

News in Brief

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Lactose intolerance: diagnosis, symptoms, treatment

Lactose intolerance is probably the most common genetically determined disease worldwide and the commonest cause of symptoms in the gastrointestinal tract. Worldwide, about 80 to 90% of people are affected by lactose intolerance, i.e. an inability to tolerate lactose, with a noticeable north-south divide. Thus, most people in northern Europe and America (Caucasians) are able to digest lactose. In Germany, the latest estimates are that as many as 15 to 25% of the population suffer from the disease. Lactose intolerance is caused by the absence or inadequate production of the digestive enzyme lactase. If there is no lactase or too little of the enzyme is produced, when lactose enters the small intestine its breakdown products cause the typical **cardinal symptoms: diarrhoea, flatulence, nausea and abdominal pain.**

The symptoms, which show great individual variations in intensity, but are sometimes severe, occur just twelve to 30 minutes or so after consumption of the lactose or lactose-containing products and considerably impair many sufferers' quality of life. Depending on the severity of the condition, sufferers have to switch to a diet that is lactose-free (0 g/day) or lactose-reduced (8-10 g/day). The condition can readily be controlled in this way. However, if the appropriate diet is followed (no dairy products), care must be taken to ensure that calcium is obtained from other sources. As regards lactase deficiency, a distinction is made between primary and secondary lactase deficiency. Primary lactase deficiency, the most common form, is genetic. Secondary lactase deficiency occurs

as a result of various gastrointestinal conditions such as Crohn's disease, after gastrointestinal operations and above all with coeliac disease.

Genetic analysis is now available as a means of clearly identifying a genetic predisposition for lactose intolerance. The genetic polymorphism is detected by means of PCR and then sequencing. EDTA blood is required for the tests. The sensitivity and the specificity of genetic analysis are 100%.

Anaesthetic preparation by the general practitioner: what laboratory values should be determined?

There is no consensus as to from which age laboratory values should routinely be determined in healthy patients in preparation for an anaesthetic. If the planned procedure is a major operation that may be associated with haemodynamically relevant blood loss (with a more than 10% likelihood of a transfusion), testing of both the CBC and the coagulation values is recommended. For patients with cardiovascular, nephrological or systemic diseases, the following laboratory values can be used for the preoperative assessment:

CBC: Haemoglobin, haematocrit, platelets

Electrolytes: Sodium, potassium

Protein: Albumin

Liver parameters: GOT, GPT

Coagulation values: PTT, Quick

Fasting blood glucose

If they are to reflect the patient's current condition, the laboratory results should generally be no more than four weeks old and there should have been no change in the patient's general condition in the meantime.

Skin-hair-nail profile

About 40% of all women and 44% of all men suffer from hair loss. The state of baldness (alopecia) is reached when 60% of the hair is lost. It should be borne in mind that the term hair loss is used only if more than 100 hairs fall out every day and if there is a clear difference between the number of hairs lost and the number of hairs that grow back.

Healthy hair growth, but also the health of the skin and finger nails, depends on several factors, among them thyroid function. The growth and differentiation of the skin and appendages are influenced by the thyroid hormones. Thus, brittle finger nails, hair loss or a change in sweat production can be associated with both hyper- and hypothyroidism.

Procalcitonin (PCT) – use the PCT test for a clear decision on lower respiratory tract infections

A test for procalcitonin (PCT) can be used to establish whether a respiratory tract infection is bacterial in origin or whether a patient needs antibiotics. The test can also be used to determine the duration of antibiosis. Procalcitonin (PCT) is not normally detectable in blood, however, the PCT concentration rises with bacterial infections. Infections caused by viruses and fungi, on the other hand, have no effect on PCT excretion. The course and severity of an infection can also be checked with this test. Thus, in the ProCAP study in patients with severe pneumonia receiving a PCT-controlled therapy, the duration of antibiosis was reduced from 13 to 6 days.

In summary, the test offers the following advantages:

- Reliable decisions for antibiotic therapy
- Up to 72% fewer prescriptions for antibiotics
- Fewer antibiotics – less resistance

Vitamin D – an underrated parameter?

New studies demonstrate the importance of vitamin D in the prevention of disease.

This is based on the realization that not only renal tubule cells, but different cell types of various tissues are able to convert inactive 25-hydroxy-vitamin D circulating in the blood into active 1,25-hydroxy-vitamin D. Vitamin D thus seems, in addition to its classic role in bone metabolism, to have a further function in a large number of different diseases. Low concentrations of vitamin D may be accompanied by an increasing risk of chronic diseases, malignancies and autoimmune diseases, right through to cardiovascular disorders.

In the Health Professionals Follow-up Study, for example, the risk of myocardial infarction in men with vitamin D deficiency (25-OH vitamin D < 15 ng/ml) was 2.4 times greater than in men of the same age with a good supply of the vitamin (levels over 30 ng/ml) (Arch Intern Med 168, 2008, 1174).

A good supply of vitamin D is also important in the prevention of bowel cancer. With a serum concentration of ≥ 33 ng/ml the incidence of colon cancer was half as high as with less than 12 ng/ml (Am J Prev Med 32, 2007, 21).

Since Germany is a vitamin D deficiency area (in the months December to April about 60% of people have vitamin D levels of < 20 ng/ml), substitution with vitamin D (800-2000 IU/day) is therefore recommended in patients with levels of under 20 (30) ng/ml. The desirable target range is 30-70 ng/ml.