average of 3 to 5 hot flashes daily to 1 to 2 per day, and severity of menopause-related mood and physical symptoms reduced by about half. In women undergoing the menopause transition, what represents (continued on page 30)
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adequate management is individualized, and so the reduction but not elimination of symptoms observed in this study may or may not be acceptable for a given patient.

The potential for synergistic benefits of fenugreek husk extract on lipids and glucose make it an intriguing option for women with menopause symptoms as well as hypercholesterolemia and/or type 2 diabetes mellitus. The researchers presented some evidence that this particular extract helped reduce total cholesterol, low-density lipoprotein (LDL) cholesterol, and triglycerides in participants with hypercholesterolemia, but this information was not fleshed out adequately for scrutiny. Glucose was not an outcome measure in this study, but hypothetically the increase in serum estradiol observed could contribute to improved insulin sensitivity.\(^1\) Keep fenugreek husk extract in mind for this patient scenario, with the caveat that further research is needed with regards to its usefulness in glucose and lipid management.

The increase in serum estradiol presented in this study and the purported effects of fenugreek on estrogen receptors pose a conundrum for practitioners treating women with a personal history of estrogen receptor–positive cancer. We do not know which types of estrogen receptors the constituents in fenugreek favor, and even if we did know, it is not clear whether fenugreek husk extract would be beneficial, deleterious, or neutral with regards to secondary prevention of cancer. There is strong interest in finding effective nutraceutical remedies for menopausal symptoms in women with estrogen receptor–positive cancer history, but based on the data presented in this study and the lack of specifics about mechanism of action, it is advisable to proceed cautiously.

This study is limited by its small size (N=88), short duration (90 days), and the conflict of interest with respect to its funding sources.

The participants in this study went from an average of 3 to 5 hot flashes daily down to 1 to 2 per day, and severity of menopause-related mood and physical symptoms reduced by about half.

REFERENCES

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Integrative Treatment Considerations for Patients with Eating Disorders: An Interview with Carrie Decker, ND
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ABOUT THE EXPERT

CARRIE DECKER, ND, is a certified naturopathic doctor who graduated with honors from the National College of Natural Medicine (now the National University of Natural Medicine) in Portland, Oregon. Decker also holds graduate degrees in biomedical and mechanical engineering from the University of Wisconsin-Madison and University of Illinois at Urbana-Champaign respectively. Decker sees patients at her office in Portland as well as remotely. Her practice focuses on gastrointestinal disease, eating disorders, allergies, mood imbalances, autoimmune disease, chronic fatigue, thyroid disorders, and skin conditions. The primary modalities Decker employs are clinical nutrition, botanical medicine, homeopathy, biotherapeutic drainage, and counselling. Decker also supports integrative medicine education as a clinical education thought leader with Allergy Research Group and by writing for various other educational resources. More about her practice may be found at www.carriedecker.com or www.blessedthistle.info.

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The Stress Response: Lifestyle and Herbs for Maintaining Resilience

Interview with physician, midwife, and herbalist Aviva Romm, MD

In this interview, Aviva Romm, MD, reviews how the stress response is triggered, how the hypothalamic-pituitary-adrenal (HPA) axis engages, and what can be done to lessen the health consequences of chronic stress. She explains how lifestyle measures such as getting adequate sleep and eating at the proper times can begin to set the normal rhythmicity needed for maintaining normal HPA function. She also discusses the differential effects of various adaptogenic plants such as ashwagandha, the ginsengs, rhodiola, reishi mushrooms, and more.

This is a conversation for patients and practitioners alike, covering the basics and some nuanced botanical insights that can help any clinician in prescribing adaptogenic plant combinations for their patients.

ABOUT THE EXPERT

AVIVA ROMM, MD, has bridged the best of traditional medicine with good science for over three decades. A midwife, herbalist, and Yale-trained MD, Board Certified in Family Medicine with Obstetrics, Dr. Romm’s focus is on the impact of stress, diet, and environmental toxins on health, willpower, food cravings, weight, chronic disease, and hormone imbalance in women.

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