

**HPU-test®**

Patient: Sim, Sabin
Cavendel 42
CH-7408 Cazis
United Kingdom

Date of birth: 28-11-1989

Code: 626570

Referentie nr.: Sim, Sabin
Cavendel 42
CH-7408 Cazis
United Kingdom

Date	5-12-2025	Value	Reference value
Hemopyrrollactamcomplex	1,17	< 1 µMol/L	
24 Hr. Volume	1500	1100 - 2100 ml	
Total amount of HPL excreted	1,75	Up to 1.4 µmol/24 hr.	

Explanation:

The HPU test measures the amount of haemopyrrollactam complex in the urine. The abbreviation corresponds to haemopyrrollactamuria. Patients with the metabolic disorder HPU excrete the haemopyrrollactam complex together with other pyrroles in the urine. HPU is a genetically determined disorder in the haem synthesis. The key focus is on a lack of the active form of vitamin B6 (pyridoxal-5-phosphate). This deficiency causes a double effect. On the one hand, it disrupts the biochemical processes in which vitamin B6 is involved, and the absorption of zinc, manganese and chromium is also greatly reduced. HPU is therefore defined as a lack of pyridoxal-5-phosphate that cannot be compensated for with food.

Interpretation of HPU-Test

Results from this test are divided into:

Value between 0.00 - 0.85 µMol/24 hours **HPU negative**
Value above 0.85 µMol/24 hours **HPU positive**

HPL was determined with the fulfillment of the GLP standard. If the result of the HPU urine test is more than 0.85 µmol/24 hours, treatment should be given.

Value impact

The concentration of HPL can be affected by chemical substances, but also by food. The highest concentration of HPL is mainly found after a hot meal. The following diseases can affect the result to a lesser extent: alcoholism, hyperthyroidism (increased activity from the thyroid gland) and active mononucleosis/kissing disease (infectious disease with swollen lymph glands), pernicious anemia, Bartter syndrome, cirrhosis of the liver, Crigler-Najjar disease, Gilbert's disease, hepatitis, spherocytosis, malaria, sickle disease, shortly after a heart attack, psychological stress or shortly after an operation or accident.

HPU can be present with various symptoms:

People with HPU have greater fluctuations in blood sugar levels. When blood sugar levels are low, the adrenal glands are activated to produce adrenaline. The rise in blood sugar levels occurs through the breakdown of amino acids (the building blocks of proteins) into glucose. This reaction is due to reduced glycogen production. Enzymes involved in the build-up and breakdown of glycogen are stores for active vitamin B6 (pyridoxal-5-phosphate). Glycogen is mainly produced in the liver and muscles. There is an interaction between P5P and these enzymes. P5P stabilizes the enzymes and more glycogen is formed

and broken down faster. People who do not have HPU have their blood sugar corrected with glycogen. Unnecessary activation of the adrenal glands is the long-term cause of most symptoms.

You can learn more about the other most common symptoms at the link below:
<https://www.keac.nl/hpu-2/pattern-of-compla/?lang=en>

Treatment recommendation

We provide some general guidelines below:

Good treatment is possible if the following recommendations are followed:

- limit your use of sugar and gluten.
- eat regularly during the day, divided into small amounts.
- get daily physical activity, but avoid overstraining.
- for higher values, avoid taking more than one gram (1000 mg) of ascorbic acid, ascorbyl palmitate is more recommendable.
- avoid acidified dairy products or products preserved with lactic acid, as the body can become acidified (too high acid formation).
- do not take any copper.
- take little/no PABA or beta-carotenes.
- take the following nutritional supplements: zinc, manganese and pyridoxal-5-phosphate or B6-phosphate (no vitamin B6 or pyridoxine (HCl)) which are available from various companies.

This combination of vitamins and minerals is available from KEAC in one capsule. Supplemented with magnesium under the name Depyrrol Plus €47.85 for 120 capsules and €7.50 shipping costs. You must first take Depyrrol Plus as one capsule every other day in the morning with breakfast. After three weeks you can take one capsule every day. Zinc and manganese are present in the capsule in such a form that good absorption is ensured even when taken in the morning.

After about three to four months, you will notice the first signs of the body's regeneration.

Please pay attention to the following

Patients who have (have had) psychosis, anxiety or depression should start very carefully. Even at normal doses, mental disorders can increase. Several, very sensitive patients cannot tolerate even very low doses. For these people, it is recommended to start with Taurine/P5P (5 mg) or Taurine 500 mg first. You should take these with breakfast. After 10 days, 15 mg of zinc can be added, which is best taken with a hot meal. After one month, Depyrrol Kind can be added every other day. On the days you take Depyrrol, you do not take zinc. You can slowly increase the amount. After a while, Depyrrol Plus is usually tolerated. If treatment with Depyrrol fails to produce the desired result, we recommend having an additional blood test, the HPU screening, carried out. This test provides you with a better overview of your level of disease condition. You can request test documents at KEAC. In connection with this, personal recommendations can be given to you.

Never give Depyrrol, in any form, to children under two years of age!

HPU and and...?

If the result requires treatment, KEAC offers the book "HPU and and...?" by Dr. J. Kamsteeg. This book deals with the subject of HPU and offers patients comprehensive instructions for treatment. The book is available (only as a PDF) at a price of €13,45.

Disclaimer

All information, including information regarding health conditions, products and treatment, is for informational purposes only. They are certainly not intended to be a substitute for medical advice from your treating physician or medical specialist or any information on or in any product packaging/label. Nor is the information intended to diagnose health problems or prescribe medication. KEAC strongly recommends that you only carry out the above recommendation together with your doctor or general medical practitioner. If you are not treated by a doctor, KEAC can advise you on choosing a doctor (see also our website www.keac.nl). Before taking the purchased products, carefully read the information provided by the product manufacturer (on or in the packaging). If you are unsure, first ask your doctor or specialist or send an e-mail to info@hpustest.nl