

Hypoxic challenge test: information for families

A hypoxic challenge test is used to assess if your child will require supplemental (extra) oxygen while on an aircraft. This information sheet from Great Ormond Street Hospital (GOSH) describes what a hypoxic challenge test involves, what will happen when your child has the test and the reasons why the test has been requested. An Easy Read information sheet is included for your child.

Aircraft cabins are pressurised to between 5,000 to 8,000 feet, which means that the partial pressure of oxygen inside the aircraft is lower than what we breathe in room air (at sea level).

As a result of the lower oxygen levels at altitude, most passengers will experience a decrease in oxygen saturation – the amount of oxygen circulating in the body.

This is normally tolerated well in healthy individuals. People with cardiac and respiratory problems, however, may experience complications.

The hypoxic challenge test will help evaluate how well your child will tolerate the reduced oxygen levels in the aircraft cabin.

What does the test involve?

The hypoxic challenge test takes place in a large cabin that simulates being in an aircraft. The child sits inside the cabin for 20 minutes during which a pulse oximetry probe will be attached to a finger or toe to assess oxygen saturation levels.

Further information

If you need any further advice or information about Hypoxic Challenge testing, you can contact the Lung Function Lab on 020 7405 9200 ext 5456 or via the MyGosh portal at www.gosh.nhs.uk/mygosh once you have registered.

Your child can take toys and a portable DVD player inside to keep them amused throughout the test. Parents can sit inside with younger children.

Nasal prongs will be secured at the beginning of the test. If required, oxygen will be provided via the nasal prongs while remaining in the cabin.

The results will be sent back to your consultant.

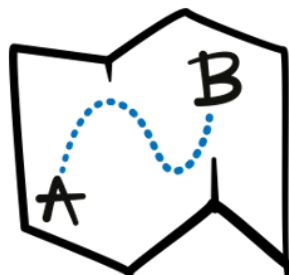
How long will it take?

The test takes approximately 45 minutes, however we would advise you to allow one hour for unexpected delays.

What should we bring to the test?

You may wish to bring along a favourite toy, book or electronic game which can help as a distraction during the test.

It can get hot inside the cabin, so if you need to sit inside the cabin with your child, you may wish to wear light clothing.



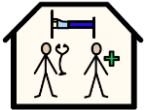
Having a check-up before you fly



When you fly in a plane, the pressure of the air inside the plane is lower than outside. This means that the amount of oxygen in your blood is lower when you are flying.



This may be a problem if you already have an illness. Children with a heart or lung problem need to have a check-up before they fly.



Your check-up will happen at GOSH in our lung function testing clinic.



The first thing we do is put a sticky clip on your finger or toe. This measures how much oxygen is in your blood. It does this through your skin so will not hurt.



Next we will ask you to sit in our testing cabin. This is a yellow room that is just like inside a plane. We will put a bendy plastic tube just under your nose. This can give you extra oxygen if you need it.



You can take books and toys into the cabin with you. You can play with them as much as you like. We will look at the amount of oxygen in your blood on a screen outside the cabin. Your parents can sit inside the cabin with you if you want.



We will need you to stay in the cabin for about 20 minutes. After this, you can come out of the cabin. This is long enough for us to check how you will manage in a plane.



We will send a report of the results to your doctor. They will discuss the results with you.

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