



# Women's Health Overview

## Obesity and Treatment Options

Obesity has been heralded as the “new” epidemic for over 20 years. As of 2024, 40% of U.S. adults are obese, with a rise to almost 50% projected by 2030. Recently, discussion has been on medical options. Today, we aim to give frank information about these new medications, their expectations, limitations and risks, and to discuss alternatives to maintain control of obesity.

**Obesity and Health** Counseling my patients on weight loss sometimes feels like asking them to stop smoking; they have heard it a million times before. While everyone knows being overweight is bad, sometimes we don't convey the why. Extra fat (or adipose tissue) can't all be carried under the skin. Much of it hides under the surface, surrounding our organs and heart. This fat increases our blood pressure and raises the workload of the heart. The higher cholesterol levels that occur in obesity can narrow vessels, making us more prone to heart attack and stroke. Increased weight increases insulin resistance, leading to diabetes. The extra weight adds an additional load to our joints, increasing pressure on our knees, hips and spines, exacerbating and even causing arthritis. Obesity is directly linked to increased rates of cancers, specifically breast, endometrial, colon and pancreatic cancer.

**What is Obesity?** Obesity sounds bad. But at least I'm not morbidly obese, right? Obesity is defined as a BMI of 30 or above, which for women is 180 pounds at a height of 5'5". For men, that would be 210 pounds for someone 5'10". With 40% of the adult population qualifying as obese, it sometimes can seem that our weight 'isn't that bad' since we are like our peers. However, the risks remain regardless of our neighbors' weight. In fact, the risk of obesity on our overall health is so high that treatment is encouraged for a BMI >30 or even a BMI >27 if the patient has an additional diagnosis of hypertension, diabetes or heart disease.

**The Trajectory of Weight** The natural course for weight across someone's lifetime is slight gain. Once we hit a new peak weight, our body naturally wants to return to that level. We must actively work against this bit of nature to return and maintain a healthy weight. Additionally, the success of some of the weight-loss medications is helping us understand the impact of “food noise” on weight trajectory and balance. While one person can traverse a busy day without snacking, others persistently fight off hunger urges and food cravings, making it harder to maintain their diet. Finally, we all gain gradually, not suddenly. For instance, someone with a steady weight could add

three mini Reese's Peanut Butter Cups per day (100 extra calories) for five years and gain 50 pounds. Since our body wants to maintain its trajectory, returning to the lower weight range will be harder.

**Treatment Options** Thankfully, recognition of the need for obesity treatment is increasing. This has gained attention in the past five years as newer therapeutic agents have become available. Much of the treatment for obesity depends on individual factors, side effects and cost. The most effective treatment options currently available are surgery and specific medications called GLP-1RA, or glucagon-like peptide – 1 receptor agonists.

**Expectations** It is important to understand that obesity medications are not a “miracle cure.” In medicine, we treat obesity as any other medical diagnosis. These medications are broadly intended for prolonged use and NOT as a short-term “boost” for weight loss. This is because most of these treatments have an expected weight regain following cessation of therapy. Even after bariatric surgery, an average patient can regain about 30% of their lost weight within 10 years. With medications, the weight regain is more robust.

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# From the Chairman

As I was preparing to write this message, the March of Dimes released its annual report card for 2023 that highlights the factors associated with maternal and infant mortality and morbidity. Regrettably, this report card was not one we as a country should be very proud of. Most distressing is the lack of progress in reducing an unacceptably high rate of preterm birth. In the U.S., 10.4% of all births are preterm. This rate is at an all-time high. Nebraska fares a bit worse, with a rate of 11.1%. Even more embarrassing is the fact that the rate of preterm deliveries in Black birthing people is 1.4 times higher than all others. The bad news does not end there. The infant mortality rate (infants dying before the first year of life) is also too high at a rate of 5.6 deaths per 1,000 live births. Compared to our peers in the developed world, we fall dreadfully short.

The reasons for these alarming results are varied. Systemic racism, access to health care and environmental factors, including air quality and exposure to high ambient temperatures, have all been associated with adverse outcomes. In addition, there has been a systematic underfunding of research in women's health. If we expect this situation to improve, we must increase resources for at-risk populations, improve access to care, reduce inequities in care, and improve research funding in this critical area. We should also expect our elected political leadership to prioritize perinatal care. There is ample evidence that this approach is cost-effective and will benefit the health outcomes of persons long after their first birthday.

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## 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.

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# research news

## The Intersection of Fertility and Obesity

Obesity among reproductive-age adults in the U.S. has doubled over the past 40 years and is projected to impact half of the population by 2030. Obesity affects more than 40% of reproductive-aged females and men. Women and men with obesity have a 2- to 3-fold higher risk of infertility. Being overweight or obese in the preconception period for both women and men is associated with poorer reproductive outcomes.

Obesity and excess adipose tissue (tissue that stores energy in the form of fat) in women significantly impact fertility and reproductive health, directly affecting the reproductive axis, the ovary and oocyte (egg), and the endometrium (the tissue that lines the uterus). The most well-established mechanism of obesity-induced menstrual dysfunction is irregular menstrual periods caused by an impaired ability to ovulate (called anovulatory infertility). This is most evident in patients with polycystic ovary syndrome (PCOS), where excess adipose deposition results in elevated levels of insulin and androgen, which can adversely affect the ovary and reproductive axis. In addition to disrupted reproductive cycles, obesity in women is associated with delayed conception, increased pregnancy loss, and adverse pregnancy outcomes.

In men, obesity is associated with reduced function of the testis and the production of defective sperm. Male partners with obesity display an association with reduced success rates using assisted reproductive technologies and increased pregnancy loss rates.

A recent review of the literature\* addressed the question, "Is preconception weight reduction associated with improvement in conception rates among women and men with infertility?" This study examined results from multiple clinical studies employing short-term lifestyle and medication interventions that achieved weight loss of 5 to 20 pounds. The authors concluded that in controlled trials, weight loss achieved with these interventions did not appear to improve per cycle conception or live birth rates in women undergoing ovulation induction, intrauterine insemination, or in vitro fertilization (IVF). However, they reported that the interventions resulting in weight loss may increase the success rate of natural conception, particularly among women with anovulatory infertility, such as patients with PCOS. The increase in conception associated with weight loss is an important consideration for women with obesity and infertility, particularly for women who do not have access to

infertility treatments or are not interested in medical interventions.

Recent multicenter retrospective studies that examined very large numbers of patient outcomes from assisted reproductive technologies reported that obesity either had no effect or resulted in up to 20% increased risk of lower birth rates. However, a key observation was that maternal age greater than 35 is a higher predictor of reduced birth rates, indicating that treatment for infertility versus weight loss should be a priority for women with obesity and advanced age.

Given the high prevalence and adverse impact of obesity on reproductive health, there is a need for additional research that considers the underlying bodily changes caused by obesity and effective and sustainable interventions to treat obesity and manage weight gain before, during and after pregnancy.

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Contributed by **John S. Davis, PhD**  
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*\*References available upon request*

If a medication removes cravings and allows lower calorie intake, then removing the medication will allow the cravings to resume, and therefore, our body will return to its prior weight trajectory.

**Crash Diets** Rapid weight loss followed by rapid weight regain is very common in fad diets. The keto diet or very low-carb diets typically cause rapid weight loss over the first 2 or 3 weeks, mainly attributed to the water loss within the liver from using our own carbohydrate stores of glycogen. Once this is gone, we start losing weight more slowly. Returning carbohydrates will again deposit the higher water and glycogen content into our liver, and our old weight trajectory resumes, bringing weight regain back to baseline.

Very low-calorie diets (<1200kcal) risk rapid muscle wasting and the potential for lower basal metabolic rate. This lower rate can make weight regain easier when resuming normal caloric intake. The trajectory with these fad diets actually tends to overshoot pre-diet weight, making for even higher weight compared to before the crash diet.

Intermittent fasting has also been highly advertised as a weight-loss option. This is typically done in two forms: a 24-hour fast twice per week with time-restricted eating for eight hours a day, and only 50 calories or less consumed during the remaining 16 hours. These methods have been shown

to limit food cravings and help maintain weight but have limited efficacy in weight loss. Combining intermittent fasting with other lifestyle changes can increase the likelihood of weight loss.

In general, my patients have tried many diets and have had limited success. Our goal is to work together and determine what diet is tolerable and sustainable in the long term. We don't become overweight overnight. We won't lose it overnight, either.

**The Bias Against Obesity** In our society, many assumptions are made about those who suffer from obesity. Commonly, implicit bias can affect people in the workplace, school, relationships and even in health care offices. Unfortunately, this further leads to people not seeking help who would be candidates for treatment. Being obese does not mean someone is lazy or doesn't care about their own health. We all (including health care providers) need to be more cognizant of our bias against those with obesity and to be sure to give compassionate, appropriate care.

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	<b>How do they work?</b>	<b>Expected weight loss?</b>	<b>What are risks/ side effects?</b>	<b>Who can't take them?</b>
<b>Bariatric Surgery</b>	Surgically alter gut anatomy to reduce volume or absorption of food intake	25-35%	Malabsorption, diarrhea, surgical complications	Non-surgical candidates, unable to clear pre-surgical evaluations (physical and mental)
<b>Phentermine +/- topiramate</b>	Appetite suppression	5-8%	Increase blood pressure and heart rate, cognitive slowing	People with uncontrolled high blood pressure, anxiety
<b>Bupropion +/- naltrexone</b>	Appetite suppression	3-5%	Increased agitation	People on pain medications or who have a seizure disorder
<b>GLP-1 agents</b>	Appetite suppression	10-15%	Nausea, diarrhea, constipation, belching, low blood sugar	People with history of pancreatitis, gastroparesis, hypoglycemia



**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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# Stay Warm with a **Winter Fitness Routine**

We all know that movement is good for us. Not only is our physical health positively impacted by regular activity, but it can also improve our mental and emotional well-being. The American College of Sports Medicine recommends that we focus on three main types of physical activity:

## **Cardiovascular activity** 3 to 5 days per week

- 150 minutes of moderate-intensity physical activity or 75 minutes of vigorous-intensity physical activity or some combination of the previous two.
- You know you're at a **moderate intensity** if you can talk but not sing.
- You know you're at a **vigorous intensity** if you can only speak a few words at a time.

## **Resistance training** 2 to 3 training sessions each week performed on nonconsecutive days

- Target all major muscle groups in each session.
- Lower body squat variations – chair sits, air squats, weighted squat
- Upper body push-up variations – hands on the wall, counter, or floor

## **Stretching** 2 to 3 days per week, but daily stretching is ideal

Feeling overwhelmed? Do not worry! Here are some practical ways to work toward your fitness goals as colder weather approaches.

**Meet Yourself Where You're At** If you're not currently active, trying to meet all the guidelines at once may leave you feeling discouraged. When starting a new routine, doing it slowly is safer, more enjoyable and helps you feel confident, making it easier to maintain a more active lifestyle long-term.

To help set achievable fitness goals, you can use the SMART goal framework. This goal-setting method has been shown to increase the likelihood of success. Your goal should be:

**Specific** – it clearly describes what you want to achieve.

**Measurable** – it includes a clear way to track your progress, like days per week, minutes per day, etc.

**Achievable** – it is realistic given your time, resources and where you're starting from.

**Relevant** – it aligns with your values and broader objectives.

**Time-bound** – it sets a deadline for when you want to achieve your goal.

Here is how you can make a goal SMART:

**Old goal** I'm going to start walking more.

**SMART Goal** By next month, I will walk at the mall three days every week for 30 minutes each session.

**Preparing for Winter Conditions** As the temperatures fall, it's important to gather the necessary clothing or equipment to help you navigate the unique challenges posed by colder temperatures and fewer daylight hours. Here are some tips to stay safe and comfortable while being active outdoors:

- Be aware of temperature and wind chill.
- Choose a location free of ice and slippery spots.
- Dress in moisture-wicking layers to stay warm and dry.
- Protect your fingers, ears and face to prevent frostbite.
- Warm up properly to prevent injury.
- Stay visible with reflective clothing.
- Remember to hydrate – we sweat even when it's cold.

If you prefer to be active indoors, start planning where you'd like to be physically active. Proximity and convenience are critical to staying consistent, especially if your fitness routine isn't established yet. Choose a location that makes physical activity an easy (or easier) choice.

**Mindset Shifts** After the excitement of the new year wears off, dig deep to find the motivation to keep going! Here are several strategies that can help you stay motivated throughout the year:

- Focus on progress, not perfection.
- Celebrate even the smallest victories.
- Give yourself grace; setbacks will happen, but consistency is key.
- Build physical activity into your routine.
- Lean on friends and family members for support and encouragement.
- Use multiple metrics for success, i.e., the number of active days, your emotional state, and physical ability.

Starting your fitness journey is a big step; every small effort counts! It's OK to start slow – your body will adapt and grow stronger. As you progress, adjust your SMART goals to reflect your new abilities and add challenges. Be kind to yourself, and remember, as with any journey, building a physical activity routine is rarely linear. Life always presents us with new situations to which we must adapt.

Believe in yourself, stay the course, and the benefits will follow!

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## Olson Women's Health Resource Center Celebrating 30 Years of Empowering Women's Health: A Heartfelt Thanks

**A humble beginning with a big impact** When we opened in 1994, our focus was clear and simple: breast health. In those early days, we gathered small groups of women to share information on the importance of caring for their health. While our audience was smaller, our message was powerful, and we quickly saw the impact of empowering women with knowledge.

**Growing stronger, together** Today, our mission remains as strong as ever – helping women help themselves and equipping health care providers with the education they need to better serve women. Over the years, our programs have expanded and evolved, allowing us to reach more people and make a greater difference.

We are proud to collaborate with various departments at UNMC and Nebraska Medicine, as well as community organizations and health programs across the state. Together, we have created a network of support and education spanning across Nebraska (and beyond), ensuring women everywhere have the resources they need to thrive.

**Gratitude for your continued support** None of this would be possible without your support. Whether you've been with us from the very beginning or are just joining us on this journey, your commitment to our mission has made all the difference. Your participation, enthusiasm, and trust in what we do have allowed us to grow and serve for 30 wonderful years.

As we look ahead to the future, we are more determined than ever to continue providing education, resources and support to women and health care providers alike. The work is not done, and with your continued involvement, we will continue to make a positive impact for many years to come.

Thank you for being a part of this journey. Your support has shaped everything we do, and we are deeply grateful for your ongoing dedication to women's health.

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