

Willesden Community Diagnostic Centre

Fractional exhaled nitric oxide (FeNO)

Information for patients, relatives and carers

What is FeNO testing?

Fractional exhaled nitric oxide (FeNO) testing is a simple, non-invasive test that measures the level of **nitric oxide** in your child's breath. Nitric oxide is produced when there is **inflammation in the airways**, which is often seen in **asthma and allergic airway conditions**.

Why is FeNO testing important?

FeNO testing helps doctors:

- **identify airway inflammation** in children with suspected asthma
- **confirm eosinophilic (allergic) asthma**, which can be treated with inhaled corticosteroids
- **assess asthma control** and whether your child needs medication adjustments
- **reduce the need for other invasive tests** like blood tests or sputum samples

What happens during the test?

FeNO testing is quick and painless. Your child will need to **breathe out slowly** into a special device.

1. Preparation:

We will ask your child to sit comfortably and listen for our clear instructions.

We will ask them to take a deep breath in.

2. Breathing out:

Your child will exhale **slowly and steadily** into the FeNO device.

We might use a screen with visual cues to help them keep their breath steady.

3. Results:

The device measures **nitric oxide levels** in parts per billion (ppb).

The test takes around **5 minutes** to complete.

Will it hurt?

No, FeNO testing is completely **painless** and there are no needles or invasive procedures. It is suitable for children as young as **5 years old**.

How should my child prepare for the test?

To make sure we get accurate results, please follow these instructions:

- **no eating or drinking** for **1 hour** before the test.
- **no exercise** for at least **1 hour** before testing.
- **no caffeine or fizzy drinks** for at least **2 hours** before testing.
- **no smoking or exposure to tobacco smoke** for at least **2 hours** before testing.
- **no short-acting reliever inhalers** (like Salbutamol) for at least **6 hours** before the test, unless otherwise advised.

What do the results mean?

For 5 to 16-year-olds:

- a FeNO level of more than 35 ppb = high level of airway inflammation, which suggests allergic (eosinophilic) asthma
- a FeNO level of 20 to 35 ppb = intermediate range, we will check how this result fits with your child's symptoms
- A FeNO level of less than 20 ppb = low level of airway inflammation, which means it's unlikely that your child has allergic asthma

For 16 years and older:

- a FeNO level of more than 50 ppb = high level of airway inflammation, which suggests allergic (eosinophilic) asthma
- a FeNO level of 25 to 50 ppb = intermediate range, we will check how this result fits with your child's symptoms
- A FeNO level of less than 25 ppb = low level of airway inflammation, which means it's unlikely that your child has allergic asthma

Your doctor will explain what the results mean for your child and talk to you about the next steps in their asthma management.

What happens after the test?

We will have the results immediately.

The doctor will explain whether your child has **airway inflammation** and if they need treatment.

If the test confirms your child has asthma, the doctor might recommend **inhaled corticosteroids** or other medications.

Are there any risks?

FeNO testing is very **safe**. The only minor risk is if a child **blows too hard** or **too fast**, they could feel lightheaded for a few seconds. We will guide their breathing to help them have a comfortable experience.

Frequently asked questions (FAQs)

1. How long does the test take?

Around **5 minutes**, including preparation and the test itself.

2. Can my child eat and drink before the test?

They should **not eat or drink for 1 hour** before the test. This helps us get the most accurate results.

3. Will my child need repeat testing?

If their asthma symptoms continue or change, FeNO testing may be repeated to check inflammation levels.


4. What if my child is nervous?

The test is easy and painless. Our healthcare team will explain everything clearly and make sure your child is comfortable.

More information

If you have any questions, please ask your healthcare provider or contact:

 **Willesden Community Diagnostic Centre (CDC)**

 **Phone:** 020 370 46578

 **Email:** Imperial.CDCLungFunctionLab@nhs.net

 **Website:** <https://www.imperial.nhs.uk/our-locations/willesden-community-diagnostic-centre>

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on

020 3312 7777 (10.00 – 16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team:
imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk

Willesden Community Diagnostic Centre
Published: June 2025
Review Date: June 2028
Reference Number: 5265
© Imperial College Healthcare NHS Trust