

## **XII. Lungs:**

The type of breathing and rate of respiration should be recorded.

**Inspection.** Chest shape, recessions, deformities or abnormal pulsations.

**Palpation.** Chest palpation detects tactile fremitus and masses on the chest wall.

**Percussion:**

Percussion is done to compare corresponding areas of both sides of the chest. It is done at the top of the chest proceeding downwards bilaterally. Percuss to detect areas of dullness or hyperresonance. Normally the top of the liver is percussed anteriorly at about the level of the sixth rib from the midaxillary line to the sternum. The lower edge of the lung or the top of the diaphragm is usually percussed to the level of the 8<sup>th</sup> to 10<sup>th</sup> ribs posteriorly on both sides.

**Auscultation.**

Breath sounds in children are usually bronchovesicular. These may be increased or decreased. Rales (crepitations, crackles), friction rub, and inspiratory or expiratory wheezes are abnormal findings. Also listen for vocal resonance.

## **XIII. Cardiovascular System:**

A thorough examination of the cardiovascular system should include the following.

**Inspection:**

The presence of cyanosis, edema, clubbing of fingers, and respiratory distress suggest cardiac abnormality.

**Palpation:**

Part of the cardiac examination is locating the apex beat. The apex beat is normally felt in the fourth interspace just to the left of the midclavicular line in children under 7 years of age. After 7 years of age, it is felt in the fifth intercostals space in the midclavicular line. Thrills at the apex are best felt with the child lying on the left side; basal thrills are felt with the child sitting up.

**Percussion:**

An attempt should be made to percuss the heart borders.

**Auscultation:**

Determine heart rate and rhythm and auscultate over the entire chest, anteriorly and posteriorly, with particular attention to the four valve areas. The quality of the heart sounds is normally sharp and clear, splitting of the first or the second heart sound may be heard.