

Attending the Diagnostic Hubs

You have been invited by your GP for a Breathing test to Measure how well your lungs work.

There are two types of test that we carry out in the Clinic:

- **FeNo** (Fractional Exhaled Nitric Oxide) Measuring inflammation in the Lungs
- **Spirometry** measuring the size of your lungs, airways, and the air flow from your lungs. Sometime Reversibility testing is also carried out following Spirometry; this measures the lungs response to medications that open up the airways (bronchodilators).

These test help to detect lung problems and indicate specific treatments depending on the test results. Some people may not require all the tests, this depending upon your individual history and the tests your Gp has requested

Spirometry and FeNO are both breathing test. The test requires you to do a series of deep breaths in and slow/hard blows out depending on the test, the clinician will guide you through the procedure on the day of testing.

On the day of testing Please DO NOT take your usual inhalers, however please bring your inhalers and spacer to Clinic to have during or after your breathing test

To get the best possible results, please do not:

- Smoke or vape for 24 hours before the test.
- drink any alcohol for at least four hours before the test.
- do any heavy exercise for at least 15 minutes before the test.
- have any large meals before the test (a sandwich is fine).
- Please avoid an processed meats and green vegetables on the day of FeNO testing
- Do not wear tight or restricting clothing on the day of the test.

It is important that when you attend for your breathing test that you have been well in the last 6 weeks, Spirometry results can be affected if you have experienced:

- **A chest infection or taken antibiotics or steroids for your breathing**
- **Had eye, chest or abdominal surgery**
- **Have coughed up blood, experienced chest pain, had a heart attack or stroke**
- **A recent COVID infection in the past 12 weeks**

If you have been unwell or had recent surgery or hospital admission in the last 6 weeks, please contact us to rebook your spirometry test after you have recovered.



Clinician Guide to Spirometry and FeNo testing

1) Spirometry

Referral for Spirometry can be helpful to detect and diagnose pulmonary diseases

Indication for Spirometry

- To diagnose respiratory illness and evaluate symptoms
- To measure the physiologic effect of disease/ monitor diseases progression
- To screen individuals at risk of having pulmonary disease
- To assess pre-operative risk
- To assess response to therapeutic intervention
- To Monitor for adverse reactions to drugs with known pulmonary toxicity

Absolute Contra-indications for Spirometry

- Recent Myocardial Infarction
- Pulmonary Embolism
- Current Pneumothorax
- Uncontrolled blood pressure
- Active infection e.g. AFB positive TB until treated for 2 weeks
- Ascending Aortic aneurysm (>6 cm)
- Angina with potential for cardiac arrest
- Recent surgery Eye chest and Abdomen
- Haemoptysis

Relative Considerations

Inability to follow instructions i.e. Dementia, significant learning disability
Anxiety or hyperventilation
Frailty or inability to create a seal on mouthpiece

2) Fractionated Exhaled Nitric Oxide (FeNo)

Nitric oxide, which is produced in the lungs and is present in exhaled breath, has been implicated in the pathophysiology of lung diseases, including asthma. Inflammatory mediator in the lungs and airways, FENO is a marker of asthma, and high levels correlate with ongoing eosinophilic inflammation

Indications for FeNo

- Support a diagnosis of asthma in conjunction with Spirometry and clinical presentation
- serial monitoring of FENO can help in titrating corticosteroid doses and predicting exacerbation
- Evaluate current asthma therapy and symptom burden

Contraindications

There are no absolute contraindications for FeNO as the procedure does not require any forced manoeuvres.

- Suspected respiratory infection in the 6 weeks especially if prescribed corticosteroids
- Undiagnosed chest symptoms e.g. haemoptysis
- Condition which may be aggravated by prolonged expiration i.e history of panic attacks
- Recent mouth/dental procedures or infection, which may make placement of the mouthpiece distressing or painful.



- Communication problems such as learning disability or confusion
- Some external factors may alter the results eating processes meats, greens, caffeine and smoking.

