



Women's Health Research Institute
Putting Women First

July 2015

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Dear Friends,

There are still significant knowledge gaps regarding sex- and gender-based differences in health. Research indicates that men and women differ at the basic, cellular level, and these differences can manifest in ways that impact our health and lifestyles. These differences may even impact our exercising and eating habits. Understanding these differences may help us all tailor our eating and exercising routines to what is best for our health.

This month's e-newsletter provides an overview of sex differences in eating and exercising so that you can better understand your own health and make the best choices for a healthier you.

Sincerely,

The Institute Staff

Sex Differences in Eating and Exercising

In America, we are constantly being bombarded with messages about how to eat correctly, how to manage our weight, and how to exercise most efficiently. All of

these messages can be both overwhelming and confusing, especially when a large portion of this information is coming from non-reputable sources. As many people know, both eating well and exercising regularly are crucial factors for maintaining proper health. However, there are distinct differences between the sexes when it comes to both of these factors, so it is important to understand the status of your unique health in order to eat well and exercise effectively.

Eating



Sex differences in food selection and intake appear during the time of puberty in both boys and girls. Due to a higher average body weight and higher resting metabolic rate, men typically require a higher daily caloric intake than women do. The recommended intake for men is 2,900 kcal/day, while women should be around 2,220 kcal/day.

However, despite the fact that women's daily caloric intake is lower than men's, women have around two times as much body fat as men. The exact reasons for this phenomenon are still being explored, but studies indicate that differences in hormones, such as levels of estrogen, play a contributing role in fat storage and fat metabolism. It is also thought that it is possible that women naturally have a higher percentage of body fat for childbearing purposes.

During and after puberty, women experience hormonal changes, which have been shown to influence food intake and selection. In a study on food intake across the menstrual cycle in women, researchers found that food intake is lowest around the time of ovulation, when estrogen is highest, and intake is highest at the luteal phase, when estrogen is lowest. Less is known about how sex hormones affect food intake in men, but studies are being done to explore the effect of gonadal hormones on food preferences in men.

Just as there are clear differences in the intake of food between men and women, various studies have shown that there are also differences in food selection between the sexes. In an extensive survey done in 2007 by the Foodborne Disease Active Surveillance Network, over 14,000 Americans participated in a survey outlining their eating habits. This survey showed, in line with various other studies done by the U.S. Department of Agriculture in the previous years, that men are more likely to consume meat and poultry, while women are more likely to consume vegetables, fruits, dry foods, and yogurt.

Are these differences genetic? Are they due to socialization factors? While studies have proven that there are differences in both intake and food selection for the

sexes, there is debate over the exact causes of these differences. For instance, David Katz, director of the Yale-Griffin Prevention Research Center, thinks that the gendered diet is explained by evolution. In prehistoric times, cavemen were hunters that relied on protein to build muscle, while cavewomen gathered fruit and vegetables and may have heavily relied on the intake of



those foods. Katz believes that this access to different types of food led to the gendered differences in eating patterns today. In contrast, nutritionist Yvonne Bishop-Weston believes that these differences are due to socialization. From a young age, boys are encouraged to have big appetites and to eat more than girls are. She also believes that media pressure influences women to feel a responsibility to both eat healthy food and eat less food overall.

Regardless of the causes of these differences, it is important for both men and women to maintain healthy eating habits. Here are some tips:

- Incorporate fruits, low-fat dairy products, vegetables, and whole-grain foods into your diet
- Drink water instead of high-sugar drinks (including sodas and juices)
- Pack healthy lunches and snacks for school or work; this gives you more control over what you eat
- Do not skip or delay meals! If you ignore feelings of hunger, you will most likely eat too much or choose unhealthy foods

Exercising



The distinct hormone levels in men (testosterone) and women (estrogen) lead to sex differences in exercise. Estrogen, a hormone that exists at high levels in females, stimulates the release of epinephrine, which is a hormone that increases fat breakdown and mobilizes fat stores into sources of energy during exercise. This helps women have high levels of endurance during workouts. Estrogen also causes a release of a growth hormone, which also enhances the use of fat storage as fuel and preserves glycogen, which helps the body sustain exercise longer. The estrogen advantage, as it is often referred to as, is beneficial to women as it increases the

utilization of fat as fuel in different ways during exercise. For men, testosterone enhances muscle hypertrophy, leading to advantages in strength, power, and speed.

While exercise is important for both of the sexes to maintain good health, it is especially important for women. Beginning in their late 20's, women's body weight climbs each year and the average weight gain is between one and two pounds per year. Therefore, women need one hour of moderate exercise per day to prevent weight gain. Exercise has also been shown to lower women's risks of certain diseases and conditions, such as endometrial cancer and colon cancer.

Some important tips to keep yourself safe during exercise:

- Stretch your muscles before and after exercising to prevent injury
- Warm up with light aerobic activity to get your heart rate up
- Hydrate before, during, and after exercise!

Understanding how men's and women's bodies react to food and exercise differently is essential in deciphering how to tailor your healthy routines to fit your body's needs. Regardless of your sex, it is important to maintain healthy habits including regular exercise and nutritious eating habits!

Sources

- [Cathe](#)
- [The Guardian](#)
- [Handbook of Gender Research in Psychology](#)
- [Health Psychology](#)
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Institute Happenings

Illinois Men's and Women's Health Registries

The Women's Health Research Institute has launched both the Illinois Women's Health Registry and the Illinois Men's Health Registry to offer opportunities for researchers to expand their knowledge about sex-based differences in all facets of health. These registries are online databases that record confidential information on women's and men's health and matches willing participants to ongoing research studies and trials. Each registry will aid researchers in preventing disease and improving health conditions in both sexes. Each registry does not focus on any one disease or condition, but rather we invite all individuals to provide information that could help scientists learn more about chronic conditions, lifestyle behaviors and sex differences.

[If you are interested in joining the Illinois Men's Health Registry today, click here!](#)

[If you are interested in joining the Illinois Women's Health Registry today, click here!](#)

The Women's Health Science Program Summer Academy

[The Women's Health Science Program](#) just completed our summer academy introducing 24 young women from Chicago schools to careers in scientific research and medicine. The academy spent a week on the Northwestern Medical School campus learning from scientists, clinicians, graduate students, and medical students. To date, over 300 students have participated in the Women's Health Science Program since its inception in 2007. WHSP students have a 100% high school graduation rate, and all of our high school graduates have continued onto college, with 80% actively pursuing science majors. We are so proud of the 2015 WHSP summer academy young women and we cannot wait to see all the success they are bound to accomplish!

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