

If your doctor suspects AHP they should refer you to an AHP specialist listed below

Acute hepatic porphyria (AHP) refers to a family of rare genetic diseases characterized by potentially life-threatening attacks and for some people, chronic debilitating symptoms that negatively impact daily functioning and quality of life.^{1,8} If someone in your family has been diagnosed with a form of AHP, please let your doctor know.

Use this guide to keep track of your symptoms, then present it to your family doctor at your next visit. If they suspect AHP based on your symptoms, they should refer you to an AHP specialist listed below.

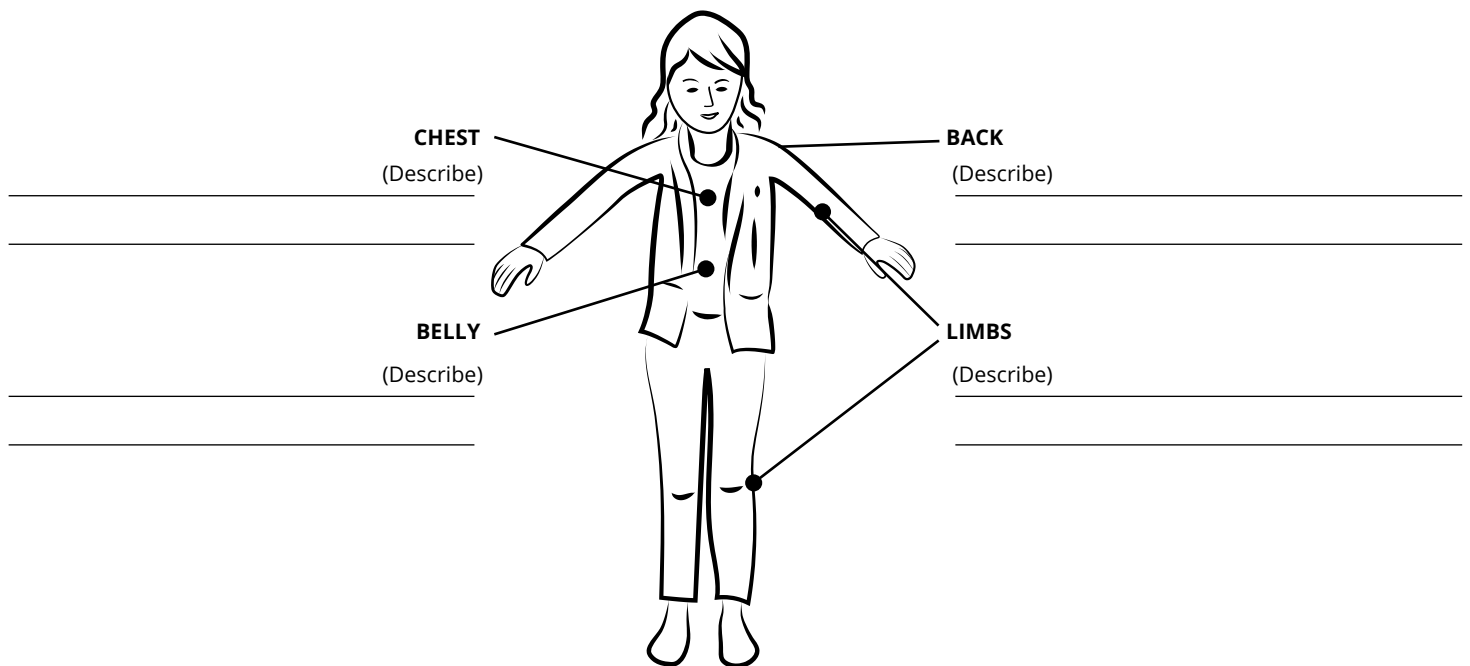
1. The below signs and symptoms can be associated with AHP. Please check all that apply:¹⁻¹⁵

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> Limb weakness or pain | <input type="checkbox"/> Confusion | <input type="checkbox"/> Constipation or diarrhea | <input type="checkbox"/> Rapid heart rate |
| <input type="checkbox"/> Numbness | <input type="checkbox"/> Anxiety | <input type="checkbox"/> Unexplained abdominal pain | <input type="checkbox"/> High blood pressure |
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> Seizures | <input type="checkbox"/> Pain in back or chest | <input type="checkbox"/> Dark or reddish urine |
| <input type="checkbox"/> Paralysis | <input type="checkbox"/> Insomnia | <input type="checkbox"/> Nausea and/or vomiting | <input type="checkbox"/> Low blood sodium |
| <input type="checkbox"/> Respiratory paralysis | <input type="checkbox"/> Hallucinations | <input type="checkbox"/> Lesions or blisters on sun-exposed skin* | |
| <input type="checkbox"/> Sensory loss | <input type="checkbox"/> Depression | | |

*Hereditary coproporphyria and variegate porphyria types only.





2. Pain is a very common symptom of AHP, either general or specific.

Please circle areas on the diagram where you have experienced pain and describe the details of your pain below.



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3. Have you had any of the following diagnoses or surgeries? Check all that apply:

- | | | |
|--|--|--|
|  <p>Gastrointestinal disorders: ⁵⁻⁷</p> <ul style="list-style-type: none"><input type="checkbox"/> Irritable bowel syndrome (IBS)<input type="checkbox"/> Acute gastroenteritis with vomiting<input type="checkbox"/> Hepatitis<input type="checkbox"/> Crohn's disease |  <p>Neurological/neuropsychiatric disorders: ^{5,6}</p> <ul style="list-style-type: none"><input type="checkbox"/> Fibromyalgia<input type="checkbox"/> Guillain-Barré syndrome<input type="checkbox"/> Psychosis  <p>Gynecological disorders: ⁶</p> <ul style="list-style-type: none"><input type="checkbox"/> Endometriosis |  <p>Abdominal conditions requiring surgery: ⁵</p> <ul style="list-style-type: none"><input type="checkbox"/> Appendicitis<input type="checkbox"/> Cholecystitis<input type="checkbox"/> Peritonitis<input type="checkbox"/> Intestinal occlusion |
|--|--|--|

If you had surgery, did or do you still have the same severe, unexplained pain? Yes No Not applicable

4. Often times symptoms can be triggered, worsened or more pronounced in the days following certain life events or activities.¹

Below are some common triggers, check all that apply:

- | | | | | | |
|---|---|---|--|--|--|
|  <p><input type="checkbox"/> TAKING CERTAIN MEDICATIONS
(please list medications)</p> |  <p><input type="checkbox"/> HORMONE CHANGES
Including levels of estrogen or progesterone. These hormones fluctuate the most during the 2 weeks before a woman's menstruation begins.</p> |  <p><input type="checkbox"/> DRINKING ALCOHOL</p> |  <p><input type="checkbox"/> SMOKING</p> |  <p><input type="checkbox"/> STRESS CAUSED BY:</p> <ul style="list-style-type: none">- Infections- Surgery- Physical exhaustion- Emotional exhaustion |  <p><input type="checkbox"/> FASTING
or low-carb diets</p> |
|---|---|---|--|--|--|

5. People with AHP often need to seek medical attention from their family physician or an acute care facility (i.e., urgent care or hospital) multiple times, usually associated with an episode of more severe symptoms:^{1,11-13}

Have you sought help at a medical facility (family doctor, hospital, walk-in or acute care clinic) four or more times in a year for your symptoms?

Yes No

On a scale of 1 to 10, how disruptive have your symptoms been for daily life?



How frequently do your symptoms disrupt your daily life?

Daily Weekly Monthly Yearly

Please write down any additional information you feel may be important to tell your doctor:

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The symptoms outlined above could indicate Acute Hepatic Porphyria (AHP). If your patient has had unexplained severe abdominal pain – 92% of patients report abdominal pain^{1,5,12-13} – plus one or more of the other symptoms referred to in this document, they may have AHP.¹ If a member of your patient's family has been diagnosed with any form of AHP and they have any of the above-mentioned symptoms, they could also have AHP.

Below is a list of physicians that have significant experience diagnosing and treating this ultra-rare disease.

Quebec:

Dr. Jean Pierre Routy, MD, FRCPC
Clinical Director of the Chronic Viral Illness Service
Division of Hematology and Chronic Viral Illness Service
Professor of Medicine, McGill University
Director, Réseau SIDA et maladies infectieuses FRQ-S
McGill University Health Centre: Glen site, 1001 Boulevard Décarie
Montreal, QC Tel: 514-843-1558, Fax: 514-843-1418

Dr. Alan O'Brien, MD, FRCPC, FCCMG
Clinical geneticist, CHUM
Assistant clinical professor, Université de Montréal
B05-043, 1000 rue St-Denis, Montreal, QC H2X 0C1
Tel: 514-890-8104

Ontario:

Dr. Michael Scott (MD, FRCPC, MHPE) & Dr. Michelle Sholzberg
(MD, FRCPC, MSc)
Division of Hematology Oncology
Department of Medicine, St. Michael's Hospital
30 Bond St. Toronto, ON
Tel: 416-864-5389 Fax: 416-864-3055

British Columbia:

Dr. Hayley Merkeley (MD, FRCPC)
Hematologist, Clinical Assistant Professor
St. Paul's Hospital/West Coast Hematology
411-1200 Burrard St
Vancouver, BC
Tel: 236-479-0498 Fax: 236-479-0498

Alberta:

Dr. Eliza Phillips (MD, FRCPC, FCCMG)
Clinical Assistant Professor, Department of Medical Genetics
Alberta Children's Hospital
28 Oki Drive NW
Calgary, Alberta T3B 6A8
Tel: 403-955-7587 Fax: 403-476-8752

Diagnosis: What Your Patient Should Expect

After ruling out other conditions, the specialist will test for elevated PBG (porphobilinogen) and ALA (aminolevulinic acid) levels, as well as porphyrins, using a simple spot urine test.^{1,3,10-13,15} It is important that the urine test is conducted when you are experiencing these elevated symptoms in order to get an accurate measure of the severity.

Confirming Diagnosis

After the urine tests, a genetic test can be used to confirm the specific type of AHP.^{1,2} Genetic testing can also confirm a diagnosis if a false negative result from the urine tests is suspected. PBG and ALA levels drop over time, increasing the chance of a false negative result. For this reason, urine tests should ideally be done within 48 hours of symptom onset.^{1,11}

No-Charge Genetic Testing

Genetic screening for AHP is available at no charge through the Alnylam Act program. Find out how you can access the free testing for your patients at [AlnylamAct.com](https://www.alnylamact.com).



References: 1. Anderson KE, et al. *Ann Intern Med* 2005;142:439-50. 2. Pischik E, Kauppinen R. *Appl Clin Genet*. 2015;8:201-214. 3. Balwani M, Wang B, Anderson KE, et al. *Hepatology*. 2017;66(4):1314-1322. 4. Harper P, Sardh E. *Expert Opin Orphan Drugs*. 2014;2(4):349-368. 5. Ventura P, Cappellini MD, Biolcati G, Guida CC, Rocchi E; Gruppo Italiano Porfiria (Grip). *Eur J Intern Med*. 2014;25(6):497-505. 6. Ko JJ, Murray S, Merkel M, et al. Poster presented at: American College of Gastroenterology Annual Scientific Meeting; October 5-10, 2018; Philadelphia, PA. 7. Alfadhel M, Saleh N, Alenazi H, Baffoe-Bonnie H. *Neuropsychiatr Dis Treat*. 2014;10:2135-2137. 8. Simon A, Pompilus F, Querbes W, et al. *Patient*. 2018;11(5):527-537. 9. Naik H, Stoecker M, Sanderson SC, et al. *Mol Genet Metab*. 2016;119(3):278-283. 10. Bissell DM, Anderson KE, Bonkovsky HL. *N Engl J Med*. 2017;377(21):2100-2101. 11. Bissell DM, Wang BJ. *Clin Transl Hepatol*. 2015;3(1):17-26. 12. Gouya L, Bloomer JR, Balwani M, et al. Presented at: 2018 International Liver Congress; April 11-15, 2018; Paris, France. 13. Puy H, et al. *Lancet* 2010;375:924-37. 14. Bonkovsky HL, et al. *Ann Intern Med*. 2005;142(6):439-450. 15. Szlendak U, et al. *Adv Clin Exp Med* 2016;25:361-8