**Example of a GastroPanel report:**

**Patient Data**

**Name**: 
**Date of birth**: 15.2.1944  
**Age**: 71

**Eradicated**

*Use of PPI: Temporarily (pause 7 days)

**Acidic symptoms**: Continuously

**Use of NSAIDs**: No

**Assay Data**

**Collacted**: 26.8.2015

**Analysed**: 28.8.2015

**Pepsinogen I (PGI)**

26.3 μg/l  
30 - 140 μg/l

**Pepsinogen II (PGII)**

4.1 μg/l  
3 - 15 μg/l

**Gastrin-17b (G-17b)**

13.8 pmol/l  
1 - 7 pmol/l

**H. pylori antibodies (HPAB)**

28.8.2015

**Patient Data**

**Last First name**: 
**26.8.2015**

**Countinously**

**Temporarily (pause 7 days)**

**No**

**71**

**Interpretation**

The results indicate atrophic gastritis (loss of gastric cells) in the corpus due to a past Helicobacter pylori infection, or an autoimmune disease. Gastric acid secretion is decreased. Atrophic gastritis (loss of gastric cells, “no gastric acid”) is a significant risk factor for gastric cancer. Hence gastroscopy is recommended. The carcinogenic acetylcholine forming in an achlorhydric stomach is one possible cause of gastric and oesophageal cancer. The final diagnosis can be decided after gastroscopy.

**Test and create your own GastroPanel report at www.gastropanel.com**

**Biohit Oyj**

Laippatie 1 • FI-00880 Helsinki • Finland

Tel: +358 9 773 861  
info@biohit.fi • www.biohithealthcare.com

GastroPanel worldwide.

**Biohit Oyj**

Laippatie 1 • FI-00880 Helsinki • Finland

Tel: +358 9 773 861  
info@biohit.fi • www.biohithealthcare.com

GastroPanel report by the GastroSoft<sup>®</sup> helps interpret the results.

---

**More information about GastroPanel**

**Literature**


---

**GastroPanel test for the first-line diagnosis of dyspepsia**

A biomarker panel from a blood sample, which measures the structure and function of stomach mucosa.

- Finds patients with a healthy stomach
- Detects reliably gastritis and *H. pylori* infection.
- Detects the often asymptomatic atrophic gastritis, with or without of *H. pylori* infection.
- Gives accurate information about gastric acid output.
- Discloses the subjects at increased risk of gastric cancer and peptic ulcer.
- Helps evaluating the risk for malabsorption of vita min B12, calcium (osteoporosis), iron, magnesium, zinc and some medicines.
- With GastroPanel, unnecessary gastroscopies will be avoided.

**Risks associated with atrophic gastritis:**

- **Gastric cancer** (corpus and/or antral atrophy)
- **Malabsorption of vitamin B12, calcium, magnesium, zinc and some medicines.**
- **GastroPanel** worldwide.

**With GastroPanel, unnecessary gastroscopies will be avoided.**

**Stomach health test from blood sample**

- **A reliable means to differentiate healthy and non-healthy stomach**
- **Helps detecting patients who need further examinations**
- **Easy to perform in association with other blood tests, a 4-hour fasting is sufficient**

---

**Biological basis for GastroPanel**

- **Gastrin-17b (G-17b)**
- **PGI/PGII**
- **Pepsinogen I (PGI)**
- **Pepsinogen II (PGII)**
- **H. pylori antibodies**
- **Antigens from Helicobacter pylori infection**

**Clinical usefulness**

- Discloses the subjects at increased risk of gastric cancer and peptic ulcer.
- Helps evaluating the risk for malabsorption of vita min B12, calcium (osteoporosis), iron, magnesium, zinc and some medicines.
- With GastroPanel, unnecessary gastroscopies will be avoided.

**Risks associated with atrophic gastritis:**

- **Gastric cancer** (corpus and/or antral atrophy)
- **Malabsorption of vitamin B12, calcium, magnesium, zinc and some medicines.**
- **GastroPanel** worldwide.

**Helicobacter pylori infection** is an independent risk factor for both gastric cancer and peptic ulcer disease.

Over 1 000 000 patients have been tested with GastroPanel worldwide.
Helicobacter pylori only infects the gastric mucosa. The infection is usually acquired in childhood and causes an inflammation (gastritis), which, if untreated, becomes chronic and life-long. The infection is common particularly among elderly people. In many infected persons, the gastric mucosa becomes atrophic over the course of decades. Gastritis and atrophy can increase the risk of various diseases (stomach cancer, duodenal ulcer, peptic ulcer) and malabsorption of vitamin B12, iron, calcium and magnesium. Antibody level exceeding 30 EIU* indicates a probable Helicobacter infection.

Pepsinogen I (PGI)

The serum levels of pepsinogen I reflect both the structure and function of stomach corpus. When the corpus becomes atrophic, pepsinogen I concentration in the blood falls under 30 μg/l.*

Pepsinogen II (PGII)

The concentration of gastrin-17 in the blood (fasting concentration) is an indicator of the structure and function of the stomach antrum. Biohit’s monoclonal antibody measures only the level of amidated gastrin-17 peptide, which has a specific receptor only in parietal cells. Gastrin-17 is secreted solely by the G cells in the antrum. It accelerates the secretion of hydrochloric acid in the parietal cells of the corpus. A gastrin-17 level above 7 pmol/l usually indicates an anacidic stomach (e.g. the patient is on PPI medication or has an atrophy limited to the corpus). As the acidity (pH < 2.5) of stomach contents increases, gastrin-17 level in the blood falls. The gastrin-17 level also falls in atrophic antral mucosa, since the G cells disappear. A low level* of gastrin-17 can therefore indicate either an atrophy of the antral mucosa or an increased acid output in corpus.

Pepsinogen I/Pepsinogen II ratio

The pepsinogen I/pepsinogen II ratio falls markedly (< 3)* when the gastric corpus is atrophic.

Basal Gastrin-17 (G-17b)

To differentiate between antral atrophy and increased acid output, gastroscopy can be performed, or gastrin-17 response can be measured after protein stimulation. A low level of stimulated gastrin-17 (< 3 pmol/l*) can indicate atrophic gastritis in the antrum.

The GastroPanel examination measures four biomarkers in a fasting blood sample: Helicobacter pylori antibodies, pepsinogen I and II and amidated gastrin-17.

Helicobacter (H. pylori) IgG antibodies

Helicobacter pylori only infects the gastric mucosa. The infection is usually acquired in childhood and causes an inflammation (gastritis), which, if untreated, becomes chronic and life-long. The infection is common particularly among elderly people. In many infected persons, the gastric mucosa becomes atrophic over the course of decades. Gastritis and atrophy can increase the risk of various diseases (stomach cancer, duodenal ulcer, peptic ulcer) and malabsorption of vitamin B12, iron, calcium and magnesium. Antibody level exceeding 30 EIU* indicates a probable Helicobacter infection.

Stomach specific biomarkers

The GastroPanel examination measures four biomarkers in a fasting blood sample: Helicobacter pylori antibodies, pepsinogen I and II and amidated gastrin-17.

Healthy stomach mucosa

Healthy stomach mucosa, patient assesses no hypersalivatic

Healthy stomach mucosa, high acid output is likely

Short (4-18 day) pause in PPI treatment

Superficial, non-atrophic H pylori (Hp) gastritis

Atrophic gastritis in the corpus

Atrophic gastritis in the antrum

Atrophic gastritis

No need for gastroscopy

No need for gastroscopy

No need for gastroscopy; GERD or NERD conceivable

PPI and PGI need more time the gastric turn normal

Eradicate Hp and consider gastronomy if symptoms

The GastroPanel report contains a more detailed interpretation.

* GastroPanel reference values may be subject to changes following new clinical trial data.