

WHY ARE WE LOOKING FOR VOLUNTEERS FOR LUNG FUNCTION TESTING?

The Children's Lung Health team at Telethon Kids Institute are investigating the lung health of children, adolescents and adults who were born prematurely, and those with bronchiectasis. Those born prematurely or with bronchiectasis often have poorer lung function and breathing problems.

Collection of lung function data from participants who do not have a history of respiratory illness helps our understanding of lung function in those with lung health problems.

In the long term this helps us to improve the health outcomes of these people.

This brochure provides information about the types of lung function testing you or your child can participate in, and additional tests you can volunteer for.



WANT TO DISCUSS IT FURTHER?



If you would like to discuss volunteering for lung function testing, or would like information about the research being undertaken by the Children's Lung Health team, please contact us on:

Email: preterm@telethonkids.org.au

Phone (call or text): 0423 449 778



A Powerhouse Partnership



RESPIRATORY RESEARCH CENTRE

Healthy lungs for every child, for life

A Powerhouse Partnership



**Seeking volunteers
aged 3 years and older
for lung function testing**



WHO CAN VOLUNTEER?

Anyone aged 3 years or older with no history of respiratory illness or breathing problems (e.g., asthma, premature birth, COPD) can volunteer for lung function testing.

Participation is voluntary and you can change your mind and withdraw from taking part at any time.

You can also choose which tests you are comfortable to take part in.

WHERE AND WHEN ARE THE TESTS PERFORMED?

Tests are performed at Perth Children's Hospital. Your, or your child's, age will determine the study and tests you can participate in. In general, testing varies from 1 to 3 hours.

Please contact us to see what study you or your child could participate in. You might be lucky enough to participate in multiple studies!

WHAT HAPPENS TO THE RESULTS?

Your child's results will be de-identified and kept in a secure, locked location at the Telethon Kids Institute in Perth Children's Hospital.

We will use these results to determine the normal variability in a lung-healthy population.

We can also send you your personal lung function test results, as well as the overall results from our studies.

TYPES OF LUNG FUNCTION TESTS

Spirometry

This test requires you to take a big breath in and blow out as much air as you can into a mouthpiece. This measures how much air is in the lungs and how fast you can blow that out. This test can be repeated following inhalation of salbutamol (a common asthma medication) to test if your lung function improves with this medication.



FeNO (fractional exhaled nitric oxide)

This test involves breathing one long steady breath out to measure nitric oxide in your exhaled breath. This gives a measure of the inflammation present in your lungs.

Oscillometry

This test involves regular relaxed breathing into a mouthpiece over 20 to 30 seconds. This test looks at the mechanics of the airways in your lungs.

Multiple Breath Washout

This test requires you to breathe normally through a mouthpiece for a few minutes at a time. We will use 100% oxygen gas to washout the air that is normally in your lungs. This tells us how evenly gas mixes in your lungs.

Plethysmography

This test requires you to sit in a lung function body box that looks like a see-through phone booth, with the door closed. You will be asked to breathe/pant into a mouthpiece. This measures how much air you can hold in your lungs.



Cardiopulmonary Exercise Testing

This test involves cycling on an exercise bike for about 12 to 15 minutes, aiming to achieve maximal exercise capacity. We use this to measure your cardiac and respiratory response to exercise.

Additional tests

Blood test – this test involves drawing a small volume of blood via a needle to measure blood cell count and investigate any allergies.

Nasal brushing – this test is like a COVID nasal swab test. It involves a small brush going up the nose to collect the cells that line the nasal passage to use in the lab for further testing.

Induced sputum – this test involves breathing in salty air for a period of 15 minutes to help with coughing up a sputum/mucus sample from deep in the lungs. This is used to assess inflammation in the lungs.