

## **The Catholic Doctor is In: When the heart beats too fast**

Some time ago, I was trying to convince one of my patients to exercise. His response makes me smile every time I think about it. “Doc, I am a firm believer that God only gives you so many heartbeats on this earth, and when you use them up, you die. So, I don’t want to use them up by exercising.”

I’m confident there is no scientific basis for this, but did you know that is not good for your heart to beat too fast for extended periods of time?

I recently cared for a young man in his 40s who presented with atrial fibrillation and a very rapid heart rate. He had no idea his heart was out of rhythm. We believed his heart was going very fast for weeks. It was only after he went into congestive heart failure with symptoms of severe shortness of breath that he realized something was wrong and he sought medical attention. In the emergency room his heart rate was running between 160 and 180 beats per minute.

Many people that go into atrial fibrillation (A-fib) are immediately aware of their fast and irregular heart rhythm, but there are a significant percentage of people who initially have no symptoms.

Our evaluation included an echocardiogram that documented severe deterioration of his heart function. His EF (ejection fraction) was only 15 percent, which is barely good enough to sustain life. The normal EF is usually in the 55-70 percent range. We hypothesized that he had a tachycardia- (fast heart rate) induced cardiomyopathy (weak heart muscle). Truthfully, I was hopeful that was the case because this type of cardiomyopathy can be completely reversed by slowing the heart down to normal again. (Other types of cardiomyopathy are less likely to recover.)

We performed an electrical cardioversion, shocking him back into normal sinus rhythm so his heart would beat synchronously again at normal rates. We put him on medicine to maintain a normal rhythm, and the best combination of medicine to enhance recovery of his weakened left ventricle. When he went home we had him wear a LifeVest, since he was at risk for sudden potentially fatal arrhythmias. (If you have not heard of the LifeVest, you missed my article two months ago.) After two months he was feeling better, and his EF climbed up to 30 percent. Two more months later, his EF had recovered to 55 percent, his LifeVest was discontinued and he returned to work. His heart had made a great comeback!

A-fib is the most likely cause of a tachycardia-induced cardiomyopathy, but we also see occasional people whose heart rate just goes too fast in normal rhythm for unknown reasons. We call this inappropriate sinus tachycardia. The heart rate is inappropriately

going too fast. Most of these people are actually quite young. If the resting heart rate is over 120 for extended periods of time, then we become concerned about the possibility of a cardiomyopathy developing with time. The treatment to slow down a heart rate is usually a beta blocker, titrated to a dose needed to adequately control the heart rate.

Most people can learn to take their pulse, but if you can't master doing that there are multiple other options. One of the options is to download one of the heart rate-acquiring apps on your smartphone. These include "Instant Heart Rate," "Runtastic Heart Rate Pro" or "Cardio." They use technology called photoplethysmography (say that three times fast!). These apps explain how to use them better than I can, but basically you put your finger over the smartphone's camera and flash: It can actually see color changes from the arterial pulsations through the skin and give you an accurate heart rate. Technology at its best! Anybody that has had their heart function deteriorate because of prolonged, sustained, elevated heart rates is strongly urged to check their pulse frequently.

Allow me to also end with Scripture, specifically Psalm 73:26: "Though my flesh and my heart waste away, God is the rock of my heart and my portion forever."

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