

Date: June 13, 2014
To: North, Edmonton and Central Zone
Physicians, Nurses and Laboratories
From: AHS Laboratory Services
Re: Optimization of Sugar Testing in Alberta

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Key Messages:

- Effective June 2, 2014 urine reducing substances and fecal reducing substances testing (CliniTest©) will be **discontinued** in Central Zone. Urine pH will only be available as part of the Urinalysis panel and stool pH will be referred out. Reducing substances testing by CliniTest© was previously discontinued from Edmonton, North, Calgary and South Zones between April 2012 and February 2013.
- Fecal reducing substances testing (Benedict's) will be introduced at the University of Alberta Hospital as an in-house progressive screening test for fecal sugar identification.
- Galactosemia screen, urine sugar identification, and disaccharidase panel tests are more sensitive and specific alternatives and should be requested in place of urine reducing substances.

Why this is important:

- A clinical need to retain a fecal reducing substances test for management of short bowel syndrome has been identified by consultation with Gastroenterology.
- Progressive testing ensures proper utilization of fecal sugar tests. Specimen rejection criteria facilitate collection of good quality stool and urine specimens. The galactosemia screen is underutilized in Alberta.

Action Required:

If	Indicate on Requisition	Provide Patient With
Short bowel syndrome patient or suspect pediatric lactase deficiency	Fecal reducing substances	Routine Chemistry Requisition and refer to collection site for Stool Collection Instructions and Collection Container
Pediatric patient and clinical suspicion for galactosemia (i.e. jaundice, feeding difficulties)	Galactosemia screen	Routine Chemistry Requisition and refer to collection site for a Newborn Screen Bloodspot Card
Pentosuria or fructosuria **	Urine sugar identification	Routine Chemistry Requisition

** If the urine sugar identification test is abnormal, refer the patient to the Metabolic Clinic in Edmonton for a sugar challenge test. If sucrase deficiency is suspected, refer the patient to Gastroenterology for small bowel biopsy and disaccharidase panel test.

Specimen Rejection Criteria

- If a stool or urine sample is received after 2h not frozen, the collection site will cancel the test. Ambient transport temperatures promote bacteria growth and sugar consumption. This can yield a false negative result.
- If a formed stool specimen is received, the University of Alberta Hospital Laboratory will cancel the test. A loose stool is required for analysis.

Result Reporting/Interpretation:

- Fecal reducing substances test performed within 48hr of sample receipt.

Result	Interpretation	Follow-up
Negative - Trace	Normal	Cancel fecal sugar identification test
+1 - +2	Borderline	Perform fecal sugar identification test
+3 - +4	Abnormal	Perform fecal sugar identification test

- A positive fecal reducing substances test (>2+) is a clinical indication of sugar malabsorption and initiates a reassessment of feeding rates or formula composition.
- The same limitations of sensitivity and specificity for CliniTest© apply to the Benedict's test.

Additional Information:

- Alberta Health Services Edmonton Zone Test Directory
- Patient Instructions for Stool Collection (attached)
- Client Response at: 780-407-7484

Inquiries and feedback may be directed to:

- Dr. Kareena Schnabl, Clinical Biochemist, University of Alberta Hospital at: 780-407-3186 or email: kareena.schnabl@albertahealthservices.ca

This bulletin has been reviewed and approved by:

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