



# Women's Health Overview

## Heart Failure and Women

**Heart disease is the number one killer of men and women.** In fact, heart disease kills more women than all forms of cancer combined, but less than half of women are aware of this. One form of heart disease is heart failure, which will affect approximately one in five women during their lifetimes. To reduce the likelihood of developing heart failure, one must recognize the risk factors and understand how to optimally address them.

Heart failure can be divided into two basic types: systolic and diastolic. Systolic heart failure occurs when something causes the heart muscle to become weak, making the heart unable to squeeze strongly enough to pump blood to the rest of the body. Diastolic heart failure occurs when the heart muscle becomes stiff, meaning the heart squeezes fine but does not relax well. This stiffness prevents the heart from filling with enough blood, which can result in less blood flowing to the body. As a result, both types of heart failure can lead to symptoms, including shortness of breath, fatigue, swelling of extremities and the abdomen and reduced appetite.

The prevention of heart failure includes addressing multiple factors. These include blood pressure, diabetes, obesity, physical activity and tobacco and alcohol use. It's

best not to focus on just one of these areas but to try to incorporate all of them into daily life.

Blood pressure plays a major role in the prevention and management of heart failure. High blood pressure is known as the "silent killer" because symptoms do not develop until organ damage has occurred. As blood pressure gets higher, the heart must work harder. This can cause the heart to "give out" more quickly, resulting in systolic heart failure. It may also cause the heart muscle to become thicker and stiffer, leading to diastolic heart failure. It is estimated that over 50% of high blood pressure-related deaths are in women, many of them African American.

High blood sugar can lead to damage of the heart muscle and blood vessels. Over time, this can cause a heart attack or heart failure. It can also cause weight gain and abdominal obesity, which can further increase the risk of heart disease. According to the Centers for Disease Control, women with diabetes are more at risk for developing heart disease compared to men and have worse outcomes after a heart attack. This emphasizes the importance of women maintaining healthy blood sugar levels to prevent the development of diabetes.

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## Know your blood pressure range

High blood pressure, also known as hypertension, can increase your risk for serious health issues like heart disease and stroke. Lifestyle changes can help you maintain healthy readings and potentially avoid medication. The five blood pressure ranges as recognized by the American Heart Association are:

**Normal** – Blood pressure numbers of less than 120/80 mm Hg (millimeters of mercury) are considered within the normal range.

**Elevated** – Elevated blood pressure is when readings consistently range from 120 to 129 systolic and less than 80 mm Hg diastolic.

**Hypertension Stage 1** – Your blood pressure is high (stage 1) if it reads 130/80.

**Hypertension Stage 2** – Stage 2 high blood pressure is 140/90 or higher.

**Hypertensive Urgency** – If you get a blood pressure reading of 180/120 or higher more than once, seek medical treatment immediately.

For more heart health resources visit [NebraskaMed.com/Heart-Month](https://NebraskaMed.com/Heart-Month)



# From the Chairman

Cardiovascular disease is a leading cause of death among all Americans. When I was a medical student, it was held that heart disease was more common in men and that, when it occurred in women, it presented the same way as it did in men. That and other myths about women's health care took far too long to be changed. In the paternalistic era of medicine (note that some believe we are still in it), diagnosis and management of cardiac and other diseases were based on studies largely, if not exclusively, done in white male populations. In fact, as late as 1977, the Food and Drug Administration, or FDA, recommended excluding women with child-bearing potential from investigational studies.

It took until the Revitalization Act in 1993 for the FDA to mandate that federally funded studies include subpopulations that include women and minorities. The same year, the FDA issued guidelines calling for drug studies to allow participation of women with child-bearing potential.

In 1990, our government established the Office of Research on Women's Health, or ORWH. These changes, albeit occurring at a glacial pace, resulted in the recognition that women are at significant risk of cardiac disease, have a mortality rate that is similar to or greater than that of men and have symptoms that are not always the same as men. In this issue, advanced heart failure and transplant cardiologist Christina Dunbar Matos, DO, discusses heart health for women and will increase our understanding of this important topic. Younger patients are also not immune to cardiac disease. With advancing technology and care, patients with congenital heart disease are also able to become pregnant. While many have successful pregnancy outcomes, cardiovascular disease remains a significant cause of maternal mortality in recent years.

As we enter a new electoral season, keep women's health issues in mind as you decide which candidates are worthy of your support or vote. Regardless of party affiliation, our elected officials need to pay attention to these issues.

**Carl V. Smith, MD, FACOG**

Chairman, Department of Obstetrics and Gynecology  
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## Women's Health overview

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Obesity can cause a multitude of problems, including high blood pressure, diabetes and sleep apnea – all of which can lead to heart failure. Obesity can be addressed through diet, physical activity and medications. You don't need to lose a large amount of weight to gain health benefits. Losing as little as 5% of your body weight can lead to overall health improvement.

Regular exercise is essential to a healthy heart and lifestyle. At least 30 minutes of physical activity five days a week is recommended. This should include a combination of aerobic activity and strength training. Exercise can also help control blood pressure and blood sugar and aid in weight loss. A recent study showed that women obtain greater health benefit from equal levels of physical activity compared to men. This should motivate women to be more active to improve their health and longevity.

To prevent heart and lung disease, refraining from all tobacco use is recommended, including smokeless tobacco and vaping products. Anything that stresses the lungs also stresses the heart and should be avoided. Alcohol should be used sparingly and those diagnosed with heart failure should completely avoid it.

Pregnancy is an exciting time; however, it does carry risks for some women. Up to 20% of women will have a health issue during pregnancy, such as high blood pressure, preeclampsia and gestational diabetes and can experience an increased risk for developing heart disease later in life. Heart failure during or shortly after pregnancy is known as postpartum cardiomyopathy. Risk factors include pregnancy at an older age, twins and triplets, high

blood pressure and diabetes. The cause of postpartum cardiomyopathy is not fully understood but treatment is like other forms of heart failure. Women that develop this condition should be followed closely by their providers and reconsider future pregnancies, as they carry a high risk of illness and even death.

If one does develop heart failure, certain medications can be used to stabilize or potentially improve heart function. However, management of lifestyle factors (blood pressure, blood sugar and weight) must continue. If heart function continues to worsen, treatments such as mechanical heart pumps or heart transplants may be considered. Unfortunately, women eligible for advanced heart failure therapies are less likely to be offered treatment. In fact, only one in four heart transplants worldwide are in women. Thankfully, steps are being taken to try to correct these disparities.

There are distinct differences between men and women regarding heart health. The medical world is finally starting to recognize this and tailor treatment accordingly. Prevention is key; however, if heart failure does develop proper treatment and lifestyle changes are necessary to slow progression and ensure optimal management. Ultimately, women must make their heart health a priority and work with their doctor to prevent and/or manage risk factors.

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## Let's Talk **Heart Health**

Interested in more information on heart health? The Olson Center for Women's Health partnered with Nebraska Medicine Heart and Vascular for a three-part Brown Bag series. Dr. Dunbar Matos presented *Heart Failure and Women* and her recording can be found at [UNMC.edu/obgyn/community/brown-bag/bb-2023-2024.html](https://UNMC.edu/obgyn/community/brown-bag/bb-2023-2024.html).

Other heart health topics covered, with recordings also available, include:

**Coronary Artery Disease in Women and Stress Testing**  
by Neha Goyal, MD

**Atrial Fibrillation: Understanding the Mechanisms and Treatment Options**  
by Niyada Naksuk, MD

### *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](https://www.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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## Maggie Kuhlmann, MD Joins the Olson Center's Maternal-Fetal Medicine Team



**Maggie Kuhlmann, MD**, is an assistant professor for the Department of Obstetrics and Gynecology at the University of Nebraska Medical Center. She attended medical school at UNMC and completed a residency in obstetrics and gynecology and fellowship in maternal-fetal medicine at the University of Texas Medical Branch in Galveston.

Dr. Kuhlmann is particularly interested in maternal critical care, prenatal genetics, fetal therapies and developmental origins of health and disease. She believes maternal-fetal medicine is an extremely rewarding and intriguing specialty because she can guide patients through some of the best (and worst) moments of their lives, while utilizing her advanced training in complex pregnancy care. This, in turn, leads to strong bonds with patients and she loves to see their families grow over time.

Dr. Kuhlmann is a native of rural Nebraska and finds it extra meaningful to take part in outreach clinics in central and western Nebraska. Welcome to the Olson Center for Women's Health, Dr. Kuhlmann!

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