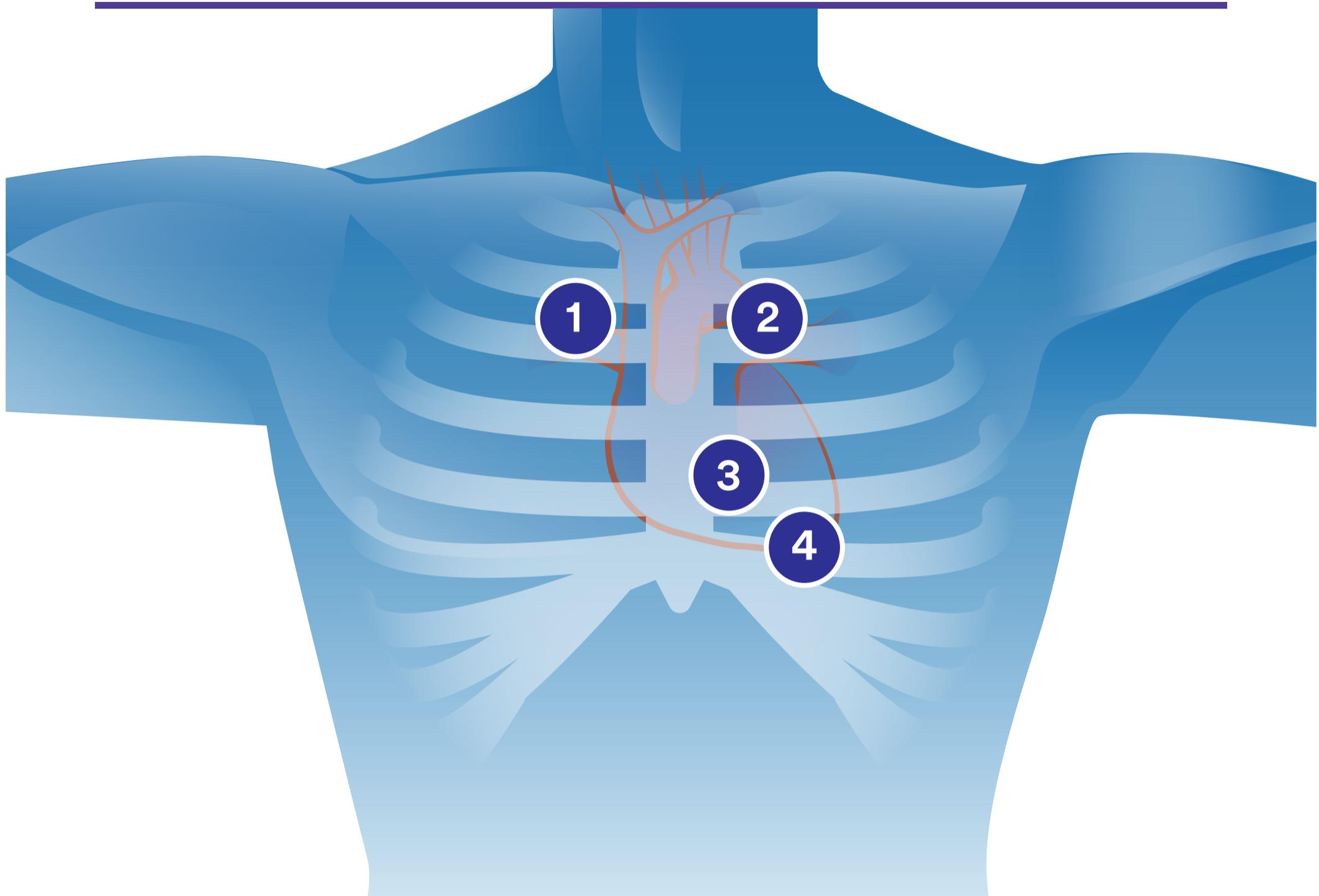


Cardiac Auscultation



At a minimum, listen to the four basic auscultatory sites, first using the stethoscope's diaphragm and then the bell. Having a 3M™ Littmann® Stethoscope with tunable technology allows you to hear different frequencies without repositioning the chestpiece.

**1**

Base Right (Aortic area)

Base right (aortic) is the second intercostal space to the right of the sternum. You can best hear sounds from the aortic valve in this area.

2

Base Left (Pulmonic area)

Base left (pulmonic) is the second intercostal space to the left of the sternum. You can best hear sounds from the pulmonic valve in this area.

3

Lower Left Sternal Border (LLSB) (Tricuspid area)

Left lower sternal border (tricuspid) is the fourth intercostal space to the left of the sternum. You can best hear tricuspid valve and right heart sounds in this area.

4

Apex (Mitral area)

Apex (mitral) is the fifth intercostal space in the mid-clavicular line. It's easiest to hear mitral valve and left heart sounds in this area.



Understanding heart sounds

The cardiac cycle consists of two periods: The first is a contraction (systole) and the second is a relaxation (diastole). During systole, blood is ejected from the chambers of the heart and during diastole, the heart chambers fill with blood. Ventricular systole causes closure of the mitral and tricuspid valves. Cardiac sounds are named according to the sequence of occurrence and are produced at specific points in the cardiac cycle.

The initial heart sound is called the first heart sound, or S1. It occurs at the beginning of ventricular systole when the ventricular volume is maximal. The S1 corresponds to a point very early in the rise of the ventricular pressure curve where ventricular pressure becomes greater than atrial pressure and the mitral and tricuspid valves close. This corresponds with the QRS complex on the ECG (electrocardiogram). On the graphic recording of heart sounds, called a phonocardiogram, it is the first of the components recorded.

The second heart sound, or S2, occurs at the end of the ventricular systole, at the time of the diastolic notch on the ventricular pressure curve. It is the second of the high-frequency components recorded on a phonocardiogram. The period between S1 and S2 represents ventricular systole.

Learn more auscultation skills.

The 3M™ Littmann® Learning Institute App is packed with auscultation training resources that help you sharpen your ability to hear through a stethoscope. The basic version of the app is a free download from the iTunes Store® or Google Play™.

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