A 75-year-old woman with a history of chronic congestive heart failure undergoes cardiac catheterization to determine her extent of cardiac dysfunction. During estimation of her systolic function, in what phase of the cardiac cycle should her peak left ventricular pressure occur?

Step 1: Answer with Explanation

Answer: C Ventricular ejection

Explanation

The volumetric portion of fluid that is ejected from a chamber with each contraction is known as the ejection fraction. Although if left unclear, it typically refers to the left ventricle of the heart, it can also refer to the gall bladder or leg veins.

In and out of contraction, the heart. The two lower chambers of your heart pump out (eject) blood when it beats (ventricles). The ventricles of your heart fill with blood as it unwinds. The heart can never completely pump all the blood out of a ventricle, no matter how strong the contraction.

Step 2: Explanation for incorrect option

Rapid filling starts when the pressure in the left atrium exceeds the pressure in the left ventricle, causing the mitral valve to open and passive blood flow into the LV. The bulk of the filling's volume comes from this stage.

In terms of cardiac physiology, an isometric contraction is when the ventricles contract in early systole without a commensurate volume change. All of the heart valves are closed during this brief phase of the cardiac cycle.

The phase of the heart cycle referred to as atrial systole. The left and right atria contract simultaneously during atrial systole, sending blood into the left and right ventricles, respectively.

Isovolumic relaxation period is the portion of the cardiac cycle between the commencement of filling caused by the opening of the mitral valve and the aortic component of the second heart sound. It can be applied as a diastolic dysfunction indication.