

## "Oxford Handbook of Clinical and Laboratory Investigation, Second Edition"

Drew Provan, editor, 2005, 814 pages, Oxford University Press, \$49.95

Review by Norman M. Goldfarb

"Oxford Handbook of Clinical and Laboratory Investigation, Second Edition" is the perfect practical protocol companion for clinical research scientists who need to know which tests to include and how to explain them to the FDA and study personnel. The book describes over 600 laboratory and physical exam tests that you can include in your next protocol. On the other hand, if you conduct protocols, you can decipher the next one that includes a Kleihauer test or Nijmegen questionnaire. As a special bonus, if you are a hypochondriac, you can drive your physician crazy. Seriously, there is no point conducting a protocol with the wrong tests; this book is just what the doctor ordered.

This book has been selected for  
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Essential reading for clinical research professionals

A very simple and brief example (translated into American English) is the test for exhaled nitric oxide:

Clinical indications: Asthma

- Diagnosis
- Assessment of severity
- Assessment of treatment response to  $\beta_2$  agonists

Patient preparation

1. Patient breathes directly into the nitric oxide (NO) analyzer.
2. With this technique, gas samples from various compartments of exhaled volume can be selectively analyzed. This prevents contamination by nasal NO.
3. Perform three tests each time and record the largest value.

Possible results

- Exhaled NO can be detected by chemiluminescence analysis in the range of 3 to 20 parts per billion (ppb).

Interpretation

- Patients with asthma have higher concentrations of NO in their expirate than do similar nonasthmatic subjects (13.9 vs. 6.2ppb in one study).

Advantages over other tests

- Simple
- Non-invasive
- Objective measure of response to treatment

Ancillary tests for diagnosis of asthma

- PEFR diary
- Histamine/methacholine inhalation challenges

Pitfalls

- Exhaled nitric oxide is also elevated in bronchiectasis and upper respiratory tract infections.
- Exhaled nitric oxide levels are reduced by smoking, alcohol and caffeine.

The tests are organized in 14 chapters:

- Symptoms & signs
- Endocrinology & metabolism
- Hematology
- Immunology & allergy
- Infectious & tropical diseases
- Cardiology
- Gastroenterology
- Respiratory medicine
- Neurology
- Renal medicine
- Poisoning & overdose
- Rheumatology
- Radiology
- Nuclear medicine

The book is available in bookstores.

### **Reviewer**

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