

Physical exam

A **physical examination** is a basic procedure in the examination of a patient. The physical examination is performed only with the help of one's own senses and relatively simple tools, such as a stethoscope, a spatula or a neurological hammer. The physical examination is governed by the so-called *principle of the four "pés"*:

- aspect (*aspect*),
- to feel (*palpation*),
- p knock (*percussion*),
- listening (*auscultation*).

However, this list is not complete, because sometimes, rather to emphasize the importance, the examination "*per rectum*" is mentioned as the "fifth step". The sense of smell can sometimes provide important information, e.g. the smell of acetone from a patient's mouth in diabetic ketacidosis or the so-called *foeter hepaticus* in liver failure.

View

The visual examination of the patient consists in a careful evaluation of all changes visible to the eye. For a quality aspect, it is necessary to perform this examination under the right conditions, which are in particular:

- suitable position for both the patient and the doctor,
- sufficient lighting that does not distort colors,
- undressing the patient so that some changes do not escape attention.

We evaluate the overall appearance of the patient by aspect, paying more attention to the individual examined areas. Part of the assessment of the overall appearance is the assessment of gait and body posture, nutritional status and any noticeable deviations in behavior, e.g. agitation or compulsive movements. When looking at a specific area, we evaluate the size, configuration, symmetry, color of the skin and the nature of the skin adnexa. Scars, should not escape attention either, especially for larger scars we search for their origin (this will then be part of the personal history). We also evaluate spontaneous movements in the given landscape caused by, for example, breathing or the pulsation of superficial arteries. Skin changes (efflorescence) should be described and evaluated.

Feel



Palpation of the abdomen of a small child

Examination of the patient by palpation is usually carried out in two stages **Surface palpation** consists in evaluating surface structures with moderate pressure, with **deep palpation** structures located deeper in the patient's body are evaluated with greater pressure. For a successful examination, warm and dry hands and trimmed nails are a matter of course, because in addition to the tactile sensation, the patient's reaction is also evaluated - a reaction to a cold hand or digging with a nail can then be mistakenly evaluated as a painful palpation.

During the palpation examination, the following is evaluated:

- temperature, tension and moisture of the skin,
- the size, shape, surface, consistency and mobility of subcutaneous formations,
- some intra-abdominal organs,
- the presence of pathological formations,
- palpation soreness.

Percussion

A pat-down examination evaluates the character of the tissues located beneath the surface of the body. It is often used to determine the boundaries of two environments with different properties, but often the very nature of the sound will indicate the nature of the ongoing pathological process. Depending on the method of execution, a distinction is made between direct and indirect tapping.

Direct tapping means that the examiner taps the patient directly, e.g. with his own finger. It is a less common procedure, today it is used only when tapping the skull and when tapping the knee, possibly as tapotement.

Indirect tapping means that the examiner places another object between the tapping finger, usually the finger of the other hand. It is properly tapped by (if the examiner is right-handed) placing the third finger of the left hand on the examined area and striking the second joint of the attached finger perpendicularly with the third finger of the

right hand. The stroke should be short and flexible. If a boundary is sought, e.g. the boundary of the liver or the boundary of an effusion, the left hand is placed so that the third finger is directed parallel to the expected course of the boundary being sought.

The following patency findings are distinguished:

- **tap full clear** – over healthy lung tissue,
- **hypersonic (box) tap** – over pathologically ventilated tissue, typically pneumothorax or pulmonary emphysema, is loud, deep, long
- **tympanic tap** – e.g. over gas filled stomach or intestines,
- **differentiated tympanic percussion** – normal percussion over the entire abdomen, small differences correspond to the different presence of gas,
- **dark tap** – over airless tissue, for example over muscles, liver, heart effusion,
- **darkened tap** – between a clear and a dark sound (in case of inflammatory infiltration of the lungs).

Listening



Auscultation of the heart in a young child

Listening (auscultation) is an examination method based on the evaluation of sound phenomena resulting from the activity of certain organs, such as the heart, lungs or intestines. Depending on the listening method, a distinction is made between:

- **direct listening** – the ear is placed on the surface of the examined body (practically not used),
- **indirect listening** – a phonendoscope or stethoscope is used for listening.

Listening to the heart

The listening places of the heart valves do not correspond to their placement, sound phenomena are propagated in the places where the sound waves have traveled through the blood column. Listening locations:

- aortic valve – 2nd intercostal parasternal right,
- pulmonary valve – 2nd intercostal parasternal left,
- tricuspid valve – above the lower sternum at the lower left border,
- mitral valve – in the area of the tip.

In addition to these places, we also listen above the remaining precordium. The sound depends on the place of origin, but also on the way and to what extent the chamber presses against the chest wall.

Auscultation of the lungs

Listening to the lungs (half-heel) - a guide to recordings on the network

Listening to murmurs over the great vessels

Listening on the belly

Links

Related articles

- General examination of the patient - position and mobility; standing and walking
- General examination of the patient - body constitution (habitus), state of nutrition
- General examination of the patient - skin of the skin adnexa
- Physical examination of the abdomen
- Physical examination of the lungs
- Physical examination of the gallbladder

References

- CHROBÁK, Ladislav. *Propedeutics of internal medicine*. 2nd edition edition. Grada, 2003. pp. 195. ISBN 80-247-0609-1.