Cardiac + Respiratory
FOUNDATION NZ

The Thoracic Society of Australia & New Zealand
LEADERS IN LUNG HEALTH

BRONCHIECTASIS

Patient information

This booklet will help you and your whānau to learn and understand more about bronchiectasis.

Cardiac + Respiratory
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Introduction

Receiving a diagnosis of bronchiectasis can be scary. You may need time to think about it and may have many questions.

This booklet will help you and your whānau to learn and understand more about bronchiectasis. It can also help you to make choices so your lungs stay as well as possible.

The Cardiac and Respiratory Foundation NZ is here to support you with tools and resources.

For more resources, check out the bronchiectasis pages on:

www.cardiacandrespiratory.org.nz

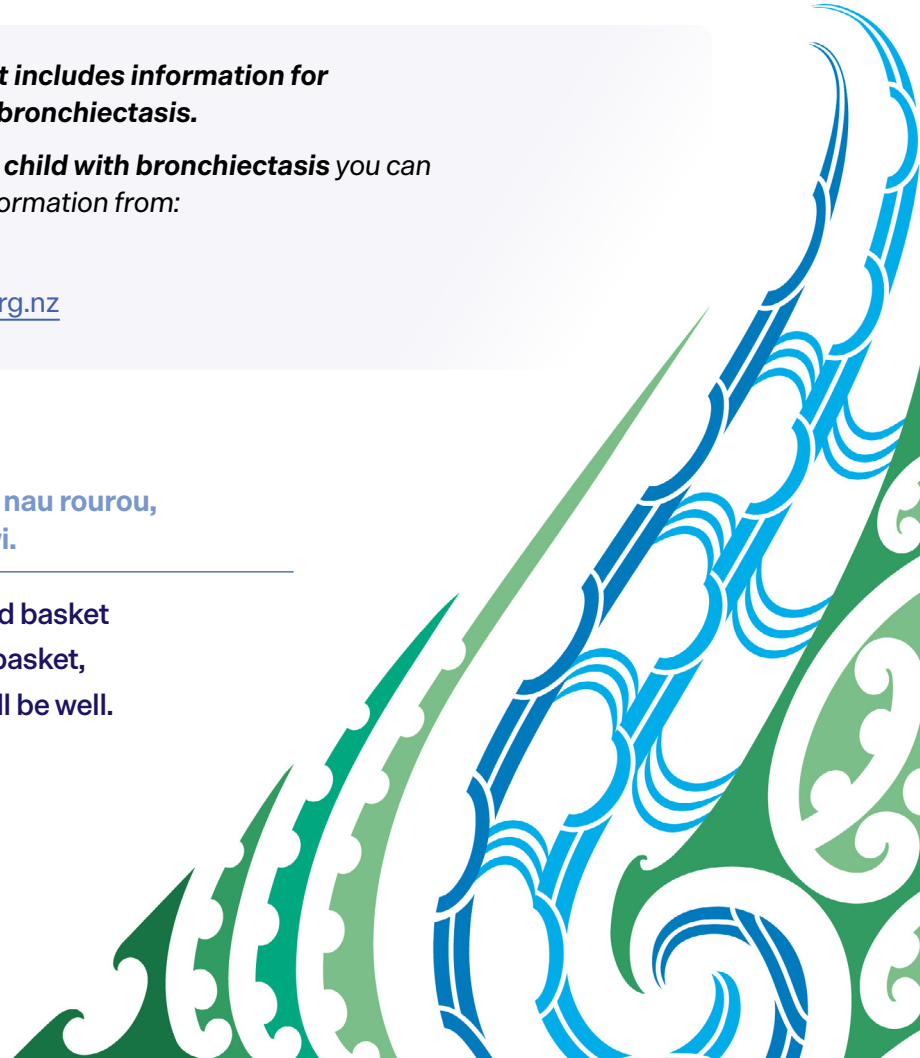
This booklet includes information for adults with bronchiectasis.

*If you have a **child with bronchiectasis** you can get more information from:*

KidsHealth
kidshealth.org.nz

Naku rourou, nau rourou,
ka ora ai te iwi.

With your food basket
and my food basket,
the people will be well.



Contents

What is bronchiectasis (pūkahukahu hauā)?

Bronchiectasis (pūkahukahu hauā) is a long-term lung illness where the airways (breathing tubes) are damaged and produce more sputum (phlegm/mucus) than healthy lungs. The sputum damages the airways and this causes symptoms such as a chesty cough, shortness of breath and repeated infections. Treatment cannot cure bronchiectasis but can help to control your symptoms and keep you well.

Bronchiectasis comes from the Greek words '**Bronkhia**' (airway) and '**Ektasis**' (widening). It is pronounced 'BRON-kee-EK-ta-sis'.

What happens in bronchiectasis?

In the lining layer of healthy lung airways, tiny hair-like structures called cilia work all the time to 'sweep' sputum up to the larger airways so that it is easy to cough out.

In **bronchiectasis**, where the airway walls are damaged, the cilia lining the airways are also damaged. This means that sputum is hard to cough up and can be trapped in the damaged areas of the airways.

The build-up of sputum means that bacteria can cause chest infections and scar the lungs. The infections can also cause damage to other areas of the lungs and cause more scarring. With good treatment, this damage can be slowed down. In children, research has shown that with early diagnosis and good treatment the damage may get better.

What causes bronchiectasis?

Bronchiectasis can occur at any age and for about half of people who have bronchiectasis, the cause is not known.

The most common cause is after a bad chest infection from the flu (influenza), measles, whooping cough (pertussis) or other viruses or bacteria.

There are some less common causes of bronchiectasis and your healthcare team will check if any of these are important for you.

Risk factors for bronchiectasis

Māori and Pacific peoples have a high risk of getting bronchiectasis than Pakeha people. The illness can be worse for Māori and Pacific peoples and they may spend more time in hospital. This can be for a lot of different reasons.

Although smoking is not a cause of bronchiectasis, smoking will make your bronchiectasis worse. You should avoid smoking cigarettes, cannabis or using a bong, vaping, or being in a place where other people are smoking.

How can bronchiectasis affect me (symptoms)?

Symptoms can vary between people. The most common symptom is a long-term cough with sputum. For some people this might only be a small amount of sputum and for others this can be as much as an egg-cupful or more everyday. A few people have a dry cough with no sputum to cough up.

Your cough and sputum amount is likely to be worse when you have a chest infection.

Other ways bronchiectasis might affect you include:

- Frequent chest infections
- Feeling tired
- Having difficulty with breathing or feeling short of breath
- Coughing up blood
- Chest pain or discomfort
- Sinus or nasal symptoms
- Urine leak (incontinence) when coughing
- Anxiety or depression

Remember to tell your healthcare team about the symptoms you have as these may be from bronchiectasis or they could be from other illnesses you have.

How is bronchiectasis diagnosed?

The healthcare practitioner will ask about your symptoms, your medical history and will listen to your lungs using a stethoscope.

If they think you might have bronchiectasis, they will arrange for you to have some tests and may refer you to a specialist respiratory service.

Some of the tests that might be done include:

- Blood tests
- Sputum tests
- Chest X-ray
- Breathing tests (spirometry)
- Computerised tomography (CT) scan.

This is a special lung scan that shows more detail than a X-ray. It is the test used to diagnose bronchiectasis.

How is bronchiectasis treated?

Bronchiectasis cannot be cured as it is a chronic illness that needs regular treatment. Treatments help you control your symptoms and cut down the number of chest infections you may have, helping to slow down further damage to your lungs.

Treating bronchiectasis is best done by a team of health professionals; they will work alongside you and your whānau to work out what is the best plan for you. This healthcare team may include your primary care doctor or nurse, specialist doctor, specialist nurse, physiotherapist, kaimahi hauora Māori (Māori health worker) or other clinicians or support workers.

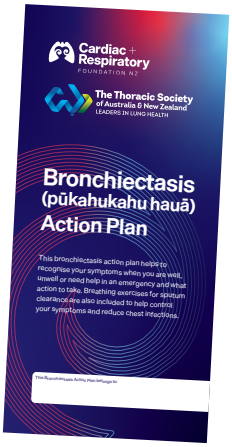
Treatments usually include:

- A personalised action plan (self-management plan) to help you control your symptoms
- Breathing exercises (chest physio) to help you clear the sputum from your lungs
- Antibiotics for any chest infections
- Teaching you ways to help with breathlessness
- Flu and COVID vaccines, and other recommended vaccines
- Advice on keeping your home warm and dry
- Advice and support to stop smoking and other lifestyle changes
- Treatment for other illnesses or problems that may be making your bronchiectasis worse, for example acid reflux (heartburn) or immune problems.

Personalised action plan (self-management)

A bronchiectasis action plan (or self-management plan) will help you to manage your symptoms on a daily basis. (See page 6).
This plan will advise you on:

- how often to do your breathing exercises for sputum clearance
- how to recognise a chest infection
- when to start antibiotic treatment.



Download: www.cardiacandrespiratory.org.nz/resource-hub/bronchiectasis-action-plan/

Breathing exercises for sputum clearance (chest physio)

I think that airway clearance is really under-rated. It's so important to clear your lungs regularly, because with this condition they can't clear themselves.

Breathing exercises for sputum clearance are one of the most important treatments for bronchiectasis. These exercises will help to clear the sputum from your lungs. It is best to do these exercises **every day** to help control your symptoms and cut down the number of chest infections you might get.

A physiotherapist will teach you the best breathing exercise/s for your treatment.

Read more: bronchiectasis.com.au/physiotherapy/techniques/the-active-cycle-of-breathing-technique

Some people find it helps to blow into a special handheld device to help clear their chest. If you do need one of these, then your physiotherapist will talk to you about the right one for you.

Your physiotherapist may also want you to breathe in a nebulised sterile saline (salt) solution. This can help loosen your sputum and make it easier to cough up. If are wanting to buy the special handheld device for sputum clearance or a nebuliser, talk to your healthcare professional first.

Antibiotics for chest infections

Signs that you have a chest infection might be:

- You are coughing more
- Your sputum is changing to a darker colour
- Your sputum amount has increased
- You are more tired and breathless
- You feel unwell
- You might have a fever
- You might have chest discomfort or pain

If you have signs of a chest infection, you may need a course of antibiotics. Usually you will take the antibotics for two weeks. Make sure you take the antibiotics as directed and finish the full course. Choosing the best antibiotic for you can depend on which bacteria are in your sputum, and whether you have any medicine allergies. Testing a sample of the

sputum helps guide your healthcare team to know the best choice of antibiotic for you.

It is very important to do your breathing exercises for sputum clearance more often when you are unwell.

If you have many chest infections, it may be recommended that you take antibiotics every day for a few months or longer. This is to try and stop the infections flaring up so often. If you have signs of a chest infection while you are on long-term antibiotics, tell your healthcare team, as you may need different antibiotics to treat the infection flare.

Talk to your healthcare team about having a course of antibiotics at home ready to use (called a 'back pocket' prescription) when you get a chest infection. Your team will talk to you about when you should start the 'back pocket antibiotics' and when you should see them for a checkup.

Breathlessness

Some people with bronchiectasis only get breathless when they have a chest infection. Others will be breathless on most days.

This Breathlessness Quick Reference Guide (see page 7) has tips for you on managing breathlessness.

Pulmonary rehabilitation is an exercise programme to help manage your shortness of breath. Classes are available for those people who have bronchiectasis. Ask your healthcare team to refer you to this programme.

Vaccines

To help protect yourself from some infections, get your flu vaccine every year. This is free for people who have bronchiectasis. Keep up-to-date with your COVID vaccination and booster doses as well.

You are also advised to have the pneumococcal vaccine, but this is not funded in New Zealand. Ask your healthcare team for information about the cost of this vaccine.

Lifestyle changes

Regular exercise is important. Regular exercise for about 20–30 minutes, 5–7 days a week, that makes you 'huff and puff' will help to keep you fit and can help to clear your sputum.

Eating a balanced and varied diet will help with your strength, fitness and help you fight infections.

Being able to keep fit and healthy is very important

Drink plenty of fluids, especially water, as this helps to prevent the sputum becoming thick and sticky.

Avoid smoking cigarettes, vaping, or smoking cannabis. Exposure to smoke or environmental pollutants will irritate the lungs and worsen bronchiectasis. If you smoke, ask your healthcare team for help to quit smoking.

Keep your home warm and dry as much as possible. Cold, damp housing and mould can worsen your bronchiectasis and general health. It is important to speak with your healthcare team if you are concerned about your housing.

You can check out more information from Healthy Homes Initiative at www.hhi.org.nz

Other health issues

Some other health issues can make your bronchiectasis worse. Treating these also help to keep you well.

Some people who cough a lot have leaks of urine when they are coughing. Pelvic floor exercises can help.

Find out more:
www.continence.org.nz/information-adults

Talk to your healthcare team and physiotherapist about this and they can give you more information.

Don't ignore symptoms. Talk with your healthcare team if you think your chest symptoms are getting worse.

Download: 'Living with Bronchiectasis – Things to Know' checklist

www.cardiacandrespiratory.org.nz/resource-hub/living-with-bronchiectasis-things-to-know/.

(shown on page 8)

What is the outlook for someone with bronchiectasis?

Bronchiectasis cannot be cured and your symptoms may change over time. Regular checkups with your primary healthcare team (general practice) are important so that your treatment plan can be adjusted for what suits you best.

We know that people worry about the impact of bronchiectasis in the future. In general, most people with mild bronchiectasis have a normal life expectancy with treatment suited to their needs.

If you have more severe bronchiectasis, you will likely have more flare-ups with chest infections and need to spend more time on your treatments, such as airway clearance.

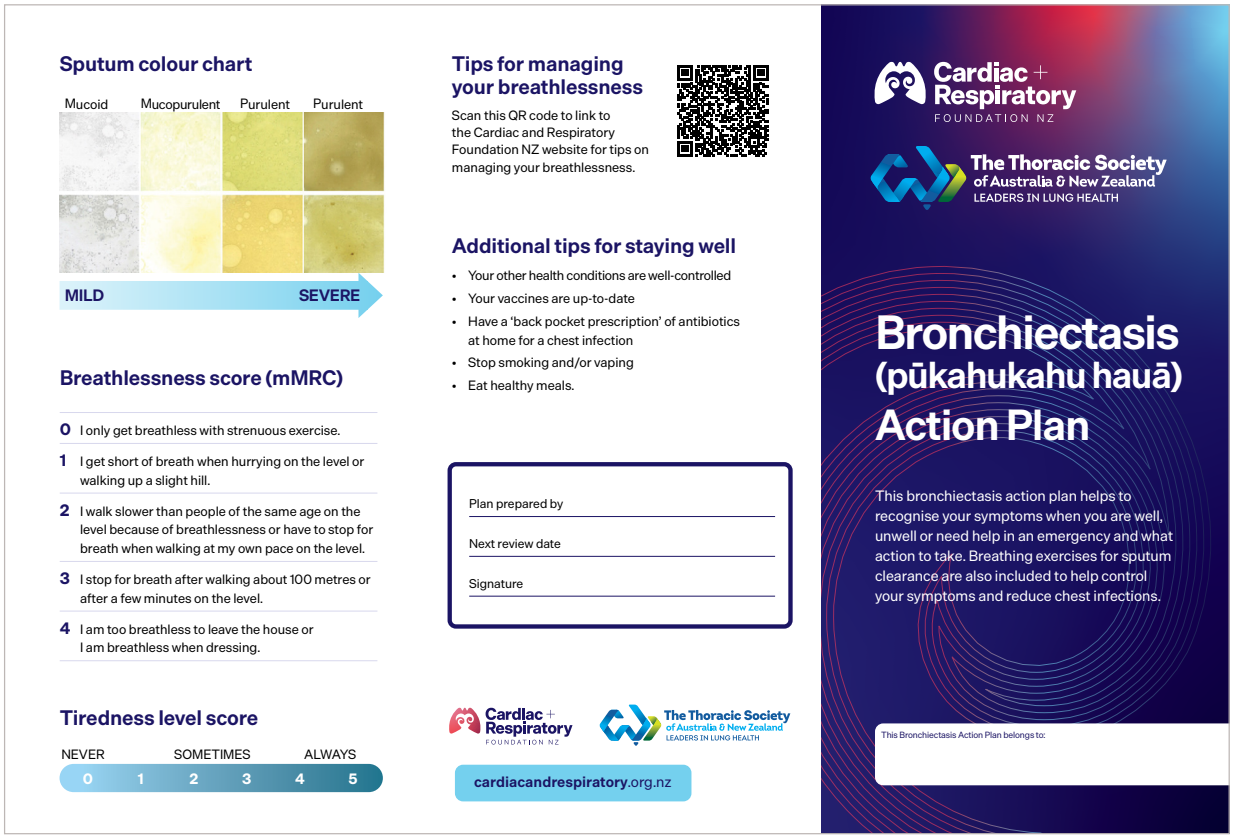
At its worst, bronchiectasis can affect life expectancy. Your healthcare team can tell you if this is a risk for you.

Remember – most people manage very well living with bronchiectasis.

Bronchiectasis resources

The following resources can be downloaded from the Cardiac and Respiratory Foundation's website:

Bronchiectasis Action Plan



Sputum colour chart

Mucoid | Mucopurulent | Purulent | Purulent

MILD → SEVERE

Breathlessness score (mMRC)

0 I only get breathless with strenuous exercise.

1 I get short of breath when hurrying on the level or walking up a slight hill.

2 I walk slower than people of the same age on the level because of breathlessness or have to stop for breath when walking at my own pace on the level.

3 I stop for breath after walking about 100 metres or after a few minutes on the level.

4 I am too breathless to leave the house or I am breathless when dressing.

Tiredness level score

NEVER SOMETIMES ALWAYS

0 1 2 3 4 5

Tips for managing your breathlessness

Scan this QR code to link to the Cardiac and Respiratory Foundation NZ website for tips on managing your breathlessness.

Additional tips for staying well

- Your other health conditions are well-controlled
- Your vaccines are up-to-date
- Have a 'back pocket prescription' of antibiotics at home for a chest infection
- Stop smoking and/or vaping
- Eat healthy meals.

Plan prepared by

Next review date

Signature

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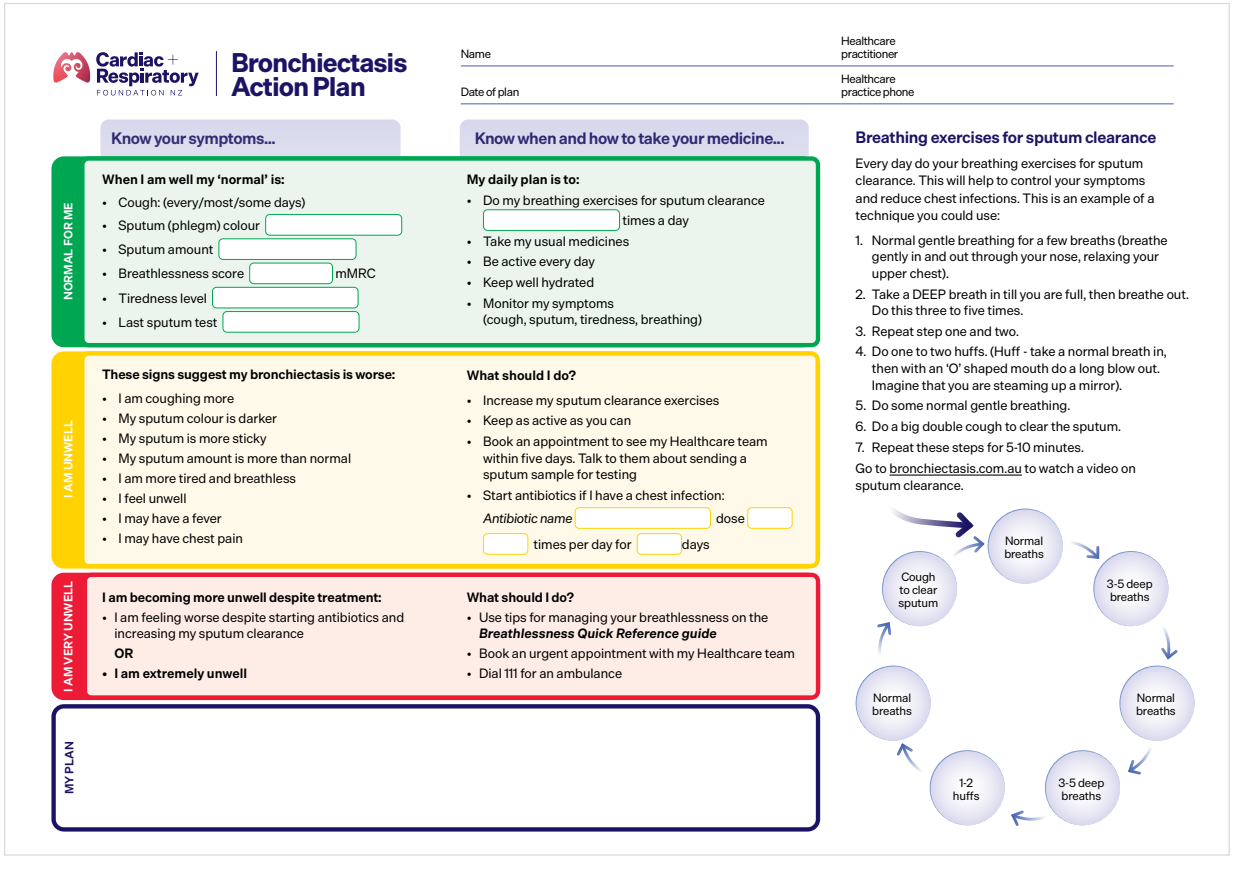
Bronchiectasis (pūkahukahu hauā) Action Plan

This bronchiectasis action plan helps to recognise your symptoms when you are well, unwell or need help in an emergency and what action to take. Breathing exercises for sputum clearance are also included to help control your symptoms and reduce chest infections.

This Bronchiectasis Action Plan belongs to:



Cardiac + Respiratory FOUNDATION NZ | Bronchiectasis Action Plan

Name

Healthcare practitioner

Date of plan

Healthcare practice phone

Know your symptoms...

Know when and how to take your medicine...

NORMAL FOR ME

When I am well my 'normal' is:

- Cough: (every/most/some days)
- Sputum (phlegm) colour
- Sputum amount
- Breathlessness score mMRC
- Tiredness level
- Last sputum test

My daily plan is to:

- Do my breathing exercises for sputum clearance times a day
- Take my usual medicines
- Be active every day
- Keep well hydrated
- Monitor my symptoms (cough, sputum, tiredness, breathing)

I AM UNWELL

These signs suggest my bronchiectasis is worse:

- I am coughing more
- My sputum colour is darker
- My sputum is more sticky
- My sputum amount is more than normal
- I am more tired and breathless
- I feel unwell
- I may have a fever
- I may have chest pain

What should I do?

- Increase my sputum clearance exercises
- Keep as active as you can
- Book an appointment to see my Healthcare team within five days. Talk to them about sending a sputum sample for testing
- Start antibiotics if I have a chest infection:
  Antibiotic name dose times per day for days

I AM VERY UNWELL

I am becoming more unwell despite treatment:

- I am feeling worse despite starting antibiotics and increasing my sputum clearance

OR

- **I am extremely unwell**

What should I do?

- Use tips for managing your breathlessness on the ***Breathlessness Quick Reference guide***
- Book an urgent appointment with my Healthcare team
- Dial 111 for an ambulance

MY PLAN

Breathing exercises for sputum clearance

Every day do your breathing exercises for sputum clearance. This will help to control your symptoms and reduce chest infections. This is an example of a technique you could use:

1. Normal gentle breathing for a few breaths (breathe gently in and out through your nose, relaxing your upper chest).
2. Take a DEEP breath in till you are full, then breathe out. Do this three to five times.
3. Repeat step one and two.
4. Do one to two huffs. (Huff - take a normal breath in, then with an 'O' shaped mouth do a long blow out. Imagine that you are steaming up a mirror).
5. Do some normal gentle breathing.
6. Do a big double cough to clear the sputum.
7. Repeat these steps for 5-10 minutes.

Go to bronchiectasis.com.au to watch a video on sputum clearance.

Breathlessness Quick Reference Guide

Cardiac + Respiratory FOUNDATION NZ

Breathlessness Quick Reference

Tips for managing breathlessness at home

Conserve your energy and pace yourself

Plan your day: Will I have time for a break?

Prioritise tasks: What's most important?

Adapt tasks: Can it be done easier?

Delegate: Can someone else help?

Use a fan

Use either a hand-held fan, freestanding fan, a desktop fan, or the breeze through an open door or window.

Hold the fan about 15 centimetres from your face so you can feel the air on your top lip.

Change your position

- Lean forward with arms resting on your knees or the sides of a chair and position knees slightly apart.

- Lean forward over a table or surface resting on your arms up on some pillows or similar.

- Lean forward with arms resting on a surface e.g. supermarket trolley, or back of a chair. Alternately rest standing with your back against a wall.

Breathing techniques

- **Breathing control/tummy control:** Place hands on tummy, breathe in (tummy goes out), breathe out (tummy goes in).
- **Pursed-lip breathing:** Breathe in through your nose, breathe out like through a straw.
- **Blow as you go:** Breathe in before exerting effort, breathe out while making the effort.
- **Paced breathing:** Breathe in for a few counts, breathe out for a few counts.
- **Breathe around the rectangle:** breathe in on the short side, breathe out on the long side.

Distraction and meditation

Focus on things that bring you pleasure or calmness, such as mindfulness or meditation.

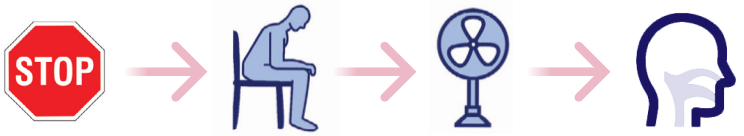
Exercise

Regular activity should be done in moderation. Ask to be referred to your local pulmonary rehabilitation programme.

Take your medication

Use your prescribed medication as directed. If you have difficulty managing your breathlessness, talk to your healthcare professional as there may be other medications that may help.

When feeling breathless...



Stop what you're doing → Rest your position → Use your fan → Start your breathing technique

cardiacandrespiratory.org.nz

Living with Bronchiectasis – things to know

Living with Bronchiectasis
(pūkahukahu hauā)

Things to know

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This checklist has the information that will help you understand and manage your bronchiectasis symptoms.

	STATEMENT	EXPLANATION	
	**I have had a chest CT scan that shows that I have bronchiectasis.**	A CT scan of your chest is an X-ray machine that gives a detailed picture of your lungs. This can show where and how much bronchiectasis you have in your lungs.	☐
	**I understand what bronchiectasis is and my healthcare team have explained where to find more information.**	Understanding bronchiectasis, the causes and the treatments will help to better manage your health condition. → *healthify.nz/health-a-z/b/bronchiectasis*	☐
	**I know to regularly check my sputum (phlegm) colour, stickiness and volume.**	Knowing your 'normal' is important. This way you can more quickly recognise when you may have an increase of your bronchiectasis symptoms.	☐
	**I know my symptoms of a chest infection.**	Being able to recognise an early change in your bronchiectasis symptoms means you can start treatment earlier. Symptoms may include: feeling unwell, more sputum, sputum colour change, feeling more tired and more breathless than normal.	☐
	**I know when to start my emergency supply of antibiotics.**	Talk to your healthcare team about having an emergency supply of antibiotics at home for when you are unwell and have signs and symptoms of a chest infection – sometimes called a back pocket prescription. Also check on steps to take if you are not getting better.	☐
	**I have been taught sputum clearance exercises and understand the importance of doing these every day.**	Sputum clearance exercises will help to clear sputum (phlegm) from your lungs and reduce the risk of a chest infection. These are taught to you by a physiotherapist and can include breathing through a device (PEP device) and nebulising with prescribed saline (salty water). → *bronchiectasis.com.au/resources/airway-clearance-videos*	☐
	**I have a written bronchiectasis action plan (self-management plan).**	A personalised action plan will help you to manage your symptoms on a daily basis. It will help you to know when you should start antibiotics and when to increase your sputum clearance techniques	☐
	**I know that regular exercise and eating well are important.**	Regular exercise (5-7 days a week) that makes you 'huff and puff' will help to keep you fit and can help to clear your sputum (phlegm). Eating a balanced and varied diet will help with your strength, fitness and help you fight infections.	☐
	**If my bronchiectasis makes me breathless my healthcare team have discussed the benefits of a pulmonary rehabilitation programme.**	Whole body fitness is important as your muscles need to be strong to support your breathing muscles. Pulmonary rehabilitation is an exercise programme that is designed for those who have a lung condition and helps to improve the management of your symptoms. Ask your healthcare team for a referral to your local programme if you have breathlessness.	☐
	**I get my regular free vaccines.**	Make sure you get your flu vaccine every year. This is free to people who have a health condition such as bronchiectasis (pūkahukahu hauā). You should keep up-to-date with your COVID vaccination and booster doses. Ask your primary care team about the pneumonia vaccine (there is a $ cost for this vaccine).	☐
	**If I smoke, vape or use cannabis I have been encouraged to stop.**	If you smoke cigarettes, vape, or smoke cannabis, it is very important to stop. Ask your healthcare team about how to quit and for a referral to a smoking cessation programme. → *healthify.nz/hauora-wellbeing/s/smoking-treatments-for-quitting-smoking*	☐
	**I have regular appointments with my healthcare team.**	A regular review with your primary healthcare team (general practice) is encouraged, as bronchiectasis may change over time and your treatment plan may need to be adjusted.	☐

Cardiac + Respiratory FOUNDATION NZ

The Cardiac and Respiratory Foundation NZ is the trusted leader in cardiac and respiratory health knowledge and advocacy for patients and health professionals in Aotearoa New Zealand.

Our purpose is to develop and support cardiac and respiratory health evidence-based practices through education, training, research and advocacy.

cardiacandrespiratory.org.nz

The Thoracic Society of Australia & New Zealand
LEADERS IN LUNG HEALTH

The Thoracic Society of Australia and New Zealand (TSANZ) lead, support and enable all health workers and researchers to prevent, cure and relieve disability caused by lung disease.

TSANZ is committed to serving the professional needs of its members by improving knowledge and understanding of lung disease, with the ultimate goals being to prevent respiratory illness through research and health promotion and to improve health care for people with respiratory illness.

thoracic.org.au

This booklet should not be used in place of health professional advice. For further information on this topic please talk to your healthcare practitioner or Māori health provider. The content in this booklet is not to be altered or reproduced in part or whole without written permission from the Cardiac and Respiratory Foundation NZ.