

Heart Disease In Women: Fact Vs. Fiction



By *Jamie Wells, M.D.* — July 25, 2017



Credit: Wikipedia [1]

Heart disease is the leading cause of death in women. Despite continued campaigns to raise awareness that it is responsible for roughly 1 out of 4 female deaths, the [Centers for Disease Control and Prevention \(CDC\)](#) [2] estimates nearly half of women do not identify it as such a risk.

Here, I will elucidate why, along with how best to prevent it, clarify any misperceptions and demonstrate the dynamic nature of the cardiovascular system throughout a woman's life cycle from childhood to pregnancy to menopause and beyond.

[Nearly two-thirds of women](#) [2] who die suddenly from cardiac events had no prior symptoms. Though it can be a so-called *silent killer* for some, for others a range of symptoms can include chest pain—dull, heavy, even sharp—and pain in the jaw or abdomen and back which can occur at rest or under exertion. Descriptions can be as vague as general malaise. Women might experience symptoms for the first time upon being diagnosed with a heart attack or failure, arrhythmias or stroke.

Fortunately, for many of us, there are modifiable strategies to alter our clinical course. Maintaining an optimal weight, not smoking, avoiding excessive alcohol intake, finding healthy methods to cope with stress and being physically active are all effective ways to stave off development and progression of such heart conditions— especially when a strong family history is in the mix.

To tease out further the topic of women's heart health, I enlisted cardiologist [Jennifer H. Haythe, MD](#) [3], Assistant Professor of Medicine in the Division of Cardiology, Center for Advanced Cardiac Care at Columbia and Co-Director of the Women's Center for Cardiovascular Health:

Q&A:

What do you see as the greatest myths and misperceptions about women's heart health and disease from the media and Hollywood? What do you hear most from patients?

Historically, heart disease has been depicted in media, including books, television and movies, as a man's disease. We have all seen images of men clutching their chests while playing tennis or having sex. Women have grown accustomed to believing these messages and thinking of heart disease as a man's problem.

The medical system is to blame as well. For decades, women and heart disease has largely been ignored by the medical profession, their symptoms minimized, under-evaluated and under-treated. In fact, until recently women have only been significantly under-represented in research studies on heart disease, accounting for roughly 38% of participants.

Many women have shared their stories of going to the hospital or doctor with chest pain, trouble breathing or palpitations, and being told they are anxious, hysterical, or having a panic attack. This idea that women's symptoms are "in their head" is deadly and needs to be changed.

In fact, heart disease is the leading cause of death for women - killing more women than all cancers combined. It's time for women's symptoms to be taken seriously and their treatment be aggressive and equal to men.

Please walk through the life cycle of the female cardiovascular system in terms of development from young adulthood to the peri-menopausal and post-menopausal years. How do changing hormone levels play a role in maintaining cardiovascular health and how does your advice differ at each of these stages for preventing heart disease and its progression?

Women need to start paying attention to their heart health in early adulthood - as these years are essential for laying the foundation for a healthy heart in older age. Young women need to exercise, maintain a healthy body weight, and eat a Mediterranean diet low in saturated fats and processed foods. In addition, avoiding toxic substances like alcohol, tobacco and drugs is crucial for prevention of heart disease later in life.

Women of childbearing age should be aware of their cholesterol, blood sugar, and blood pressure. Preeclampsia has now been identified as a risk factor for heart disease later in life and should be a warning flag for women to be screened later in life. A strong family history of heart disease (father with heart attack under 55 mother under 65) should prompt earlier screening and more vigilant management of other risk factors.

It is clear that pre-menopausal women have less cardiovascular disease than men. But as women head into menopause, and estrogen levels drop, a woman's risk of heart disease increases and equals that of men. However, the jury is still out as to whether hormone replacement is harmful or protective and more research is needed. There is emerging evidence that hormone-replacement therapy may benefit women in a certain age window (i.e 50-59) while it may be harmful to older women (70-79). Menopausal women need to have their blood pressure, heart rate, weight, fasting blood sugar, and cholesterol checked by a physician at least annually. Maintaining a healthy weight, participating in a cardiovascular exercise program and eating a heart healthy diet are the bare minimum. Women with any symptoms of heart disease should be promptly screened,

possibly with more advanced testing.

Please describe the changes in the cardiovascular system of the pregnant woman. How do you prepare a woman who has heart disease or a strong family history? What is the likelihood of developing heart disease while pregnant for the otherwise healthy female? What are the necessary precautions and treatment limitations in those categories and the competing concerns for the baby?

The cardiovascular system in the normal pregnant woman undergoes significant changes during pregnancy. Blood volume increases dramatically, resting heart rate increases, and cardiac output (the amount of blood ejected from the heart) rises by 50%. Women's bodies are designed to accommodate these changes.

The risk of heart disease in pregnancy remains small at 4% - though this is not negligible. Risk factors for developing heart disease in pregnancy include advanced maternal age (>35 years), gestational hypertension, gestational diabetes, obesity, preeclampsia, multiples, and strong family history. Women with known heart disease going into pregnancy are at increased risk for complications and should see their cardiologist prior to conception to ensure a safe pregnancy.

Certain conditions pose an increased risk to pregnant women including Marfan's syndrome, a history of certain heart valve abnormalities, prior heart attack/known coronary artery disease, heart failure and pulmonary hypertension.

Managing the pregnant patient with heart disease can be complex and requires a multidisciplinary team of specialists. To avoid exposing the fetus to radiation, certain testing must be avoided except for in emergency settings. Many medications used to treat heart disease are safe in pregnancy though many are not and must be avoided. Women should be seen in very close follow up (monthly, weekly at times) with a cardiologist trained in the care of pregnant women. In addition, a thorough delivery plan with an obstetric and cardiac anesthesiologist should be made in advance to minimize risks and complications. Certain maternal conditions necessitate a caesarean delivery and women on blood thinners need their anesthetic plan established well in advance.

The good news is that with proper planning, almost all cardiac complications in pregnancy can be managed safely and effectively, with excellent outcomes for mother and baby.

Please discuss the role of high cholesterol (e.g. HDL vs LDL) in heart disease— what was previously known and what is now believed citing the new evidence that has evolved the discussion.

It is hard even for doctors to stay on top of the ever changing cholesterol guidelines.

Recommendations for lipid lowering medications will differ depending on an individual's risk factors and prior heart disease history. In general, we feel that HDL cholesterol or "good" cholesterol helps stabilize plaques by removing LDL cholesterol from the walls of arteries and high levels may be protective. LDL or "bad" cholesterol contributes to fatty buildups in arteries raising the risk of heart

attack, stroke and peripheral arterial disease. Recently, scientists have challenged the idea that dietary fat intake contributes dramatically to cholesterol levels in the blood – attributing abnormal lipids to genetics more than diet. Regardless, I advise my patients to stay away from foods high in saturated fats and **NO** processed foods! Olive oil, nuts, fish, legumes, and fruits are the key!

How do symptoms for heart attacks differ in women than men? How about treatments from medical to surgical options? According to the American Heart Association (goredforwomen.org [4]), more women than men die each year from heart disease and the gap between men and women's survival continues to widen— is this true and why?

In January 2016, the American College of Cardiology (ACC) issued a scientific statement on acute myocardial infarction in women. The study which appeared in the journal *Circulation* found that while chest pain is the most common symptom of a heart attack in both men and women, women manifested many different symptoms from men. And shockingly, 64% of women who died from a heart attack had no previous symptoms at all.

They found that women more often described atypical chest pain, shortness of breath, fatigue, dizziness, and lightheadedness than men. In addition, the type of heart attacks women have are different from men. Men are more likely to have a typical “plaque rupture” while women are more likely to have plaque erosion, coronary vasospasm, and spontaneous coronary artery dissection (SCAD). In the first 12 months after a heart attack, women are more likely to die than men. Finally they found that hypertension was more closely associated with heart attacks in women than men, and diabetes is a bigger risk for stroke in women than in men.

While cardiovascular disease mortality peaked in men around 1995 and women in 2000 the overall trend for both is significantly down, suggesting better diagnosis, treatment and management of risk factors has improved survival. This delay and wide gap between men and women for many years is likely related to the aforementioned gender bias in screening, diagnosis, and treatment of women.

I have written, repeatedly, about the importance of [early bystander CPR](#) [5] -- and use of [AEDs \(automated external defibrillators\)](#) [6] when possible -- along with the importance of learning CPR in school, community etc. Please describe how effective early CPR can be and why-- including the new campaign for hands-only CPR— and detail the short- and long-term impact of cardiac arrest when CPR is delayed.

Sudden cardiac arrest can be a terrifying thing to witness. And the truth is that 75-80% of all out-of-hospital cardiac arrests occur at home. Approximately 95% of victims of a sudden cardiac arrest die before reaching the hospital. Being trained in CPR could make you capable of saving the life of your loved one. Prompt and effective bystander CPR can **double** the chances of a victim's survival. Without bystander CPR, a victim's chance of survival falls 7-10% for every **minute** CPR is delayed.

Ideally, all individuals should be trained in CPR starting in middle school. The hands-only CPR

movement was born out of understanding that people are hesitant to provide mouth-to-mouth to strangers. Hands only CPR is easy and effective. Following the simple three step rule – bystanders can perform CPR on anyone suffering from a cardiac arrest. Check the victim, call 911 and then using interlocked hands apply continuous, rhythmic compressions to the victim's chest until EMS arrives. Bystanders can alternate if they become fatigued. It is that easy.

Why do you think heart disease is the leading cause of death in women? What are the unique differences with women's heart disease?

In most people, heart disease is multi-factorial condition that evolves over many years and is caused by multiple risk factors. High rates of diabetes, hypertension, obesity, sedentary lifestyle and poor nutrition make American women at significant risk for heart disease.

You specialize in heart failure and transplant. What are the most common reasons women develop such severe disease? What are the particular challenges for women with respect to heart failure and transplant? Are they faring well?

Both men and women with advanced heart disease and congestive heart failure may eventually require a heart transplant or mechanical pump (LVAD) to keep them alive. In both men and women, ischemic heart disease (coronary artery disease) is the leading cause of heart failure. Women, however, are more likely to develop other forms of heart failure than men including Takotsubo (stress) cardiomyopathy, and obviously peripartum cardiomyopathy which happens in the peripartum period. (1)

Heart transplant survival continues to be excellent with 85%-90% 1-year survival and about 3.4% mortality every year thereafter. The median survival for most heart transplant recipients is 10-11 years, though many individuals live 20+ years after transplant.

Treating women with heart failure who are of child-bearing age can be complicated as certain heart-failure medications cannot be taken during pregnancy. Again, the management of these women should be referred to a specialist.

What are the greatest innovations being implemented now in women's heart disease? What do you hope we do or discover in the next decade?

Probably the biggest innovation being implemented in women's heart disease is creating awareness of the problem among the public, and educating women AND the medical field. We need to talk about women's risk of heart disease in the news, on the radio, in the media, and destigmatize the disease that is most likely to kill them. Women also need to start talking to each other about heart disease. It is also essential that we demand from the FDA and drug companies that women be enrolled in clinical trials in a 50/50 ratio with men.

In terms of technology and trends, treatment of heart disease is constantly advancing for both men and women. Drugs, interventional procedures, stents, valve replacements and temporary pumps

for heart failure are constantly being made safer, smaller, better and more effective. In the next 10 years, it is possible that the majority of valve replacements/repairs will be done percutaneously (catheter based) instead of requiring “open-heart” surgery.

What are the most important modifiable risk factors for women and girls to avoid to maintain ideal heart health? What type of family history compels you to follow a woman more closely?

I always tell my female patients that quitting smoking is the single best thing they can do for their health. In fact, smoking may be a stronger risk for heart attack in women than men. After that, a good diet and regular exercise to maintain a healthy body weight is key. However, I also explain to them that many risk factors for heart disease are out of their control and that the best way to handle that is to manage them aggressively and minimize the risk. For instance, some women will develop hypertension regardless of diet and exercise and so they need to manage with medication. The same goes for diabetes. Finally, a family history of sudden death, multiple people with a heart failure syndrome, or heart attack in a father <55 years and mother <65 years are particularly notable and should prompt more careful screening.

Are there specific tests or studies you think women should have by a certain age etc? Why?

For women without a notable family history of heart disease, an annual check-up beginning at age 18 should include weight, blood pressure, heart rate, fasting blood sugar, cholesterol, and thyroid screening. Women who have a strong family history will need different types of screening which might include an echocardiogram (ultrasound of the heart) or a stress test.

What does the term “heart disease” encompass for women? Why can it be such a silent killer for some and symptomatic for others?

Heart Disease includes a wide spectrum of conditions: coronary artery disease/heart attack, heart failure, hypertensive heart disease, valvular heart disease, congenital heart disease, and arrhythmias. Sometimes the term “cardiovascular disease” extends to include stroke as well.

While some women have no symptoms before a heart attack, many have symptoms and signs they have been ignoring. Annual screening by a doctor will help identify risk factors and expedite treatment. And larger educational campaigns will raise awareness in women so that they are better educated and more likely to seek help.

What role does stress play in women’s heart health?

We are just starting to understand the dramatic relationship between the heart and the mind. Stress is a key risk factor for heart disease and stress management in reduction is important for all

women to learn. Many theories have been postulated as to how stress can increase heart disease risk – through inflammation, by releasing stress hormones and raising blood pressure and heart rate, or by increasing unhealthy behaviors like use of alcohol, drugs, tobacco and binge eating. I advise all of my patients to incorporate stress-reduction techniques – meditation, yoga, walking, and breathing exercises.

Note(s):

(1) To learn more about stress cardiomyopathy, read my piece [Don't Go Breaking My Heart-- Literally!](#) ^[7]

(2) To learn more about Dr. Jennifer H. Haythe (pictured below) see [here](#) ^[8].



Source URL: <https://www.acsh.org/news/2017/07/25/heart-disease-women-fact-vs-fiction-11598>

Links

[1]

https://www.google.com/search?q=women%27s%20heart%20health%20wikipedia&client=safari&hl=en-us&prmd=nisv&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiB26WLo6TVAhVM_IMKHxq3

[2] https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_women_heart.htm

[3] <https://www.columbiadoctors.org/jennifer-h-haythe-md>

[4] <http://goredforwomen.org>

[5] <http://www.acsh.org/news/2016/11/16/want-nation-super-heroes-early-cpr-makes-every-second-count-10440>

[6] <http://www.acsh.org/news/2017/03/27/can-starbucks-and-pizza-shops-prevent-deaths-11029>

[7] <http://www.acsh.org/news/2016/10/13/don't-go-breaking-my-heart-literally-10291>

[8] <http://www.nyp.org/physician/jhhaythe/>