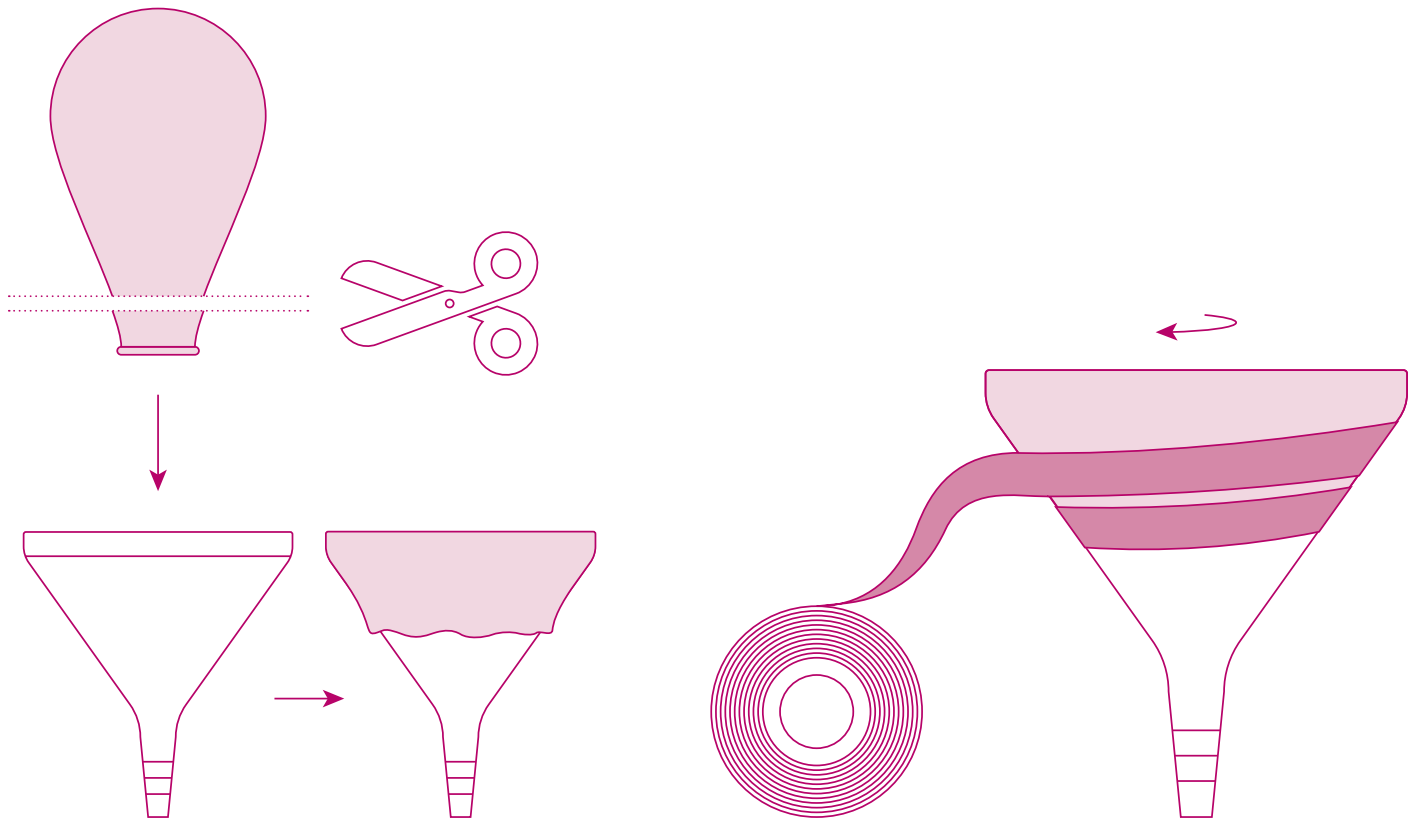


How to make a STETHOSCOPE

LIST OF MATERIALS

- 1 OR 2 SMALL FUNNELS
(2 PER STETHOSCOPE, SIZE 3 INCHES / 7.6 CM)
- BALLOONS OR PLASTIC WRAP
- SCISSORS
- ELECTRICAL TAPE
- RUBBER BANDS
- CLEAR, FLEXIBLE PLASTIC TUBING
(24 INCHES PER STETHOSCOPE)



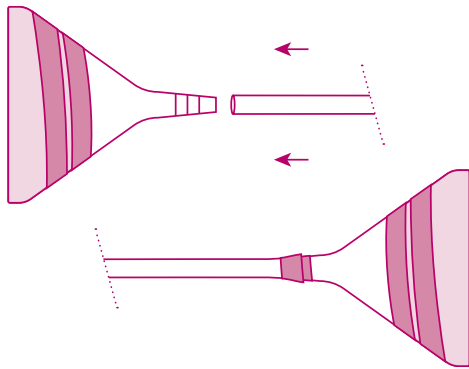
1 Cover the top of a funnel with a balloon.

- a. Cut off the tail end of a balloon, then pull what's left over the larger opening of a funnel.
- b. Pull the balloon tightly enough so that it is stretched tautly across the funnel like a drum.
- c. You can use any size funnel you want, but a smaller one will be easier to work with. Something around 3 inches (7.6 cm) wide is ideal.
- d. If you can't get a balloon, or stretch the balloon across the funnel, use a sheet of plastic wrap instead.

2 Wrap electrical tape around the balloon to hold it in place, if necessary.

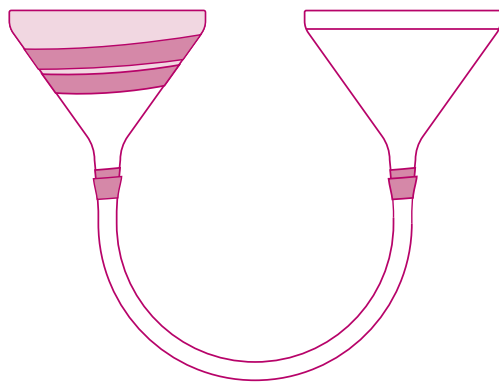
- a. The balloon needs to be held securely across the top of the funnel. If the balloon keeps popping off, wrap a piece of electrical tape around the edge of the balloon.
- b. If you used plastic wrap, you can help hold it in place with a rubber band.
- c. If you don't have electrical tape, you can cut a strip of duct tape in half so it's one inch (2.5 cm) wide and use that instead.

How to make a STETHOSCOPE



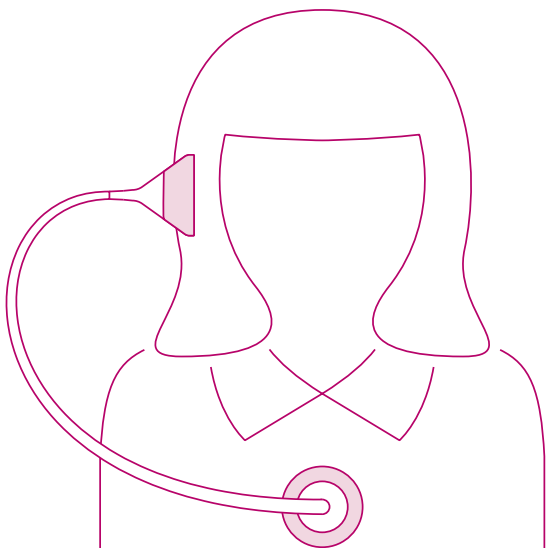
3 Stick the end of the funnel into a piece of clear, flexible plastic tubing.

- Find some clear, flexible plastic tubing that's wide enough to fit over the narrow end of the funnel.
- Measure and cut 24 inches (61 cm) of the tubing, then stick the narrow end of the funnel into the tubing.
- You can buy flexible plastic tubing from hardware stores, garden supply shops and the aquarium section of a pet store.
- If the funnel is still loose, secure it to the tubing with a strip of electrical tape.
- If the tubing is too small to fit over the end of the funnel, try it the other way around: poke the tubing through the inside of the funnel.



4 Add a second, matching funnel to the other end, if desired.

- The stethoscope will still work if you leave the second funnel off. It just depends on what you find more comfortable: holding a funnel over your ear or sticking a piece of tubing into it.
- If you choose to use a second funnel, you do not need to cover it with a balloon.



5 Use the stethoscope in a quiet room.

- Place the balloon-covered end over your heart (or someone else's heart), and the other end against your ear.
- If you used a second funnel, make sure it is touching your head; if you left the tube as-is, gently stick the end into your ear like an earbud. If the room is quiet enough, you should be able to hear the heart beating.
- If you can't hear the heart, do some jumping jacks for about a minute, then try again. If you're listening to someone else's heart, have them do the jumping jacks.
- A quiet room is important. Because this is a handmade stethoscope, it's not very strong or loud so a noisy room will drown out the heartbeat.