



Stool examination

The signification of the gut, why and when is a stool examination appropriate.

Dear patient,

Your doctor has given you a stool specimen container, together with a specimen covering note and transport envelope for a stool specimen examination. Your doctor has also provided you with a separate information sheet, in which the steps that are necessary for a “technically” correct specimen collection are listed (“The 10 golden rules for correctly collecting and transporting stool specimens”).

It may seem somewhat odd to you to be required to collect such “obnoxious” material for examination purposes. For this reason, we should like to explain briefly to you the background and reason for stool examinations:

What significance does the gut have?

The gut is much more than just a digestive tube. The gut is also our largest area of contact with the environment. When completely spread out, its surface amounts to 400-500 m² (!), which is considerably larger than surface of the lung (approx. 100 m²) and of the skin (approx. 2 m²). Since the gut requires a certain degree of permeability for the uptake of nutrients, this large surface carries the risk of harmful substances or pathogens entering our body via the gut, e.g. with the food. To prevent this, the body has developed some defence barriers. Apart from the gut wall, which prevents the passage of these substances like a protective firewall hinders fire, it is primarily the various defence cells of our immune system, which are involved in this permanent defence of the body. The vast majority of the body's own defence cells is therefore found in the gut. Furthermore, the human body is also reliant upon other help: a large number of bacteria colonise the gut from the time of birth and accompany us throughout our lifetime as “our body's own” gut flora. With a total of approx. 10¹⁵ (i.e. a 1 with 15 noughts, so written in full: 1,000,000,000,000,000), they even surpass the entire number of our body's cells by 10-100 fold. Without these tiny helpers, which are only visible under the microscope, humans would not be capable of surviving, because they protect us from “foreign” pathogenic bacteria, fungi and viruses.

Why stool examinations?

The gut's barrier is disturbed in a number of diseases, with the consequence that pathogens can gain a foothold in the gut and increased amounts of harmful substances can enter our body, leading to the appearance or intensification of clinical symptoms.

Your doctor needs to “take a look inside your gut”, in order for him to be able to address such disturbances in the course of his treatment. The simplest way of forming a picture of the state of the gut flora and of the gut is the stool examination. Under the trade name enterosan®, we have specialised in such “micro-ecological” stool examinations.

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When is a stool examination appropriate?

A stool examination is not only appropriate in the presence of digestive problems, i.e. in cases with disturbances which quite plainly originate from the gut. Given its enormous contact area and the large number of defence cells in the gut, it also plays a role in many other disorders. A stool examination is therefore particularly recommended for the following ailments:

- **Allergic disorders/intolerances**
(e.g. hay fever, food allergies / intolerances, neurodermatitis, asthma)
- **Immune deficiency**
(e.g. increased susceptibility to infection, chronic fatigue syndrome, various skin disorders, fungal disorders, cancer aftercare)
- **“Digestive disorders”/irritable bowel syndrome**
(e.g. diarrhoea, constipation, flatulence)
- **Chronic inflammatory bowel diseases**
(Crohn’s disease, ulcerative colitis)
- **Bowel cancer screening**

Why may additional stool examinations be necessary?

Assessment of the bacterial flora in the stool is often not enough to reach a diagnosis. Additional parameters in the gut, such as the digestive function of the pancreas or the liver, the state of the gut mucosa and the ability of the defence cells in the gut to function, need to be taken into consideration. Ultimately, these factors significantly affect the gut flora.

A suspected fungal colonisation of the gut may also render necessary the additional examination of swabs taken from the oral cavity, the throat or the vagina, because these regions of the body are in close proximity to the gut.

Is it possible to do a stool examination in infants?

For this purpose, enterosan® *Junior* is available as a special diagnostic programme. Stool flora can also be examined in infants as early as the second week of life. Particularly in babies, colonization of the gut plays an important role for their healthy development. Disturbances of gut flora become apparent here in the form of skin problems, increased susceptibility to allergies and infection and (three-month) colic, among other things.

Whether a stool examination in individual cases makes sense, can only decide your therapist. Please understand that as a diagnostician laboratory we can not and should not give appropriate recommendations to patients.