

### Biotin Interference in laboratory tests

*Dr Cheryl Tomalty, PhD, FCACB, Clinical Biochemist*

Biotin is a water-soluble vitamin B vitamin necessary for several biological carboxylation reactions involved in fatty acid metabolism, gluconeogenesis, and amino acid metabolism. Biotin supplementation can cause erroneous results for some immuno-assay-based laboratory tests. The supplementation has to be very high [e.g. 5,000 ug (micrograms) per day] or about 100 times the dose found in multivitamins, to affect these assays. (High levels such as these have been used in some clinical trials in multiple sclerosis patients). At this level, it takes approximately 15 hours from the time of ingestion to eliminate enough biotin to obtain accurate results.

The chart on the right indicates which tests at LifeLabs are affected by mega doses of biotin. Other laboratories may have biotin interference with different tests than those listed.

For further information, please contact the Biochemist on-call at 1-800-431-7206.

Test	Effect of biotin on test result	Test	Effect of biotin on test result
cTroponin T	↓	CA-125	↓
βHCG	↓	CA 15-3	↓
ACTH	↓	CA 19-9	↓
AFP	↓	DHEAS	↑
AMH	↓	HBeAg	↓
Anti-CCP	↓	HBsAg	↓
Anti-HAV-IgM	↓	HGH	↓
Anti-HBc-Total	↓	Insulin	↓
Anti-HBs	↓	PTH	↓
Anti-HBe	↓	SHBG	↓
Anti-HCV	↓	Testosterone	↑
Anti-Thyroglobulin	↓	Thyroglobulin	↓
Anti-TPO (Thyroperoxidase)	↓	CTX (Crosslaps)	↓

### Changes to Parasitology Testing Method

*Dr. Romina Reyes, MD, FRCPC, Medical Microbiologist*

In mid-February 2019, LifeLabs will be implementing the BD MAX™ Enteric Parasite Panel for parasitology testing. This molecular-based technology will supplement the existing microscopy-based approach.

The BD MAX™ Enteric Parasite Panel detects three of the most common pathogenic intestinal parasites: Giardia lamblia, Cryptosporidium spp. (C. parvum and C. hominis) and Entamoeba histolytica.

Samples will be triaged as per the MSP guidelines definition of low and high risk patients (see <https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/infectious-diarrhea>).

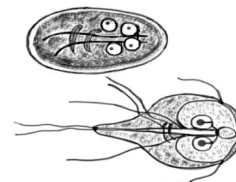
#### O&P examination is recommended for patients at risk for parasitic infections:

- Low risk populations: submit a single specimen. Submit a FOLLOW-UP specimen if initial results are negative and symptoms PERSIST.

- High risk populations: submit two stool specimens collected at least one day apart. INDICATE High Risk status on the requisition.
- More than two stool specimens per requisition require consultation with the laboratory physician.

#### Patients at high risk for parasitic infections include:

- Patients who have traveled to or immigrated from an endemic area
- Patients with prolonged diarrhea (> 2 weeks)
- Patients who have consumed unsafe food or untreated water
- Children attending daycare
- Patients who have been swimming in unsafe water
- Men who have sex with men



## A Year in Review: MedSci at LifeLabs

Over the last year, LifeLabs has continued to advance its mission to build a healthier Canada through the practice of laboratory medicine by delivering the highest level of service to patients and their health care providers. We are proud of our quality and accreditation record.

During this time, LifeLabs performed more than 112 million lab tests for Canadians nationally while supporting more than 36,000 health care providers. Significant improvements were made in patient wait times while increasing safety, and new sample collection services were launched in the Regina and Saskatoon communities. Partnerships were formed with provincial governments to lend LifeLabs' expertise in fighting the opioid crisis, while continuing to build the invaluable partnership with the Pediatric Oncology Group of Ontario (POGO) to champion care for children with cancer.

The MedSci department at LifeLabs is essential to this work. MedSci is made up of pathologists, clinical scientists and lab scientists, as well as cardiologists who support ECG and holter work. The work of these pathologists, cardiologists and scientists are critical for the prevention, early detection, diagnosis and treatment of many of the leading causes of disease. In fact, pathologists provide the diagnostic test information that facilitates 70 per cent of all the diagnoses made by health care providers.

The MedSci team also represents LifeLabs on a national and international scale within the realm of laboratory medicine. Last year, MedSci staff participated and presented in conferences around the world and published work related to their profession. In addition, these staff are fostering the next generation of lab medicine experts through the supervision of residents and students on rotations at LifeLabs facilities.

Our newly refreshed LifeLabs website ([www.lifelabs.com](http://www.lifelabs.com)) provides information on our core team and ways in which you can seek out advice for the tests that we offer at LifeLabs. We also offer medical consults. We are here to help you do the best for your patients.

Together, we are building a healthier Canada.

## LifeLabs® BY THE NUMBERS

16  LifeLabs laboratories



Proudly serving  
**British Columbia, Ontario  
and Saskatchewan**

Perform over  **112** million  laboratory tests in 2017

 **90%** customer satisfaction rate

**79K patient** visits per day 

 Partnerships and reference testing for **over 80 hospitals**

**36,000** health care providers supported 

## MedSci BY THE NUMBERS

**37**   
Pathologists  
Clinical Scientists  
Laboratory Scientists

 **41** publications in journals or internal communications

Supervised **18** residents and students 

**37**   
Participated in international and national clinical or scientific conferences or symposia

Delivered a total of **113** presentations in Canada and internationally   
Provided reviewer services for **16** journals and surveyor services for **3** accreditation bodies 

 **55** positions on external committees representing their professional role

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