

# Basic Body Examination Practical

## Article to be checked

Check of this article is requested.

Suggested reviewer: Carmeljcaruana

## Basic Body Examination

### INTRODUCTION

**Basic body examination** is a primary procedure that must be performed by every physician before developing a diagnosis. This includes using methods such as measuring **blood pressure, BMI, and heart rate**.

This is especially important because by doing that, the doctor can take note of things that the patient might not be able to describe or forget to mention. Some of the clues may also be based on what the patient **feels** subjectively (**symptoms**) but others may be from what the doctor **observes objectively (signs)**. Examples of symptoms are fatigue, pain or nausea. Examples of signs are pale face, skin rash or an unstable gait. Both symptoms and signs are extremely crucial for the doctor's diagnosis. It is also essential because it will help give the doctor a better idea of what he/she might be working with and would eliminate other diagnoses that do not fit with the patient's physical examination. This information then adds up together with the data collection retrieved from laboratory work and radiology studies to develop a diagnosis. Before technology was more advanced physical examination was even more critical because that's what the final diagnosis depended on.

### IMPORTANCE

Basic body examination is crucial in every specialty of medicine. In any specialty, the physician must be able to conduct it in a bid to make sure the patient does not have any serious pathologies that may cause harmful consequences during prescribed procedures or to evaluate the intensity of treatment.

The main significance of basic body examination lies in diagnostics. Results of the procedure help to indicate which additional tests must be carried out. In addition, it is a common way of monitoring the patient's condition at hospitals. It checks those signs, which are first to show that something has gone wrong during the treatment. Also, it can be carried annually in a bid to notice the first symptoms of disease, if it occurs, and to be able to detect it at an early stage hence increasing the probability of successful therapy. However, some statistic researches have been carried, that show this method of prevention is ineffective on its own.

### BRIEF LITERATURE REVIEW

The **advantage** of basic body examination is how by carrying out simple measurements you can develop a better overall picture of a person's state of health. When comparing to other examinations run by the physicians, the equipment required for the basic body examination is affordable even for a person that wants to perform the basic body examination away from the clinic of a physician.

**Basic body examination works** in a way that includes measuring the patient's **heart rate** at rest and after exercise, **BMI (body mass index), blood pressure, and lung function**.

Simplicity of the examination brings some **disadvantages**. The BMI takes only the height and the weight into consideration but leaves out the composition and structural differences of the patient's body thus a patient with a large muscle mass might get a value of 25 and over, which would incorrectly indicate an unhealthy relation between height and body mass. Also the values of the patient's height and weight might vary when measured at different time points of the day, since the patient can be as much as 2 centimeters taller and 3 kilograms lighter in the morning than in the evening. Blood pressure measurement might not give reliable results if the patient has followed an abnormal diet for him/her before the examination or the measurement situation might alter the patient's blood pressure.

One of the **risks** regarding the examination is that the patient might go through some pain while doing it, for example during the measurement of the blood pressure when the blood pressure cuff is wrapped snugly around the upper arm which can cause the feeling of tightness around the arm. Another risk is the need to quickly raise the heart rate during measurement of heart rate under exercise which may cause a problem for a patient who hasn't done any strenuous activity for a long period of time. And the patient should also be careful while checking the pulse at the location of the carotid artery, especially at an age older than 65. If the pressing of the artery is too hard, the person may become lightheaded and fall.

Because of frequent yearly body examination that can lead to abnormal or incorrectly measured test results, as mentioned before, the examination might cause some **ethical issues** concerning the patient experiencing unnecessary worry and stress because of the results. It may also lead to an extreme reaction by the patient by for example an unhealthy loss of weight which can lead to anorexia, an eating disorder characterized by low weight, fear of gaining weight, and a strong desire to be thin, resulting in food restriction.

## PROCEDURE

### 1. Body weight measurement using a **weight scale**

The patient should step on the weight scale and his/her body weight shown on the scale is recorded in kg.

### 2. Height measurement using a **stadiometer**

After the patient gets on the stadiometer, the examinee should adjust the sliding horizontal headpiece to rest on top of the patient's head.

The height can then be measured by reading off the ruler where the headpiece rests.

### 3. **BMI calculation**

Body Mass Index (BMI) is calculated by applying the weight and height measured in the previous steps into the metric BMI formula:

$$\text{BMI} = \text{weight (kg)} / \text{height}^2 (\text{m}^2)$$

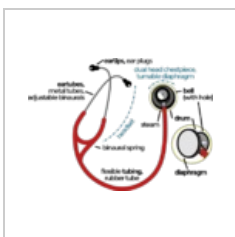
### 4. Blood pressure measurement using a manual **sphygmomanometer**



A manual sphygmomanometer is composed of an inflatable cuff, a measuring device (a mercury manometer), and a bulb that inflates the cuff.

- Place the patient's arm on a table so that the arm is at the same level as the heart.
- Wrap the inflatable cuff around the patient's upper arm so that it covers the brachial artery (which can be located by palpation at the crease of the arm).
- Place the stethoscope's bell over the brachial artery just below the edge of the cuff and start pumping the cuff bulb.
- Continue pumping the cuff bulb until the pulse sounds can no longer be heard. At this point, start deflating the cuff slowly.
- Record the pressure at which the first pounding sound is heard (the systolic blood pressure)
- Record the pressure at which rhythmic sounds stop (diastolic blood pressure)

5. **Stethoscope** – a tool that helps doctors and nurses listen to the internal organs of patients, which is crucial in detecting any abnormalities.



- Ask the patient to relax, sit straight and to breathe normally (in case you can't hear anything through the stethoscope ask the patient to take deep breaths)
- Use the diaphragm of the stethoscope to listen to patients lungs. Listen to the upper chest region, midclavicular line of the chest and the lower chest region. Do this on both lungs and from both sides (front and back). This way you will listen to all of the lobes of the patient's lungs.

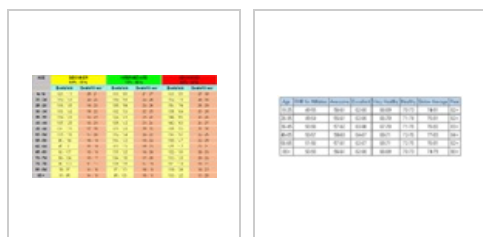
- Listen carefully to the sounds in order to make a diagnosis.
- Normal breathing sounds clear, like someone is blowing air into a tube.

There are four types of abnormal breathing:

- *Wheezing* – a high pitched sound when a person exhales and sometimes even during inhalation
- *Stridor* – similar to wheezing, a high pitched sound heard most often when the person is inhaling
- *Rhonchi* – sounds like snoring
- *Rales* – sounds like some kind of rattling inside the lungs

## 6. Pulse Oximeter

- First measure the resting pulse. Ask the patient to sit and relax. Place the probe on the patient's finger and start up the device.
- As the patient breathes in and out record the pulse rate for both inhalation and exhalation. Make these recordings 3 times.
- Next, ask the patient to perform some sort of physical exercise (e.g. squats or jumping jacks). Let the patient do 20 repetitions of this exercise (in case the person cannot do 20, ask them to do as many as they think they can).
- Record the pulse rate right after the exercise just like previously.
- For the last measurement, let the patient rest for 3 minutes and then perform the measurements again.



*The beginner, intermediate and advance labeling on the chart suggest the targeted heart rate during an exercise regarding the level of fitness.*

## CONCLUSION

A basic body examination is critical for the diagnostic process and provides important information regarding the patient's health-care issues. Particularly important for middle-aged and elderly patients, these exams check for chronic diseases or infections and can help find problems at an early stage. The exam includes checking vital signs and health history of the patient, visual and physical exams to check for any abnormalities. For example, the presence of lumps or lesions, fever, muscle weakness or poor reflex response point out a possible health problem and are treated accordingly. Additionally, screening tests are performed if needed depending on the age of the patient.

In the future, these exams will help health care professionals to point out abnormalities or risk of chronic diseases and treat them at an early stage, thereby ensuring healthier lives for the patients.

## Works Cited

Campbell, Earl W., and Jr. "The Physical Examination." Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd Edition., U.S. National Library of Medicine, 1 Jan. 1990, [www.ncbi.nlm.nih.gov/books/NBK361/](http://www.ncbi.nlm.nih.gov/books/NBK361/) (<http://www.ncbi.nlm.nih.gov/books/NBK361/>).

"Physical Examination: Purpose, Preparation, and Procedure." Healthline, Healthline Media, [www.healthline.com/health/physical-examination](http://www.healthline.com/health/physical-examination) (<http://www.healthline.com/health/physical-examination>).

Eheintl.com. "Importance of Regular Physical Exams." EHE, 21 July 2017, [eheintl.com/importance\\_of\\_regular\\_physical\\_exams/](http://eheintl.com/importance_of_regular_physical_exams/) ([http://eheintl.com/importance\\_of\\_regular\\_physical\\_exams/](http://eheintl.com/importance_of_regular_physical_exams/)).

BSN, Mary-Beth Moriarty RN. "Heart and Breath Sounds: Listening with Skill." Modern Medicine, 1 May 2002, [www.modernmedicine.com/modern-medicine/content/heart-and-breath-sounds-\\_listening-skill?page=full](http://www.modernmedicine.com/modern-medicine/content/heart-and-breath-sounds-_listening-skill?page=full) ([http://www.modernmedicine.com/modern-medicine/content/heart-and-breath-sounds-\\_listening-skill?page=full](http://www.modernmedicine.com/modern-medicine/content/heart-and-breath-sounds-_listening-skill?page=full)).

Hudák, R., Kachlík, D., Volný, O., & Cizek, B. (2016). Memorix anatomy. Wrocław: Edra Urban & Partner.

"Taking a Pulse (Heart Rate)." WebMD, WebMD, [www.webmd.com/heart/taking-a-pulse-heart-rate](http://www.webmd.com/heart/taking-a-pulse-heart-rate) (<http://www.webmd.com/heart/taking-a-pulse-heart-rate>).

"Body Mass Index." Wikipedia, Wikimedia Foundation, 12 Dec. 2017, [en.wikipedia.org/wiki/Body\\_mass\\_index](http://en.wikipedia.org/wiki/Body_mass_index) ([http://en.wikipedia.org/wiki/Body\\_mass\\_index](http://en.wikipedia.org/wiki/Body_mass_index)).