

A Hole in My Heart

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I have never had a broken heart ... But since the day I was born, I *have* had a small hole, three millimeters in circumference, in my heart. When I was eight, I began experiencing symptoms like shortness of breath, irregular heartbeats, and fatigue. Following an appointment with my pediatrician and subsequent visits to a cardiologist, I was diagnosed with an atrial septal defect (ASD), an opening in the wall (septum) between the two upper chambers (atria) of the heart. While rare, this defect can cause oxygenated blood from the left atrium to flow backwards through the hole in the septum into the right atrium and mix with deoxygenated blood. As a result, an ASD increases the amount of blood flowing through the lungs, increasing pressure on the heart to pump the additional blood effectively throughout the body. If the hole is sufficiently large, an ASD can lead to serious medical complications, including high blood pressure in the arteries of the lungs, arrhythmias, stroke, and even heart failure. However, early detection, routine monitoring, and, if necessary, surgical intervention can significantly improve the prognosis.

This pinpoint hole—comparable to the size of a toothpick—has only minimally affected my quality of life. Nonetheless, I have noticed that I am especially prone to experiencing shortness of breath during exercise and to fainting during prolonged exposure to heat. As a former competitive tennis player, these symptoms exacted a particularly heavy toll during long hours of training outside in high temperatures. While I enjoy running outdoors, it has also often proven difficult to run for long distances without experiencing breathlessness, irregular heartbeats, and light-headedness, particularly in the heat.

Since elementary school, I have visited the cardiologist every five years to undergo routine medical tests to monitor the size of my ASD—appointments that fill me with a well of fear and apprehension. I am required to receive two standard tests: an echocardiogram (echo), which employs ultrasound waves to produce detailed images of the heart and assess the size of the hole as well as overall strength and function, and an electrocardiogram (ECG), which utilizes electrodes to record the electrical activity of the heart and evaluate heart rate and rhythm.

Although the tests are painless and simple, I was always still hesitant to enter the diagnostic room, don a dismal hospital gown, and allow the nurse to position seemingly alien machinery across my torso. The clinical environment feels at once cold and intimidating, sterile and unemotional. I am reminded of both the extraordinary advances of modern medicine—not least of which is the capability of machines to monitor and portray the intricacies and inherent beauty of my most essential organ—and the growing tension between technological innovation and human interaction in healthcare, with increasing dependency on instrumentation over physical connection.

In these solitary moments in the diagnostic room, however, I am able to reconnect with my own humanity. While my pulse inevitably rises before entering the diagnostic room as anxiety spreads, there is also something quite tranquil and otherworldly in focusing on my own breathing and the concert of bodily processes sustaining my flow of blood, listening to the cadence of my heartbeat, and viewing the dynamic masterpiece that is the ultrasound scan composed of my own cardiac chambers, valves and blood vessels. As the cardiologist, sensing my apprehension, gives me a knowing smile, relief overwhelms me as I realize I have passed another five-year check-up.