OLSON CENTER FOR WOMEN'S HEALTH

Women's Health overview

Sleep Across a Woman's Lifespan

Much like a healthy diet and regular exercise, sleep is an integral part of a healthy lifestyle. The more we understand about sleep, the better equipped we are to support our best health.

For women, it is important to note that sleep evolves across the lifespan in response to hormonal shifts, body changes and life experiences. From the teen years through older adulthood, women experience measurable differences in sleep patterns compared with men. For example, women tend to feel sleepy earlier in the evening and wake earlier in the morning. Interestingly, even though women often report more sleep problems, studies show they usually get better-quality sleep than men.

During the reproductive years, sleep is closely tied to hormonal shifts across the menstrual cycle. Estrogen and progesterone rise and fall in a pattern through the monthly cycle. As progesterone levels rise, women may feel sleepier, but sleep can become lighter and more disrupted due to an increase in body temperature. As estrogen levels change during the menstrual cycle, it can affect sleep, sometimes leading to trouble falling asleep or staying asleep. Many women report worse sleep in the days leading up to menstruation, including poor sleep quality and frequent awakenings.

Pregnancy is another time of significant sleep disruption. Up to 60% to 80% of women report sleep problems at least a few nights per week. Common causes include frequent nighttime urination, aches and pains, reflux and fetal movement. Restless legs syndrome can also occur during the reproductive years and is common during pregnancy, often driven by iron deficiency.

Sleep architecture also shifts, with decreased total sleep time and more awakenings, particularly in the third trimester. Importantly, these disturbances are not merely inconvenient. Insufficient sleep during pregnancy has been associated with adverse outcomes. Even after delivery, sleep often remains disrupted, with many women experiencing ongoing insomnia and mood symptoms.

While sleep disruption occurs throughout life, the menopausal transition is one of the most significant and clinically impactful periods for sleep health. Perimenopause, which can begin seven to 10 years before the final menstrual period, is characterized by declining estrogen and progesterone levels and rising gonadotropins, leading to widespread physiologic changes. During this time, 40% to 60% of women report significant sleep complaints, including difficulty falling asleep,

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Using personal health devices for **sleep tracking**

Consumer sleep trackers, such as smartwatches and rings, have become increasingly popular tools for monitoring sleep. **However, the American Academy of Sleep Medicine advises interpreting their data with caution.**

These devices can reasonably estimate sleep duration and timing, but are limited in accurately determining sleep stages or diagnosing sleep disorders. The AASM does not recommend using them as standalone diagnostic tools for conditions such as insomnia or obstructive sleep apnea.

Instead, sleep trackers are best used to improve our awareness of habits and patterns that may support behavioral changes. When sleep concerns arise, they are most helpful when used alongside clinical evaluation and evidence-based interventions.

Contributed by **Rubab Scherger, PA-C** and **Stefanie Breitkreutz, PA-C**
Nebraska Medicine Sleep Medicine

Women's Health • overview
newsletter is published quarterly for health care professionals and the general public with special interest in women's health issues by the Olson Center for Women's Health.

Address all comments to:
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From the Chair

The Olson Center for Women's Health and the Department of Obstetrics and Gynecology at the University of Nebraska Medical Center are actively developing and implementing programs across Nebraska to improve women's health and assist physicians in communities throughout the state. Faculty and staff within the department are leading these efforts and will share program updates in upcoming issues of Women's Health Overview.

EMBRACE – Excellence in Maternal Birth Outcomes through Rigorous Assessment and Community Engagement

We greet you today in the spirit of service. And it is through service that our team is working diligently to improve the health outcomes for the families we serve. We would like to share information about the program helping make that possible.

EMBRACE uses evidenced-based interventions proven to lower rates of poor health outcomes. Nebraska is a rural state, and families have the added burden of distance to access the care they need during pregnancy. Our team has been connecting with rural hospitals, one by one, to share the evidence-based tools the EMBRACE team can bring into each community.

The services available are many and may include:

- High-risk specialty pregnancy care
- Ultrasound access
- Labor and delivery partnerships and transitions
- Evidence-based supportive programs

It is through a heart of service that the EMBRACE team listens to the needs of each community and works collaboratively to help meet those needs.

This is a big job, and we have grown our team to rise to the challenge. Led by Sarosh Rana MD, MPH (Founder and EMBRACE Program Director), the EMBRACE team includes:

- Neil Hamill, MD – EMBRACE Medical Director; UNMC Dept of Ob/Gyn
- Briley Patterson, BSN, RN – EMBRACE Manager; Nebraska Medicine Olson Center for Women's Health
- Courtney Thomas, BSN, RN – EMBRACE Nurse Coordinator; Nebraska Medicine Olson Center for Women's Health
- Michelle Grady, MHA – Nebraska Medicine Lead Strategic Account Liaison
- Brian Sims, PhD, MA – EMBRACE Assessment Lead; UNMC College of Public Health
- Richard Blum, MPA, CMPE – Dept of Ob/Gyn Administrator

We look forward to sharing more details and stories about the impactful work being performed by this dedicated group of health care professionals.

Sincerely and with a passion for service,
The EMBRACE team

Pictured from left to right: Neil Hamill, MD; Sarosh Rana, MD; Briley Patterson, BSN, RN; Richard Blum, MPA, CMPE

research news

Advancing **Gynecologic Oncology Research** Across Nebraska

Research has always been at the heart of progress in women's health, and nowhere is that more evident than in gynecologic oncology. Through clinical trials, discoveries made in the laboratory are translated into new treatments that improve survival, quality of life and hope for patients facing ovarian, uterine, cervical and other gynecologic cancers.

As the newly appointed Deputy Director of the Fred & Pamela Buffett Cancer Center, I am honored to help lead the next chapter of this work by strengthening our research enterprise and expanding access to innovative therapies for patients across Nebraska.

A major priority in the coming years will be building out our Phase I clinical trials capabilities. Phase I studies are the earliest stage of testing promising new therapies in patients and often provide access to leading-edge treatments years before they become widely available.

Establishing a stronger Phase I program at the Buffett Cancer Center will allow patients in our region to participate in these groundbreaking studies closer to home, rather than traveling long distances to larger metropolitan centers. In parallel, we are committed to expanding clinical trial access throughout the state so that geography is not a barrier to participation. Every patient, whether in Omaha, Lincoln, Scottsbluff, Norfolk, or a frontier community, deserves the opportunity to benefit from advances in cancer research.

The impact of clinical trials in gynecologic oncology over the past five years has been remarkable. In endometrial cancer, studies evaluating the addition of immune checkpoint inhibitors to chemotherapy have transformed the standard of care for patients with advanced or recurrent disease. These therapies harness the body's immune system to recognize and attack cancer cells. For tumors with mismatch repair deficiency, responses can be especially dramatic and durable, offering the possibility of long-term remission, and in some cases, outcomes that may approach cure in a disease once associated with limited options.

Similarly, patients with recurrent ovarian cancer are benefiting from a wave of innovation driven by clinical research. The addition of immune checkpoint inhibitors in select settings, antibody-drug conjugates that precisely deliver chemotherapy to cancer cells, and novel targeted small molecules have all contributed to improved outcomes. These advances are extending survival while also creating more personalized treatment strategies based on tumor biology. For many women, recurrent ovarian cancer is increasingly becoming a disease managed through multiple effective lines of therapy rather than a diagnosis with few remaining options.

The Buffett Cancer Center and the Department of Obstetrics and Gynecology have a long and proud history of advancing care for women through research, education and compassionate clinical excellence. That momentum is poised to accelerate through expanded resources, stronger mentorship pathways for faculty and trainees, greater opportunities for investigator sponsorship and focused investment in the health priorities of our catchment area.

By listening to the needs of communities across Nebraska and partnering with patients, providers, and scientists, we can ensure that innovation reaches every corner of our state.

The future of gynecologic oncology is brighter than ever. Through research, collaboration, and a commitment to equitable access, we have the opportunity not only to improve outcomes, but to redefine what is possible for women diagnosed with cancer in Nebraska and beyond.

Contributed by **Kathleen Moore, MD, MS**
UNMC Department of OB-GYN

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frequent awakenings and difficulty returning to sleep.

These disturbances are often caused by multiple factors. Vasomotor symptoms, particularly hot flashes and night sweats, are among the most prominent contributors. These events are linked to difficulty regulating body temperature and often peak in the evening, causing sudden awakenings and difficulty falling back asleep.

Research consistently shows a strong association between hot flashes and insomnia, particularly when symptoms are severe or occur at night.

However, menopause-related sleep disruption extends beyond these vasomotor symptoms alone. Mood disorders such as depression and anxiety, lifestyle and caregiving demands, chronic pain and age-related sleep timing changes may also play a role. In addition, the risk of primary sleep disorders increases during this period. Insomnia becomes more common and persistent, while obstructive sleep apnea — historically underrecognized in women — becomes much more common after menopause. Hormonal changes that affect upper airway stability and fat distribution may contribute.

Managing sleep disturbances during menopause requires a comprehensive and individualized approach that addresses both symptoms and underlying causes. Initial strategies often focus on lifestyle changes, including reducing caffeine and alcohol intake, maintaining a cool sleep environment and supporting healthy body temperature regulation. These simple steps can have a big impact on vasomotor symptoms affecting sleep.

Behavioral therapies, particularly cognitive behavioral therapy for insomnia (CBT-I), are highly effective and can reduce sleep disturbances. Mindfulness-based stress reduction and paced breathing techniques may also improve both sleep and vasomotor symptoms. Medication options can be considered when symptoms persist, including hormone therapy, antidepressants and other treatments.

Ultimately, sleep health should be viewed as a critical component of overall well-being. Chronic sleep disruption is associated with increased risks of cardiovascular disease, metabolic dysfunction and impaired quality of life. Recognizing the unique sleep patterns women experience allows for earlier identification of problems and more targeted, effective treatment. By understanding how hormonal transitions influence sleep – and by addressing both physiologic and behavioral factors – women can achieve meaningful improvements in sleep quality, health and daily functioning at every stage of life.

If you suspect you have a sleep disorder or have concerns about your sleep, please contact the Nebraska Medicine Sleep Disorders Clinic at Oakview for a consultation at 531.559.9999.

Contributed by **Rubab Scherger, PA-C** and **Stefanie Breitkreutz, PA-C**
Nebraska Medicine Sleep Medicine

New Olson Center Clinic Manager

Courtney Marshall has accepted the Olson Center Clinic Manager position and will begin her new role on May 18, 2026. Courtney is a 2011 graduate of Methodist College with a degree in nursing and she has proudly served Nebraska Medicine in a variety of roles since 2014. She started her career at Nebraska Medicine in Women and Infant Services as a Staff RN and Nursing Professional Development Specialist before bringing her expertise to the OneChart team as an Applications Analyst. Most recently, Courtney served as a Supervisor on the Heart & Vascular Unit.

Courtney has a deep passion for women and infant health, safety initiatives and evidence-based practice.

Please join us in warmly welcoming Courtney to her new role and congratulating her on this well-deserved appointment.

Contributed by: **Jamie Rudd, MHA, RN** | *Ambulatory Director of Operations*
Olson Center for Women's Health

OLSON CENTER FOR WOMEN'S HEALTH

Mission Statement
The mission of the Olson Center for Women's Health is to provide a national comprehensive health science center at the University of Nebraska Medical Center (UNMC). Based in the Department of Obstetrics and Gynecology, the center enables UNMC to make distinctive strides in education, research and service through innovative approaches to women's health issues.

Want More Information?
Visit our website: **OlsonCenter.com**

Learn more about our health care providers, services and programs available at the Olson Center for Women's Health. Our website also offers women's health information. Here are a few topics:
- Breastfeeding
- Breast health and disease
- Cardiovascular health
- Gastrointestinal health
- Gynecologic health
- Incontinence
- Reproductive endocrinology/infertility
- Pregnancy
- Wellness

Medications in Pregnancy – What About Acetaminophen?

During pregnancy, 9 out of 10 women will take a medication at least once. While some medications have sufficient data on use in human pregnancy, many do not. It can feel overwhelming to determine which medications are well studied and have the lowest risks.

Here are some things to consider when thinking about medication use in pregnancy. First is the background risk for birth defects. Many women are surprised to learn they have a background risk of about 3 out of 100 (3%) for a baby to be born with a birth defect, even without any known hazardous exposures. When possible, it is best to avoid adding to that background risk through medication use or other exposures. However, it is also important to treat maternal health conditions, since things like depression, fever, pain and other issues can affect both the mother and baby.

Another consideration is timing. In the first trimester, the baby is still forming most of its major body parts and organs, so it is essential to be cautious about exposures that might cause birth defects. The rest of the pregnancy is also important because the baby continues to grow and develop. The last month or two of pregnancy are also critical in terms of avoiding premature delivery or problems with the baby withdrawing from medications postnatally.

Imagine Quinn is 10 weeks pregnant and wakes up with a headache. When not pregnant, she typically takes ibuprofen or Tylenol® (acetaminophen), but now wonders if those medications are safe to take in pregnancy. Quinn calls her health care provider, who determines it is a typical headache and not something that requires further evaluation.

Behavioral strategies may be a helpful place to start, as they usually present no known risk to the pregnancy or baby. Staying hydrated and placing a warm or cool compress on the forehead may ease some pain. But when those do not work, what next?

Ibuprofen is a non-steroidal anti-inflammatory drug (NSAID). NSAID's are typically not recommended later in pregnancy because of risks such as changes to fetal kidneys and lower amniotic fluid levels. Earlier in pregnancy, most studies do not show any increased risk for birth defects. However, some studies do report a small increased risk for birth defects, such as gastroschisis, a condition in which the intestines are outside the body.

Acetaminophen is considered one of the best-studied medications for treating fever or pain in pregnant women. It has not been associated with an increased risk for birth defects, and most studies have not found an association with an increased risk of pregnancy-related problems. One question people may have is whether a medication or exposure in pregnancy increases the risk for neurodevelopmental differences such as ADHD or autism. A few studies have found a small risk for this, but most larger and better-designed studies have not supported this finding. The American College of Obstetrics and Gynecologists supports the use of acetaminophen in pregnancy as needed (lowest effective dose for shortest duration) to treat fever or pain after consultation with a health care provider.

One final recommendation is to read the medication label carefully to understand the dose, ingredients and risk information. Some medications have a warning such as, "Consult with a physician or health care provider before taking if pregnant or breastfeeding." Taking medication incorrectly can result in harm to the woman herself and invalidate available studies that assumed correct dosing and ingredients.

Another excellent resource for pregnant and breastfeeding women and their health care providers is **MotherToBaby.org**. People can visit this website to access fact sheets (including information on ibuprofen and acetaminophen), podcasts and blogs, or use their online chat to connect with a specialist who can discuss research studies on medications or exposures during pregnancy and breastfeeding.

After sharing this information and these resources, Quinn felt more educated about pain relief options during pregnancy and recommendations from professional societies.

In summary, behavioral strategies, reading the label, background risk, timing and dose are all important aspects to consider. Remember to talk with your health care provider before starting or stopping a new medication in pregnancy.

Contributed by **Jessie Poskochil, MGC, CGC** and
Beth Conover, MS, CGC, APRN
Teratogen Information Specialists with
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Save the Date

Friday, October 16, 2026
8 a.m. to 4:30 p.m

Scott Conference Center
6450 Pine Street
Omaha, Nebraska

29th annual

Omaha Women's Health & Wellness Conference

Scan this code or visit for more information or call the Olson Center for Women's Health at 402.559.6345.

in this issue

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