BASIC MEDICAL EXAMINATION
INSTRUMENTS AND ITEMS

Let’s discuss some of the common medical instruments and items used by healthcare professionals on a daily basis. These items are included in your medical kit.

1A. THE STETHOSCOPE
A French physician René Théophile Laënnec who worked in Paris at the beginning of the 19th century designed the first stethoscope. He was exploring the idea of listening to body sounds but could not hear much by pressing his ear against someone’s chest. Two children playing by tapping and listening at the two ends of a long piece of wood gave him the idea. He designed the first stethoscope - a wooden tube about 1 foot long with a bell-shaped opening at one end. The first stethoscope was shaped like a trumpet. The wider opening was placed against the chest of the patient, and the doctor listened through the smaller opening at the other end. Doctors occasionally still use this old-design stethoscope to check the heartbeat of an unborn baby.

B. THE MODERN STETHOSCOPE
The modern stethoscope consists of two earpieces at the end of two metal tubes, connected by flexible rubber tubes to a chest piece. The chest piece consists of a metal bell and a diaphragm (some stethoscopes have only the diaphragm part). The bell is best for listening to low-pitched sounds, and the diaphragm for identifying high-pitched sounds.

2. REFLEX HAMMER
A reflex hammer consists of a handle with a plastic or a rubber head. This instrument is designed to exert a momentary force on the tendon part of a muscle.
3. **THE BLOOD PRESSURE METER (SPHYGMOMANOMETER)**

The sphygmomanometer is a device used to measure blood pressure. It consists of the following:

- The cuff
- Rubber inflatable bladder covered by a material covering and Velcro strip
- Pressure meter
- Rubber tubing
- Bulb-like pump
- Pressure release valve

A SPHYGMOMANOMETER WORKS AS FOLLOWS:

By pumping up the rubber bladder with air when it is wrapped around the arm, the air becomes compressed. The compressed air directly compresses the main artery of the arm. The blood in the artery flows under pressure due to the pumping action of the heart. The pulsating blood in the artery “pushes” against the compressed air in the cuff around the arm and the air transfers this force to the meter.

A doctor measures blood pressure by observing the meter on the sphygmomanometer, while simultaneously listening with a stethoscope to the changing sounds produced by the blood flow in the compressed artery in the arm.

4. **EXAMINATION LIGHT (OTOSCOPE)**

Good lighting is a basic requirement when examining any region of the human body. An examination light consists of a power supply (e.g. batteries), a special light bulb and a switch mechanism.

An examination room requires good general lighting. In addition to this, an examination light increases the amount of light in the area being inspected.

A magnifying examination light also increases the detail of the area being inspected by enlarging the area.

The penlight examination set consists of a penlight as well as a special extension (speculum) for examining the ear. This converts the penlight into a simple otoscope.
5. **DIGITAL THERMOMETER**
A thermometer (temperature meter) is designed to measure temperature. The digital thermometer is a battery-operated device that electronically measures the temperature and displays it digitally. It is accurate to within one tenth of a degree Celsius.
In order to maintain a high level of aseptic technique, special thermometer covers or sleeves are supplied with the set. It is recommended that the thermometer be covered every time someone's temperature is measured. **Do not** use the digital thermometer to measure rectal temperature.

6. **URINARY TEST STRIPS**
Urinary test strips are plastic strips impregnated with various chemical indicators that change color when reacting with chemical substances in urine. One can estimate the levels of certain chemicals in urine by comparing the color of a test strip with a standard color chart. Disposable.

7. **SURGICAL MARKER AND RULER**
Surgeons use a surgical marker and ruler to plan certain surgical procedures. Structural landmarks or planned incision lines are carefully measured and marked. The ink used in the surgical marker is washable, biodegradable, and will not cause a tattoo to form.

8. **TONGUE DEPRESSOR**
A tongue depressor is a flat, disposable item made from plastic or wood with dimensions of about 15 x 2 x 0.1 cm (6 x 3/4 x 1/32 inches). Healthcare personnel use tongue depressors to facilitate the examination of the mouth and throat by retracting or depressing structures, e.g. the tongue and cheeks. Disposable.
9. **FACE MASK**
During talking, coughing, and sneezing, small droplets of saliva or nasal secretions form. These droplets contain numerous microorganisms. Healthcare professionals use face masks as a barrier to limit the spread of these potentially harmful microorganisms. A face mask also protects the healthcare professional from potentially harmful body secretions, e.g. blood, and has the additional benefit of limiting bad odors, e.g. a patient with bad breath (helpful for dentists). Disposable.

![](image1.png)

10. **EXAMINATION GLOVES**
Examination gloves serve as a two-way barrier to reduce the risk of transferring potentially harmful microorganisms between patient and doctor or other healthcare workers. A thorough washing and drying of the hands with soap and water is essential before putting on examination gloves. Different sized hands require specific sized gloves. Disposable.

![](image2.png)

11. **ANTI SEPTIC SWABS**
These swabs are small (5 x 5 cm or 2 x 2 inches) squares saturated with 70% medical alcohol and packed in sterile packages. Alcohol weakens or kills microorganisms and thereby reduces the risk of infection. A doctor or professional nurse will clean the skin with an antiseptic swab before piercing it with a needle. Disposable.

![](image3.png)

12. **Medical Files**
When you open the next 2 lessons you will see a medical file chart. Print out both of these-if possible print them out two-sided, like a book. You will use these medical files on a regular basis. You may always return and print out more if needed.

13. **Name Badge**
Put your name on your name badge. Wear this when working with patients.
**WARNINGS**

1. Use your medical instruments and disposable items only along the guidelines of the various practical projects.
2. The use of the instruments and disposable items supplied in this kit is strictly intended for educational purposes only, and not for any medical application whatsoever.
3. If you are allergic to latex, **DO NOT** use the gloves supplied in this medical kit. Ask your pharmacist to supply you with silicone gloves.
4. Do not use the alcohol swabs close to the eyes. Keep alcohol from getting into the eyes at all costs.

If you ordered your medical equipment through us, you have a nice bag to keep your items in. Please take special care of your medical supplies and put them away after each use. If you did not receive a medical bag through us, please purchase one (similar to any below) to keep your items organized and protected.