

# Matters of the Heart



Take Heart Alaska's Quarterly Newsletter

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## Obesity and Heart Disease

Most health professionals are aware that obesity is a risk factor for heart disease. However, they may overlook that not only does obesity contribute, but can directly lead, to heart failure. A fundamental understanding of exactly how these two chronic diseases are related may eliminate some common misconceptions and lead to improved patient education and care.

In the past, the relationship between obesity and coronary heart disease was viewed as indirect. This changed with a 2002 evaluation of the long-term longitudinal Framingham Heart Study that found obesity not only relates to, but independently predicts, heart failure and coronary atherosclerosis.<sup>1</sup>

Evidence now shows that heart failure is directly related to elevated body mass index (BMI). Kenchaiah et al. found in "Obesity and the Risk of Heart Failure" that - even after controlling for covariates like age, smoking status, alcohol consumption, cholesterol, hypertension, and more - men with an elevated BMI of 1 were 5 times more likely, and women with elevated BMI of 1 were 7 times more likely, to experience heart failure.<sup>1</sup>

Compared with women who had normal BMI, overweight women have a 50 percent greater risk of heart failure, and obese women had a doubling of the risk of heart failure. Obesity alone is estimated to account for 11 percent of cases of heart failure in men and 14 percent of those in women.<sup>2</sup>

Explanations for this finding point to two separate mechanisms - ventricular hypertrophy and metabolic syndrome. Because the heart must work harder to carry extra weight, enlarged left ventricles are common in obese patients. In time the heart muscle becomes dilated and inefficient - often leading to sudden death. Right ventricular hypertrophy can occur as a consequence of left ventricular dysfunction but also as a result of obesity hypoventilation syndrome in which obstructive sleep apnea and subsequent low oxygen levels cause the heart to work harder resulting in muscle hypertrophy, dilation, and progressive dysfunction.

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**Take Heart  
Alaska**

Alaska's Cardiovascular  
Health Coalition

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### Committee Minutes

Click to link to documents....

[Steering Committee](#)

[Healthy Lifestyles Committee](#)

[Alaskans Promoting Physical Activity \(APPA\) Subcommittee](#)

[Eat Smart Alaska Subcommittee](#)

[Public Education Committee](#)

### Stroke Warning Signs

- Sudden numbness or weakness of the face, arm, or leg—especially on one side of the body.
- Sudden confusion, or trouble speaking or understanding;
- Sudden trouble seeing in one or both eyes;
- Sudden trouble walking, dizziness, or loss of balance or coordination;
- Sudden severe headache with no known cause.

If you or someone with you has one or more of these signs, don't delay! Immediately call 9-1-1 or the EMS number in your area so an ambulance can be sent for you. Also, check the time so you'll know when the first symptoms appeared. It's very important to take immediate action. If given within three hours of the start of symptoms, a clot busting drug can reduce long-term disability for the most common type of stroke.

### Sodium Reduction

Nine in 10 U.S. adults get too much sodium every day - and most of it comes from common restaurant and grocery store items according to data from the Vital Signs report out of the Centers for Disease Control and Prevention.

The same report found that 10 types of foods are responsible for more than 40 percent of people's sodium intake. Foods like processed luncheon meat, soups, pizza, breads and rolls are common culprits...as are cheese, pasta dishes, meatloaf and snacks like potato chips, pretzels, and popcorn.

The U.S. Dietary Guidelines recommend limiting sodium intake to less than 2,300 milligrams per day. People aged 51 and older, African Americans or anyone with high blood pressure, diabetes, or kidney disease should limit intake to 1,500 milligrams per day.\*

\* U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary Guidelines for Americans, 2010. 6th Edition, Washington, DC: U.S. Government Printing Office, January 2010.

### Million Hearts

The [Million Hearts](#) Initiative recently hosted the "Scaling and Spreading Innovation" event designed to inspire creative thinking about developing and sustaining successful community interventions for better cardiovascular health.

Sponsored by the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), and the American Heart Association (AHA), this event highlighted the spread of innovations aimed at reducing blood pressure and cholesterol to prevent heart disease and stroke.

Among the highlighted innovations was [Heart360](#) - a pharmacist-led home blood pressure monitoring program where participants uploaded their home blood pressure measurements 3-4 times a week to the American Heart Association's website and clinical pharmacy specialists monitored the patients' blood pressure readings and adjusted medication therapy as needed.

**Obesity and Heart Disease**

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Metabolic syndrome - characterized by insulin resistance, dyslipidemia, high LDL, low HDL, and elevated C-reactive protein levels is also thought to have played a part in the Kenchaiah findings and is now widely recognized as a risk factor for heart disease in itself.

Additional findings by Lakka et al. have shown that waist-to-hip ratio is an even better predictor of coronary heart disease than BMI, so where body fat is stored may influence coronary heart disease more than how much.<sup>3</sup>

Does it matter that obesity causes both coronary atherosclerosis and heart failure as opposed to just being a risk factor for heart disease? We have known for years that excess body weight is related to a myriad of negative health outcomes, so what if the relationship is causal or associative?

Due to the low success rate of weight loss / weight gain prevention programs, some practitioners have moved away from prescribing weight loss in favor of reducing other risk factors like high cholesterol, high blood pressure, smoking, and inactivity.

The reminder from the Kenchaiah study - that overweight and obesity put you at elevated risk of heart failure even if you're otherwise healthy emphasizes the concept that while weight loss is difficult and maintaining weight loss is even more difficult, reducing weight and lowering body fat levels may be the only way to minimize risk of certain types of heart disease.

<sup>1</sup> Satish Kenchaiah, M.D et al. Obesity and the Risk of Heart Failure. New England Journal of Medicine. 2002; 347:305-313.

<sup>2</sup> Barry M. Massie, M.D. Obesity and Heart Failure — Risk Factor or Mechanism? New England Journal of Medicine. 2002; 347:358-359.

<sup>3</sup> H.-M. Lakka, T. A. Lakka, J. Tuomilehto and J. T. Salonen. Abdominal obesity is associated with increased risk of acute coronary events in men. European Heart Journal (2002) 23, 706–713

**Obesity and Heart Disease Resources**

**[Obesity Information](#)**

**[BMI Calculator](#)**

**[Losing Weight](#)** — Goal Setting, tips, roadblocks, and keeping it off.

**[Better U](#)** – A free 12 week online nutrition and fitness program

**[Get Moving!](#)**

**[Healthier Kids](#)**

**[Stress Management](#)**



# Heart Disease & Stroke Resources

## National Resources

*National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)*

**Centers for Disease Control and Prevention**

For more information, go to:

<http://www.cdc.gov/chronicdisease/>

<http://www.cdc.gov/dhdsp/>

<http://www.cdc.gov/stroke/>

<http://www.cdc.gov/heartdisease/>

<http://www.cdc.gov/bloodpressure/>

<http://www.cdc.gov/cholesterol/>

<http://www.cdc.gov/salt/>

<http://www.cdc.gov/WISEWOMAN/>

<http://millionhearts.hhs.gov/>

### Mission

The mission of the NCCDPHP is to lead efforts that promote health and well-being through prevention and control of chronic diseases.

NCCDPHP supports a variety of activities that improve the nation's health by preventing chronic diseases and their risk factors. Program activities include one or more of our major functions: supporting states' implementation of public health programs; public health surveillance; translation research; and developing tools and resources for stakeholders at the national, state and community levels.

## **National Association of Chronic Disease Directors (NACDD)**

**Centers for Disease Control and Prevention**

[www.chronicdisease.org](http://www.chronicdisease.org)

NACDD is a national public health association founded in 1988 to link the chronic disease program directors of each U.S. state and U.S. territory to provide a national forum for chronic disease prevention and control efforts. Since its founding, NACDD has made impressive strides in mobilizing national efforts to reduce chronic diseases and associated risk factors.

## State of Alaska Chronic Disease Prevention Programs and Program Resources

### **Alaska Heart Disease and Stroke Prevention Program**

<http://www.hss.state.ak.us/dph/chronic/chp/default.htm>

The goal of Alaska's Heart Disease and Stroke Prevention Program is to maintain and build the state's capacity to improve the cardiovascular and cerebrovascular health of all Alaskans.

### **Alaska Chronic Disease Prevention and Health Promotion Section**

<http://www.hss.state.ak.us/dph/chronic/default.htm>

The Section of Chronic Disease Prevention and Health Promotion seeks to improve the health and well being of all Alaskans.

### **Alaska Behavioral Risk Factor Surveillance System (BRFSS)**

<http://www.hss.state.ak.us/dph/chronic/hsl/brfss/default.htm>

The Alaska Behavioral Risk Factor Surveillance System (BRFSS) working with the National Centers for Disease Control and Prevention (CDC), gathers information about the health related lifestyle choices of Alaskan adults. Each year, results are analyzed to improve the understanding of health habits and measure progress towards health objectives at the state and national level.

### **Alaska Diabetes Prevention and Control Program**

<http://www.hss.state.ak.us/dph/chronic/diabetes/default.htm>

The Diabetes Prevention and Control Program's efforts to reduce the burden of diabetes in Alaska are consistent with national strategies and place special emphasis on communities and populations at risk for diabetes.

### **Alaska Obesity Prevention and Control Program**

<http://www.hss.state.ak.us/dph/chronic/obesity/default.htm>

The Obesity Prevention and Control Program's mission is to prevent and reduce obesity among Alaskans through the promotion of physical activity and good nutrition.

### **Alaska Tobacco Prevention and Control Program**

[www.hss.state.ak.us/dph/chronic/tobacco/default.htmh](http://www.hss.state.ak.us/dph/chronic/tobacco/default.htmh)

The mission of the Alaska Tobacco Prevention and Control Program is to provide leadership, coordinate resources, and promote efforts that support Alaskans in living healthy and tobacco-free lives.