

Cardiovascular

Year 1	Year 2	Year 3
<p><u>Do</u></p> <ol style="list-style-type: none"> Inspect and Palpate from patient's right side <ul style="list-style-type: none"> With patient at 30-45 degrees identify highest pulsations of internal jugular vein (or external jugular vein column). Palpate the carotid pulses on each side, then auscultate each (while patient holding breath) Inspect and then palpate the precordium for the point of maximal impulse (PMI) left lateral decubitus, and lifts (along sternum). Auscultate <ul style="list-style-type: none"> Listen at four basic locations (and associated valves) using the diaphragm: apex (mitral), LLSB (tricuspid), L 2nd ICS (pulmonic), R 2nd ICS (aortic) and again at apex with bell. <p>At each location listen first to S1 and S2, observing amplitude and splitting then for several cardiac cycles do the same for systole then diastole. If you hear a murmur or extra sound, "inch" your stethoscope to hear where it is heard best.</p> Palpate peripheral pulses <ul style="list-style-type: none"> Palpate brachial, radial, femoral, popliteal, dorsalis pedis, and posterior tibial pulses Check for edema by pressing on skin at ankles <p><u>Know</u></p> <ul style="list-style-type: none"> The JVP is 5cm added to the vertical distance of the sternal angle to the internal (or external) jugular venous pulsations. One can also document the JVP in reference to an anatomical landmark and patient position, i.e. 4cm above the clavicle with the head of the patient raised to 45 degree. 	<p><u>Know</u></p> <ul style="list-style-type: none"> The normal JVP is up to 10 cm H₂O. The PMI is only palpable in ~25% of adults, is <2cm in diameter (<4cm in left lateral decubitus), palpated at or medial to the mid-clavicular line in the 4th-5th interspace. A lift (also heave) is an abnormal sustained, systolic outward movement of the precordium associated with heart failure. A right ventricular lift is felt best at the left sternal border and left ventricular lift felt best at the cardiac apex A thrill is a palpable vibration felt when a cardiac murmur is grade IV-VI The bell is best for hearing low frequency sounds of S3 and S4 and mitral stenosis The order of timing of the heart valves is mitral and tricuspid (creating S1) followed by aortic and pulmonic (creating S2) The S2 normally splits with inspiration and is heard in the pulmonic region appreciated in about 50% of adults How to grade murmurs: <ul style="list-style-type: none"> I – don't hear immediately, need a quiet room II- heard fairly easily III- loud IV- associated with a thrill V- able to hear with the stethoscope on edge VI- able to hear with stethoscope off chest 	<p><u>Do:</u></p> <ul style="list-style-type: none"> The abdominojugular reflux is performed by pressing for 30-60 seconds to the right of the midline below the liver and observing the JVP. A sustained rise in the JVP >3cm from baseline is considered positive. <p><u>Know</u></p> <ul style="list-style-type: none"> The partial left lateral decubitus position is best for feeling the PMI and for hearing mitral stenosis, S3 and S4 (at cardiac apex with bell) Sitting up and leaning forward with breath held is best for hearing aortic regurgitation and cardiac rubs A rub is a high-pitched scratchy sound caused by pericardial inflammation heard best with the diaphragm. S3 occurs during diastole with passive filling of blood into an overfilled non-compliant left ventricle. In patients over 40 it indicates systolic dysfunction or valvular heart disease and in younger patients it may be normal. S4 occurs during late diastole with atrial contraction into a stiff ventricle (due to hypertrophy or fibrosis) The abdominojugular reflux is seen in heart failure and correlates well with an elevated pulmonary capillary wedge pressure.