GutScreen

Analysis of urinary organic metabolites to assess intestinal function

The flora, or microbiota, is the set of microorganisms that inhabit the gastrointestinal tract, in a symbiotic relationship with the human body. The vast majority of these bacteria are not harmful to health, and many are beneficial.

There are two types of intestinal flora: resident and transitory. The former permanently colonises the intestinal mucosa and is made up of well adapted, innocuous microorganisms. The latter intermittently colonises the intestine and is made up of potentially pathogenic and non-pathogenic microorganisms.

Intestinal flora, health and disease

The intestine provides a habitat and nutrition to resident flora, while the flora participates in functions that are beneficial for the body. For example, it prevents invasion by pathogenic microorganisms, improves intestinal cell function, strengthens the immune system, synthesises vitamins and proteins, stimulates intestinal muscle movements, improves diarrhoea- and constipation-related processes, reduces feelings of flatulence and intestinal discomfort and inhibits intestinal inflammation, among others.

The intestinal flora may vary from one individual to another since it depends on intrinsic factors, such as intestinal secretions, and extrinsic factors, such as age, gender, diet, lifestyle, immune status, intestinal transit, antibiotics, anti-inflammatory agents, etc.

Alteration of the normal resident flora may have significant harmful effects on health.

Alteration of the intestinal flora

Qualitative and quantitative changes in the metabolic activity and local distribution of intestinal flora are involved in the pathogenesis of numerous diseases. These include systemic diseases (metabolic syndrome, cardiovascular disease, peripheral vascular disease, asthma and atopy, neurological disorders, drug metabolism disorders, etc.) and gastrointestinal diseases (inflammatory bowel disease, biliary disease, etc.).

Alteration of the intestinal flora is also linked to increased **intestinal permeability,** i.e. alteration of the functions of the intestinal mucosa that acts as a barrier to the passage of compounds of a certain size. Increased intestinal permeability leads to increased passage of unwanted substances into the bloodstream. This may give rise to chronic inflammatory and immune disorders that may be local or systemic.

GutScreen

The **GutScreen** test analyses 17 bacterial metabolites and 5 fungal metabolites:

Bacterial Indicators		Fungal Indicators
Para-cresol	4-OH-phenylactate	Arabinose
Benzoate	3-OH-phenylpropionate	Arabinitol
2-OH-benzoate	Tricarballylate	Tartarate
4-OH-benzoate	Indole-3-acetate	Citramalate
Hippurate	4-OH-hippurate	Beta-ketoglutarate
Phenylactate	Hydrocaffeate	Furan-2-carboxylate
Phenylacetate	Phenol	Furan-2,5-dicarboxylate
2-OH-phenylacetate	Indican	3-OH-3-methyl-glutarate
4-OH-phenylacetate	D-lactate	

The presence of **bacterial metabolites** may indicate proliferation of:

- Putrefaction bacteria (genus *Clostridium*)
- Fermentation bacteria (genus *Lactobacillus*)

The presence of **fungal metabolites** may indicate proliferation of yeasts from the genus:

- *Candida* — low resistance
- *Candida albicans* — moderate resistance
- *Geotrichum* — high resistance

The analysis identifies and quantifies the above-mentioned metabolites that are eliminated through urine and determines the presence of pathogenic microorganisms.

An imbalance in the intestinal flora may be corrected through dietary measures that include prebiotics and probiotics or specific nutritional supplements that should be prescribed by a specialist.

Indications

The **GutScreen** analysis is indicated in:

- People wishing to proactively manage their health by optimising their gastrointestinal health
- Patients with gastrointestinal disorders
- Patients with systemic inflammatory and/or immune diseases
- Patients with other chronic systemic diseases linked to intestinal dysbiosis.

Requirements

It is not necessary to fast or prepare in any special way.

Sample: Specific kit provided by the laboratory. Morning urine with specific preservative. Following sampling instructions.

Documentation: General test requisition form.