UCD in COMMON

Getting Accurate Ammonia Level Test Results

People with urea cycle disorders (UCDs) often experience hyperammonemia, or high levels of ammonia in the blood. A **plasma ammonia reading** (commonly called an "ammonia level test") is typically ordered when someone with a UCD shows signs of hyperammonemia, or as part of the routine monitoring of a UCD.

Important treatment decisions rely on prompt and accurate test results, and inaccurate results may be reported if the blood sample is not drawn, transported, or analyzed properly.[1,2]

Follow these steps to help ensure accurate results[3-6]

1. Make sure the patient keeps his or her arm as relaxed as possible.
2. **Do not use a tourniquet.** Collect a free-flowing sample of venous or arterial blood. Use a prechilled specimen tube if possible, with lithium heparin or EDTA.
3. Place the sample on ice.
4. The sample should be handled STAT. **Transport it to the lab, separate it within 15 minutes of the blood draw, and analyze it right away.**

Important: Falsely high ammonia readings due to hemolysis can occur if the steps for proper specimen collection and processing above are not followed.

If you have questions or concerns when conducting a plasma ammonia reading for this patient with a UCD, **call the patient's metabolic geneticist.**

Patient's Name _____

Geneticist's Phone Number _____

Geneticist's Name _____

Geneticist's Pager Number _____

References: 1. Häberle J. Clinical practice: the management of hyperammonemia. *Eur J Pediatr.* 2011;170(1):21-34. **2.** Galal NM, Fouad HM, Saied A, Dabnon M. Hyperammonemia in the pediatric emergency care setting. *Pediatr Emerg Care.* 2010;26(12):888-891. **3.** Broomfield A, Grunewald S. How to use serum ammonia. *Arch Dis Child Educ Pract Ed.* 2012;97(2):72-77. **4.** Orton DJ, Gifford JL, Seiden-Long I, Khan A, de Koning L. Critically high plasma ammonia in an adolescent girl. *Clin Chem.* 2016;62(12):1565-1568. **5.** Hawke L. Ammonia (plasma, blood). The Association for Clinical Biochemistry and Laboratory Medicine website. http://www.acb.org.uk/whatwedo/science/amalc.aspx. Published 2012. Accessed November 7, 2019. **6.** Barsotti RJ. Measurement of ammonia in blood. *J Pediatr.* 2001;138(1)(suppl):S11-S20.

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