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What does the term "ejection fraction" mean? What does it measure?

Answer From Rekha Mankad, M.D.

Ejection fraction is a measurement of the percentage of blood leaving your heart each time it contracts.



Chambers and valves of the heart

The heart contracts and relaxes. When your heart contracts, it ejects blood from the two pumping chambers (ventricles). When your heart relaxes, the ventricles refill with blood. No matter how forceful the contraction, the heart can never pump all blood out of a ventricle. The term "ejection fraction" refers to the percentage of blood that's pumped out of a filled ventricle with each heartbeat.

The ejection fraction is usually measured only in the left ventricle (LV). The left ventricle is the heart's main pumping chamber. It pumps oxygen-rich blood up into the upward (ascending) aorta to the rest of the body.

- An LV ejection fraction of 55 percent or higher is considered normal.
- An LV ejection fraction of 50 percent or lower is considered reduced.
- An LV ejection fraction between 50 and 55 percent is usually considered "borderline."

Ejection fraction is just one of many tests your doctor may use to determine how your heart works. But even with a normal ejection fraction, your overall heart function may not be normal. Talk with your doctor if you have concerns about your heart.

Some things that may cause a reduced ejection fraction are:

- Weakness of the heart muscle, such as cardiomyopathy
- Heart attack that damaged the heart muscle
- Heart valve problems
- Long-term, uncontrolled high blood pressure

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Ejection fraction can be measured with imaging techniques, including:

- **Echocardiogram.** This is the most common test used to measure ejection fraction. During an echocardiogram, sound waves are used to produce images of your heart and the blood pumping through your heart.
- **Cardiac catheterization.** During cardiac catheterization, a thin, plastic tube (catheter) is inserted into an artery in your arm or leg and then gently guided to your heart. Images taken during catheterization can measure the ejection fraction of your heart.
- **Magnetic resonance imaging (MRI).** An [MRI](#) uses magnetic field and radio waves to create cross-sectional images of specific parts of your body. When an [MRI](#) is used to study the heart, it's known as a cardiovascular [MRI](#).
- **Computerized tomography (CT).** During a [CT](#) scan, a special X-ray technique is used to create cross-sectional images of specific parts of your body. When a [CT](#) scan is used to study the heart, it's known as a cardiac [CT](#).
- **Nuclear medicine scan.** During a nuclear scan, trace amounts of radioactive material are injected into your bloodstream. Special cameras then detect the radioactive material in your blood as it flows through your heart and lungs.

With

Rekha Mankad, M.D.

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