



**Stethoscopes for the ADN Student**



Stethoscopes are used to hear sounds generated by the human body: Stethoscopes are used to assess sounds within the body to include the heart, lungs, veins & arteries, and intestinal tract. The blood pressure is measured with a stethoscope. Using a stethoscope is an age-old art in medicine since 1816, it is a non-invasive acoustic tool to localize adventitious sounds and aid in diagnosing certain diseases. The stethoscope consists of a bell, diaphragm, tubing, and earpieces.

**Bell:** The bell of the stethoscope is cup shaped and located opposite the diaphragm. Not all stethoscopes have a bell, however, the bell is necessary to listen to low pitch sounds such as heart tones. **Diaphragm:**

The diaphragm of the stethoscope is the flat part at the end of the tubing which contains thin plastic. The diaphragm is used to listen to high pitch sounds such as lung sounds. Some stethoscopes have a diaphragm but no bell. **Tubing:** The stethoscope transmits sounds via the tubing to the earpieces from the bell or diaphragm. Stethoscopes may have a single tube or a double tube. Double tubes are more acoustically sensitive but may rub against one another causing extraneous sounds to be heard.

**Earpieces:** Earpieces made of soft rubber are more comfortable. The earpieces should fit in the ear snugly and angle slightly forward for the best fit thus preventing outside sounds from interfering during auscultation.



Stethoscopes vary in their design, material, and cost. Most are made of Y-shaped rubber tubing which allows sounds to enter the device at the bell or diaphragm or two-sided sound detecting device, travel up the tubes and through to the ear pieces. Some newer models have only one pressure-sensitive head. Stethoscopes range in price from \$10.00 and up.



Consider the following recommendations prior to purchase of a stethoscope:

- The more expensive stethoscopes are not necessary.
- The stethoscope with the single tubing prevents outside sounds from interfering during auscultation.
- A bell and diaphragm allows the examiner to hear low and high pitched sounds without causing operator error that might occur with pressure-sensitive models.
- It is best to obtain a colorful model to discourage theft.
- Try it before you buy it?
- Earpiece comfort and snug fit are crucial to ensure sound transmission.
- One size does not fit most. The selection of a stethoscope is a personal preference. Do not let someone else select a stethoscope for you.