

flow through the valves.

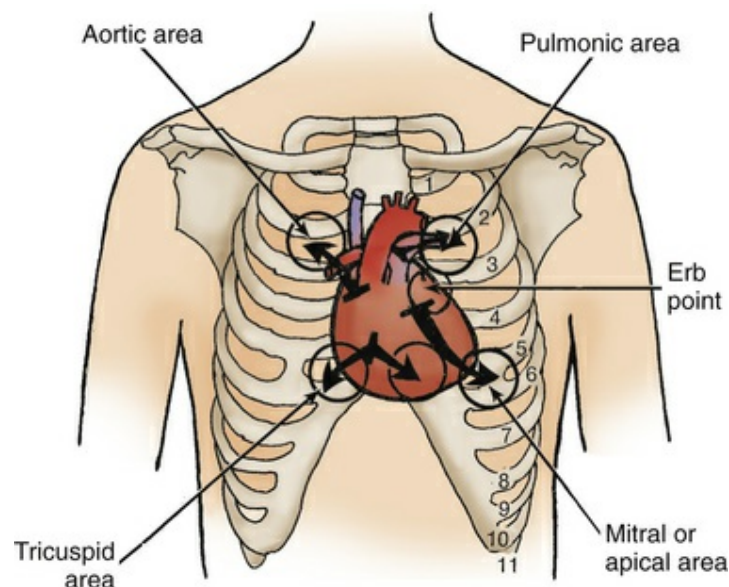


FIG 4-34 Direction of heart sounds for anatomic valve sites and areas (*circled*) for auscultation.

Normally S_1 is louder at the apex of the heart in the mitral and tricuspid area, and S_2 is louder near the base of the heart in the pulmonic and aortic area (Table 4-9). Listen to each sound by inching down the chest. Auscultate the following areas for sounds, such as murmurs, which may radiate to these sites: sternoclavicular area above the clavicles and manubrium, area along the sternal border, area along the left midaxillary line, and area below the scapulae.

Nursing Tip

To distinguish between S_1 and S_2 heart sounds, simultaneously palpate the carotid pulse with the index and middle fingers and listen to the heart sounds; S_1 is synchronous with the carotid pulse.

TABLE 4-9
Sequence of Auscultating Heart Sounds*

| Auscultatory Site | Chest Location | Characteristics of Heart Sounds |
|-------------------|----------------|---------------------------------|
| | | |