

Hypertrophic Cardiomyopathy

Overview

Hypertrophic cardiomyopathy, or **HCM**, is a chronic disease involving thickening of the heart muscle. HCM can lead to the development of debilitating symptoms and serious complications.^{1,2}

The most frequent cause of HCM is the presence of mutations in sarcomere protein genes.³

There are two main subtypes of HCM:

Obstructive HCM:

When the left ventricular outflow tract (LVOT) becomes blocked or has reduced blood flow due to the heart walls becoming thick or stiff.⁴

The majority of HCM cases are obstructive in nature.

Non-obstructive HCM:

When the thickened heart muscle does not cause restriction of blood flow.⁴

In both obstructive or non-obstructive HCM patients, symptoms such as chest pain, shortness of breath, palpitations and fainting may arise. These symptoms may interfere with a patient's ability to participate in daily activities. Complications of HCM can include atrial fibrillation, stroke, heart failure and in rare cases, sudden cardiac death.²

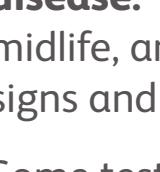
Prevalence in the U.S.

HCM is estimated to affect anywhere from **1 in every 200** people to **1 in every 500** people.^{5,6*}

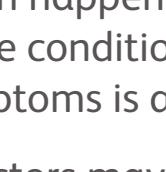
HCM has been estimated to be present in ~**700,000** adults in the U.S. Of this number, it is estimated that ~**85%** may remain **undiagnosed**.^{7,8}

Symptoms

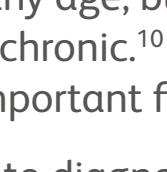
Common signs and symptoms of HCM can include:^{8,9}



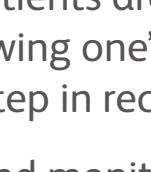
Chest pain
commonly experienced during physical exertion



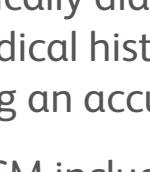
Arrhythmias
(irregular heartbeat)



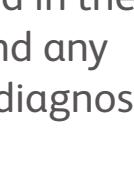
Shortness of breath



Palpitations



Fatigue & lightheadedness



Dizzy spells & fainting

HCM may affect people in different ways. For some, symptoms come and go while others may experience symptoms that can persist for a long time. Still, others may not experience symptoms right away, yet the disease may continue to progress.

Diagnosis

HCM is often inherited and is the most common form of genetic heart disease.⁹ It can happen at any age, but patients are typically diagnosed in their midlife, and the condition is chronic.¹⁰ Knowing one's medical history and any signs and symptoms is an important first step in receiving an accurate diagnosis.

Some tests doctors may use to diagnose and monitor HCM include:⁸

*The 1995 CARDIA study, a multicenter, US-population-based echocardiography study of 4111 subjects (aged 23-35) identified the prevalence of HCM as 1:500 people in the general population.

¹Estimated undiagnosed range calculated using prevalence of 1:500, estimated US population (332,330,571 in May 2021), and estimated diagnosed population (~100,000).

² Maron BJ et al. Lancet. 2013; 381 (9862):242-255.

³ Naird SS, ed. Hypertrophic Cardiomyopathy. London, Eng: Springer-Verlag; 2015.

⁴ Stanford Health Care. Hypertrophic cardiomyopathy. Accessed June 14, 2021. <https://stanfordhealthcare.org/medical-conditions/blood-heart-circulation/hypertrophic-cardiomyopathy.html>

⁵ Maron BJ, Gardin JM, Flack JM, Gidding SS, Kurosaki TT, Bild DE. Prevalence of hypertrophic cardiomyopathy in a general population of young adults. Echocardiographic analysis of 4111 subjects in the CARDIA study. Circulation. 1995;92(4):785-789.

⁶ Semsarian C, Ingles J, Maron MS, Maron BJ. New perspectives on the prevalence of hypertrophic cardiomyopathy. J Am Coll Cardiol. 2015;65(12):1249-1254.

⁷ Maron MS, Hellawell JL, Lucove JC, Farzaneh-Far R, Olivotto I. Occurrence of clinically diagnosed hypertrophic cardiomyopathy in the United States. Am J Cardiol. 2016;117(10):1651-1654.

⁸ Mayo Clinic. Hypertrophic cardiomyopathy. <https://www.mayoclinic.org/diseases-conditions/hypertrophic-cardiomyopathy/diagnosis-treatment/drc-20350204>. Last accessed 29 June 2021.

⁹ University of Maryland Medical Center. Hypertrophic cardiomyopathy types, symptoms and causes. <https://www.umms.org/umms/health-services/heart-vascular/services/hypertrophic-cardiomyopathy/types-symptoms-causes>.

¹⁰ Jacobs C. Hypertrophic cardiomyopathy in adults: an overview. J Am Assoc Nurse Pract. 2014;26(9):465-470.