The Iodine/Iodide Loading Test

Important Information

This test is used to assess whole body sufficiency for the essential element iodine. It is recommended prior to and following 3 months on orthoiodosupplementation.

Introduction

Orthoiodosupplementation is the daily amount of the essential element iodine needed for whole body sufficiency (1). Whole body sufficiency for iodine is assessed by an iodine/iodide loading test (2). The test consists of ingesting 4 tablets of a solid dosage form of Lugol (Iodoral®), containing a total of 50 mg iodine/iodide. Then urinary iodide levels are measured in the following 24 hr collection. The iodine/iodide loading test is based on the concept that the normally functioning human body has a mechanism to retain ingested iodine until whole body sufficiency for iodine is achieved. During orthoiodosupplementation, a negative feedback mechanism is triggered that progressively adjusts the excretion of iodine to balance the intake. As the body iodine content increases, the percent of the iodine load retained decreases with a concomitant increase in the amount of iodide excreted in the 24 hr urine collection. When whole body sufficiency for iodine is achieved, the absorbed iodine/iodide is quantitatively excreted as iodide in the urine (1-3). In the U.S. population, the percent of iodine load excreted in the 24 hr urine collection prior to orthoiodosupplementation averages 40% in more than 7,000 loading tests performed at the FFP Laboratories.

After 3 months of supplementation with 50 mg iodine/iodide/day, (4 tablets of Iodoral®) most non-obese subjects not exposed to excess goitrogens achieved whole body iodine sufficiency, arbitrarily defined as 90% or more of the iodine load excreted in the 24 hr urine collections (2,4). Adult subjects retained approximately 1.5 gm of iodine when they reach sufficiency (3). A repeat loading test following 3 months on orthoiodosupplementation is recommended. The goal of orthoiodosupplementation is not the treatment of disease, but the supply of optimal amounts of an essential nutrient for whole body sufficiency and for optimal mental and physical performances. Whole body sufficiency for iodine correlates well with overall wellbeing, and some subjects could tell when they achieved sufficiency even before knowing the results of the test. Iodine sufficiency was associated with a sense of overall wellbeing, lifting of a brain fog, feeling warmer in cold environments, increased energy, needing less sleep, achieving more in less time, experiencing regular bowel movements and improved skin complexion (2). Whole body iodine deficiency, based on the concept of orthoiodosupplementation, may play an important role in several clinical conditions (5). Hundreds of physicians and other health care providers are now using the loading test and implementing orthoiodosupplementation in their practice, using a tablet form of Lugol (Iodoral®). A very good correlation between the results of the loading test and clinical response of their patients to iodine
supplementation was reported (6,7). For consistency and reproducibility of results, the same Lugol tablets are used in the loading test and in the orthiodosupplementation program.

**Procedure for the loading test**

Currently, there are three Laboratories performing the iodine/iodide loading test: Doctor's Data, Inc. in St. Charles, IL, FFP Laboratories in Flat Rock, NC, and Labrix Clinical Services Inc. in Oregon City, OR. All three labs supply their own protocol for details on collection of urine samples, pooling samples for 24 hr. and sending a 2 ounce aliquot to the Laboratory for analysis. We recommend this general outline:

1. Have patient stop ingesting iodine 24 to 48 hours before the test if post-supplementation.
2. Discard first morning void;
3. Take 4 tablets of Iodoral® (in a sealed plastic packet);
4. Start collection of urine, following instructions from the Lab that supplied you with the Kit;
5. The first void on the following morning should be included in the urine collection;
6. If total urine volume is above 3 liters, follow instructions supplied with the Kit.

Boxes of 60 packets containing 4 tablets of Iodoral® are available from Optimox Corporation for use with the loading test kit supplied by Doctor's Data in ST. Charles, IL, FFP Laboratories in Flat Rock, NC, for use by physician. The cost of one box of 60 packets is $36.00 and may be ordered by calling our toll free number (800) 223-1601. The same phone number may be used to order bottles of Iodoral ® 12.5 mg tablets in sizes of 90 tablets and 180 tablets. Iodoral IOD-50 (50 mg) in bottles of 30 and 90 tablets are also available for those who need 50 mg elemental iodine to achieve and maintain whole body sufficiency for iodine.

**Laboratories Used For Testing**

**Doctor's Data, Inc.**
3755 Illinois Avenue  
St. Charles, IL 60174-2420  
Phone: 630 377-8139  
Toll Free: 800 323-2784  
Fax: 630 587-7860  
http://www.doctorsdata.com

**FFP Laboratories**
576 Upward Rd. Suite 8  
Flat Rock, NC 28731  
Toll Free: 877-900-5556  
Fax: 828-697-9020  
Email: ffp Lab@yahoo.com

**References:**