

Exhaled Nitric Oxide (eNO) Fact Sheet

Exhaled nitric oxide (eNO) has been proposed as a simple and non-invasive measure of irritation in the lungs. During the UMass Lowell / Fallon Childhood Asthma and Traffic study, samples of eNO are collected from each subject using the hand-held monitor (Niox Mino) shown in the picture to the right.

Some health care providers use eNO measurements to check the success of steroid (Azmecort, AeroBid, Advair, Pulmicort, Asmanex, QVAR) treatments for children with asthma. eNO measurements should go down if the medication is successful in reducing irritation in the lungs. However, it is difficult to interpret the meaning of a single exhaled NO (eNO) level for a child.



One important purpose of the UMass Lowell / Fallon Childhood Asthma and Traffic Study is that we hope to better understand how eNO levels change from person to person, across seasons and because of environmental factors like exposure to traffic exhaust.

Certain foods or drinks that are high in nitrites because of preservatives or natural levels can also cause high eNO levels. Examples of these foods include: cured meats (hot dogs, salami, bacon), fish, cheese, lettuce, spinach, beets, and carrots. This is why it is important not to eat 1 hour before an eNO measurement.

A valuable feature of eNO is that it is relatively easy to collect. It is our hope that eNO will prove to be an important tool in identifying children on the way to developing asthma as well as asthmatics with and without successful treatment. In addition, we hope that eNO measurements will help us recognize common environmental triggers of airway irritation and asthma symptoms.

