OLSON CENTER FOR WOMEN'S HEALTH

Women's Health overview

Understanding **Rheumatoid Arthritis**

Rheumatoid arthritis (RA) is one of the most common autoimmune diseases in the United States, affecting about 1% of the population. Women are 2 to 3 times more likely to have RA, with a lifetime risk of 3-4%. RA is characterized by inflammation of the joint lining which is driven by the immune system.

How is it diagnosed?

A rheumatologist makes the diagnosis based on characteristics of the joint pain and stiffness, medical and family history, a physical exam, x-rays and blood tests. Other types of arthritis and certain infections can mimic RA, so an expert's evaluation is important.

Are there ages when women typically get it? Is it activated by something?

The peak age to develop RA in women is 55-64 years. It results from a combination of genetic and environmental factors. Having a close family member with RA raises the risk by 2 to 3 times. The main risk factor is smoking, which significantly increases the likelihood of RA and promotes formation of antibodies against the joints. There are many other environmental risk factors that have been studied, but we do not know exactly what causes RA to present symptoms when it does.

What problems can women experience during their various life stages?

Childhood: A form of RA is called polyarticular juvenile idiopathic arthritis (JIA). It is particularly important for children to receive timely, effective treatment, as damage to the joints and growth plates can cause serious life-long complications.

Young and middle adulthood: A main consideration is tailoring RA treatments around reproductive goals. It is extremely important that individuals with RA and their rheumatologists are on the same page regarding family planning and contraceptive use. Some medications used to treat RA should be avoided in pregnancy because it could be harmful to the baby. With planning, medication regimens can be adjusted to promote safe pregnancies while maintaining good control of RA. Because of the natural changes in the immune system during pregnancy, about 2/3 of patients will experience improvement of their RA during that time. It is common to see flares in the post-partum period. RA medications may also need to be adjusted during breastfeeding. Close communication with a rheumatologist is important throughout the reproductive years to plan treatment decisions that help achieve these goals.

Menopause and perimenopause: RA often starts during menopause. It also increases the risk of osteoporosis and heart disease, making regular primary care visits crucial. Certain medications, such as steroids, can weaken bones, so bone density scans are important. Medications may need to be adjusted to

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Symptoms of Rheumatoid Arthritis

Common symptoms of rheumatoid arthritis include:

- Joint pain at rest and when moving, along with tenderness, swelling, and warmth of the joint.
- Joint stiffness that lasts longer than 30 minutes, typically after waking in the morning or after resting for a long period of time.
- Joint swelling that may interfere with daily activities, such as difficulty making a fist, combing hair, buttoning clothes, or bending knees.
- Fatigue – feeling unusually tired or having low energy.
- Occasional low-grade fever.
- Loss of appetite.

Rheumatoid arthritis can happen in any joint; however, it is more common in the wrists, hands, and feet. The symptoms often happen on both sides of the body, in a symmetrical pattern. For example, if you have RA in the right hand, you may also have it in the left hand.

Source: National Institute of Arthritis and Musculoskeletal and Skin Disease, Rheumatoid Arthritis, Nov. 2022

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From the Chairman

The central part of the United States has been referred to by many descriptors — some complimentary and others not so much. One growing concern is that our area of country is not blessed with many obstetric care providers. Some have described these areas as "Maternity Care Deserts." The March of Dimes describes these deserts as counties that have neither birthing facilities nor obstetric providers or have limited access to them.

The most recent data from 2019, shows an 8% decrease in birthing hospitals and only 7.7% maternity care providers practice in rural areas. Many factors contribute to this shortage, including lifestyle issues, low clinical volume, call coverage and lack of neonatal support. Smaller community hospitals also struggle with the costs of maintaining well-trained staff as the number of obstetrical patients decline.

The University of Nebraska Medical Center's College of Medicine will open a new medical school campus in Kearney next year. By recruiting and training students from central Nebraska we hope to reduce the barriers that discourage providers from practicing in rural areas.

In this edition of our newsletter, maternal-fetal medicine specialist Maggie Kuhlmann, MD discusses ultrasound and obstetrical consultants in rural communities. Using telehealth, specialists can now provide consultations and ultrasound interpretations from hundreds of miles away. In other situations, real-time access to these consultants can provide important information to anxious parents and their providers.

Solving the maternal care desert problem will require a multi-pronged approach that will involve close partnerships between state and federal governments, communities, patients, providers and payers.

Carl V. Smith, MD, FACOG
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An alternative electronic version of the newsletter is available. If you would like to receive this electronic version in addition to the print version, or instead of, please email your request to ljmolczy@unmc.edu.

Rheumatoid Arthritis Research Interests at UNMC

Rheumatoid arthritis (RA) affects less than 1% of the US population, but the burden posed by RA is substantial to both healthcare systems and patients with approximately $22.3 billion in total annual healthcare costs. RA is more common in women, and can also be more severe in women. In addition, disease-related co-morbidities (other diseases) and high-rates of disability, may shorten life expectancy.

Doctors use biomarker tests to diagnose and monitor RA. Data shows that these tests can lead to significant monthly savings. A biomarker is a biological signal that helps detect disease or measure how well treatment is working. During inflammation, normal proteins can be modified to have a citrulline residue. RA patients make an antibody to this citrulline (anti-cyclic citrulline peptide or CCP) that is highly diagnostic for RA and is a good biomarker for evaluating disease activity.

At UNMC, Drs. Ted Mikuls and Geoffrey Thiele are leading research on another protein modification linked to RA. This modification, called malondialdehyde-acetaldehyde adducts (MAA), increases both inflammation and fibrosis. Thus, one of our research efforts has been to identify the biologic mechanisms linking MAA alone, or in conjunction with CCP, in the development and progression of RA. Other studies are being performed to see if there are potential therapies based on these modified proteins.

Besides joint involvement, people with RA are prone to the co-morbidities of lung and cardiovascular disease. Our group, led by Dr. Bryant England and his team, have found that approximately 10% of patients with RA develop a fibrotic lung disease termed RA-associated interstitial lung disease (RA-ILD). An additional 30-40% of patients have early signs of the disease. Currently, no approved therapy in RA has been shown to prevent or slow its progression. In fact, some medications may even increase the risk for complications. Thus, the UNMC team is working to find new therapies that reduce both inflammation and tissue fibrosis in RA-ILD.

Dr. Tate Johnson and his team are researching why heart failure is more common in people with RA. As with joint and lung disease, the hearts of patients with RA can develop fibrosis resulting in diastolic heart failure due to the left ventricle not being able to relax and thus cannot fill appropriately with blood. This is a disease process known as "heart failure with preserved ejection fraction" (HFpEF).

Hearts from these patients have been shown to have proteins modified with both citrulline and MAA, just as RA patients can experience in their lungs and joints. Research has focused on gaining an understanding of whether proteins modified with citrulline and MAA act jointly (or in isolation) in promoting cardiac inflammation and fibrosis that characterize HFpEF. We also anticipate developing new treatments and interventions based on these findings.

Contributed by **Geoffrey M. Thiele, PhD**
UNMC Department of Internal Medicine, Division of Rheumatology and Immunology

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ensure that adverse effects or interactions are kept to a minimum.

The primary goal in the treatment of RA at any age is to prevent joint damage and optimize quality of life. Effective long-term treatment of RA can have life-altering effects in preserving joint function over time.

How is it treated?

The most common RA medication is methotrexate, taken weekly as a pill or injection. About one-third of people control their RA with methotrexate alone, but many need a combination of two or three different medications. Most medications used to treat RA work on the immune system to prevent it from targeting the joints, and as a result, they increase the risk of infection to varying degrees. There are many treatment options for RA, and a skilled rheumatologist can help find the best balance for each person.

Does it go away?

RA does not normally go away, but with the right treatment and good communication with a rheumatologist, many people reach remission or have only mild symptoms.

Contributed by **Austin Wheeler, MD**
UNMC Department of Internal Medicine, Division of Rheumatology and Immunology

Save the Date

Wednesday, August 27, 2025

UNO Scott Conference Center
6450 Pine Street
Omaha

16th Biennial

Breastfeeding: Baby's Natural Choice Conference

Plan to attend of next conference as we welcome in-person keynote speakers, **Kathleen Kendall-Tackett, PhD, IBCLC, FAPA** (from Texas Tech University) and **Lindsay Lebin, MD** (University of Colorado, Denver). Together with local experts, we will discuss breastfeeding topics related to: D-MER and weaning, impact of psychiatric medications, obesity bias, food sensitivities, and building a lactation consultant private practice. Continuing education will again be provided for physicians, nurses, lactation consultants, social workers, and dietitians.

For additional information, please contact the Olson Center at 402.559.6345 or **OlsonWHRC@unmc.edu**. Registration will open in June.

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

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Maternal-Fetal Medicine at the Olson Center for Women's Health Brings Specialized Care Closer To Rural Areas

Obstetric ultrasound and prenatal diagnostic services are becoming more advanced. We can now examine major fetal anatomy in the first trimester, detect complex heart defects before birth, and perform detailed genetic testing. Knowing about potential health issues in a baby before birth allows for the delivering team to work with neonatologists and pediatricians to ensure there is a safe and comprehensive plan to care for these babies immediately after birth. In some cases, this is life-saving.

However, these services require specialized equipment and highly-trained professionals, which are not always available in all communities. Residents of rural areas may need to travel for hours to have access to these specialized imaging services or to have options for prenatal genetic testing.

To bridge this gap, the Olson Center for Women's Health at Nebraska Medicine is bringing care closer to Nebraska and western Iowa through outreach clinics. Teams of sonographers, nurses, and maternal-fetal medicine physicians travel regularly to Grand Island and Kearney in Nebraska, and to Shenandoah, Iowa, providing high-quality prenatal services in local communities.

This also establishes a point of contact if a patient needs to be transferred to a larger hospital during pregnancy or delivery for an unexpected complication. For example, if a mother receiving ultrasounds in Grand Island goes into preterm labor at 26 weeks, she can easily be transferred to Nebraska Medicine with her medical records already in place — ensuring seamless care, even in the middle of the night. Patients are also more likely to see familiar faces and receive treatment by healthcare professionals with whom they have already established trust and rapport.

It is our vision at the Olson Center for Women's Health to continue to expand these outreach services, utilizing technology and local professionals to ensure that all residents of Nebraska and western Iowa have consistent access to high-quality obstetric ultrasound and other prenatal diagnostic services.

If you have a need for these services and are in a community or region where they are available, you can schedule an appointment by calling the Olson Center at 402.559.4500.

We look forward to meeting you, and working with your communities to ensure every baby and their family begins life in good health.

Contributed by **Maggie Kuhlmann, MD**
UNMC Department of Ob-Gyn and Olson Center for Women's Health at Nebraska Medicine

OLSON CENTER FOR WOMEN'S HEALTH

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Upcoming Olson Center Educational Events:

Over the next few months, we will offer many opportunities to learn on a variety of health educational topics. Everyone is welcome to attend. Pre-registration is required by reaching the Olson Center at 402.559.6345 or **OlsonWHRC@unmc.edu**.

Please reach us for any additional information.

Olson Center Brown Bags (online, 12 – 1 p.m.)

Everyone is welcome to attend the presentation, and it will also be recorded. Nursing credit provided for the LIVE presentation only

April 15: *"Relationship Dynamics and Bystanding Intervention"*

May 20: *"Using Smart Watches for Tracking Wellness Goals"*

Olson Center / College of Nursing Webinars

Nurses are the primary audience with nursing credit provided for the live and recorded presentation. Non-nurses are also welcome.

Feb. 13: *"Hypertension in Women"* – the recorded presentation is now online for viewing and for credit

May 13: *"Migraine in Women"*

June 3: *"Sunlight and Chronic Disease: Time to Take This Fight Outside"*

Women's Health Week

Our annual celebration of women's health is currently underway. For an updated list of events, please call us to get on the email promotion list.

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