

Chronic Obstructive Pulmonary Disease (COPD) Programme Patient Handbook



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Preface

The Chronic Obstructive Pulmonary Disease (COPD) programme at Ng Teng Fong General Hospital is the first in Singapore to integrate a spectrum of services for patients across multiple sites such as polyclinic, general practitioner (GP) clinics, acute hospital, community hospital and home hospice care.

COPD is a debilitating disease that often presents as a chronic cough and shortness of breath. If it is not detected and treated early, COPD can affect one's quality of life and cause difficulty in walking long distances, climbing the stairs and participating in activities of daily living and work. COPD can cause acute exacerbation or an attack that requires hospital admission and in severe cases, lead to death. With early intervention and better management of the disease, progression of COPD can be delayed or even prevented.



Under this programme, COPD patients benefit from a coordinated and multi-disciplinary approach in the management of their medical condition. Dedicated coordinators and a team of doctors, nurses, respiratory technologists, pharmacists, physiotherapists and medical social workers will:

- Develop a customised care plan for each patient
- Empower patients towards self-management through education
- Monitor patients' disease progression
- Coordinate referrals and patients' appointments across care sites

By working closely with patients on the COPD programme, we hope to improve the life expectancy of COPD patients and improve their quality of life.

**For more information on this programme
or to register, please contact us at**
1800-JHS-COPD / 1800-547-2673
Mon - Fri, 8.30am - 5.30pm
JHCampus_COPD_ICP@nuhs.edu.sg

What is COPD?

COPD stands for “Chronic Obstructive Pulmonary Disease”.¹

Chronic means it will not go away

Obstructive means partly blocked

Pulmonary relates to the lungs

Disease means sickness

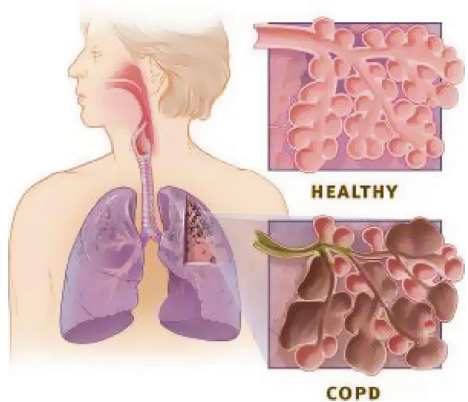
Individuals with COPD may have trouble breathing or have a cough that will not go away.

Airways carry air to our lungs and get smaller and smaller like branches of a tree. At the end of each tiny branch are many small air sacs similar to tiny balloons.

In healthy people, each airway is clear and open, and every tiny air sac fills up with air, and allows air to go out quickly. In COPD patients, the openings of the airways are smaller and insufficient air enters because:

- The walls of the airways get thick and swollen
- The airways are squeezed by small muscles around them
- The airways produce mucus that you cough up

The tiny air sacs cannot empty and the lungs feel very full. A case manager on the COPD Programme can help you understand the problems you have with your lungs.



¹ Global Initiative for Chronic Obstructive Lung Disease. Patient Handbook. 2011.

² T.P Ng et al. Respiratory Medicine (2009) 103, 895-901

What cause COPD?

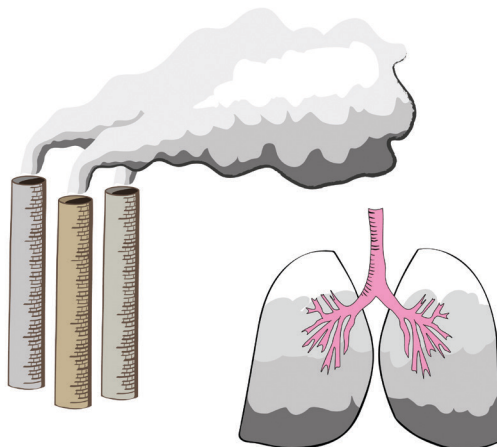
Approximately 8 out of every 100 people in Singapore have COPD². Smoking is by far the main cause of COPD, but it is not the only cause. For a very small minority of people, the primary cause is a genetic predisposition or exposure to environmental pollutants.

Smoking

The inflammation in the respiratory system caused by smoking triggers many body processes to damage the airways and degrade lung tissue. Although being a smoker is the biggest risk factor for COPD, passive smoking can also contribute to the disease. Even if you are not a smoker, you may be at risk of COPD from inhaling the cigarette smoke of a spouse, parent or a smoker you live with or spend a lot of time with.

Air pollution

Prolonged exposure to toxic fumes and industrial smoke and dust can increase your risk of COPD. The main offenders of everyday exposure are sulfur dioxide (a chemical emitted in car exhaust), factory smoke and black smoke, which contains particulate material like soot (part of air pollution). Cadmium, a chemical used in some factories, is believed to increase the risk of COPD. In developing countries, a significant cause of COPD is cooking in unventilated spaces, where smoke from cooking fills the indoor air. Compared with smoking, however, air pollution is a minor cause of COPD.



The role of infections

Bacteria and viruses do not cause COPD, but they may worsen symptoms. Patients may experience flare-ups with increased shortness of breath and cough. Such flare-ups may be caused by certain respiratory infections.

People with COPD are also more likely to get respiratory infections. Doctors suspect that bacteria play a role because they are especially common in the airways of people with chronic bronchitis. Viruses that cause the common cold and flu can also cause flare-ups of COPD. To prevent this, doctors advise people with lung disease to get a flu vaccination every year.

How does COPD develop?

COPD develops gradually as changes in the airways and lungs happen over a period of many years. In most people with the disease, problems stem from inflammation that occurs when irritants, most often cigarette smoke, damages the respiratory tract over the years. Such irritants damage airways and the glands responsible for producing mucus to lubricate the airway walls.

What are the symptoms of COPD?

The main symptoms include:

- Breathlessness
- Persistent cough
- Wheezing
- Increased sputum or phlegm production

People often confuse some of these symptoms with getting older, being 'out of shape' and dismiss it as a long-standing problem. However, breathlessness is a sign that the lungs are not working properly and many people live with breathlessness and do not realise that something can be done to help them.





How is COPD diagnosed?

Contact your case manager or doctor if you have problems breathing or a cough that lasts for more than a month. You may be referred for tests to evaluate your breathing.

These may include a:

- Breathing test (also called lung function test or spirometry). An easy and painless test, you will be asked to breathe hard into a rubber tube connected to a machine called a spirometer.
- Chest x-ray that may be needed to exclude other diagnoses.

How can I help my condition?

There is currently no cure for COPD. However, medications are available to treat symptoms and complications. Lifestyle changes can impact the progression of the condition significantly.

Quit smoking

It is never too late to quit. You can start to see benefits within a few days regardless of how old you are or how long you have smoked. Quitting helps you live longer and stay healthier. People who stop smoking before 50 years old also reduce their risk of dying in the next 15 years by half, compared to those who keep smoking. Ex-smokers enjoy a higher quality of life and have fewer illnesses like colds and flu. They also feel healthier than people who continue smoking.

Ask for help from your doctor, pharmacist or case manager, who may be able to prescribe you pills, a special gum, or special patches for your skin to help you quit smoking.



Get vaccinated

Viral or bacterial Infections, such as flu or pneumonia can infect people with COPD easily as they are more prone to infections than healthy people. COPD patients are recommended to get a flu and pneumonia vaccination every year if they are over 65 years old.

Understand your COPD medication

Understanding your medication and taking them regularly is a very important step to live better with COPD. Medication improves your breathing and reduces uncomfortable symptoms if they are taken correctly. Many types of medication are used to treat COPD.

The most important ones are:

- Bronchodilators, which prevent and reverse the tightening of muscles around the airways (bronchospasm).
- Anti-inflammatories, which reduce the inflammation and swelling of your airways. If tightening and inflammation are controlled, problems with wheezing and shortness of breath should improve.
- Antibiotics may be used to treat infections, acute exacerbations, or worsening attacks.



Exercise and good nutrition

COPD makes your lungs and heart work harder to carry oxygen to all parts of your body. Control your weight to reduce the strain on your heart and lungs and work with your doctor or physiotherapist to develop an exercise programme to strengthen your chest muscles and improve your breathing. Aerobic exercises, such as walking and riding a bike also increases your stamina or “staying power” and improve your ability to carry out daily activities. Strength training for the upper body offers similar benefits.

Good health is impossible without eating right. Speak with your doctor, case manager or dietitian on ways to plan and prepare healthy meals. A healthy weight is very important in the control of COPD. Eat several small meals over the day instead of three large ones. Your stomach is directly under your lungs and eating a big meal pushes against your diaphragm and makes it hard for you to breathe. Drink plenty of fluids to keep mucus in your airways thin and free-flowing.

Conserve energy and control stress

Most people with COPD are required to pace themselves to avoid getting worn out throughout the day. Conserve energy with practical tips offered by our healthcare professionals. These tips will help you to feel more accomplished without getting short of breath.

Control breathing

Pursed-lip breathing can help you relax and push more oxygen into your lungs to prevent a shortness of breath. Practice this breathing technique until it works for you. Your physiotherapist can advise on these breathing exercises.

Pulmonary rehabilitation

Pulmonary rehabilitation aims to help you control or reduce breathlessness. It re-conditions your body so that you feel less short of breath. With exercise and education, people with COPD can reduce their dependence on medication, experience fewer hospital admissions, enjoy better quality of life, and improve life expectancy.

Your doctor and physiotherapist will tailor a suitable rehabilitation programme for you, which may include physical training, disease education, and nutritional, psychological and behavioural intervention.

By attending pulmonary rehabilitation classes, you acquire knowledge on what is wrong with your lungs, what your medication does, when to call your health care provider, and how to prevent yourself from being hospitalised. During group sessions, you can also meet with others on this journey to share concerns and ways to live better with COPD.

Oxygen therapy

If your disease worsens and your lungs cannot supply enough oxygen to meet your body's needs, your doctor may prescribe you with home oxygen therapy. Oxygen cylinders are prescribed to patients who require relief for short periods of breathlessness. An oxygen concentrator will be recommended for patients who benefit from oxygen for a longer duration every day, even while they are asleep. Oxygen concentrators are a convenient way to supply a steady source of oxygen to patients.

Having too little oxygen in your blood is a condition known as hypoxemia. Symptoms include sleepiness, morning headaches, irritability, poor concentration, worsening breathlessness, and fluid retention. Low oxygen levels also add strain to the heart, causing it to pump less efficiently. Many people resist using oxygen for fear of their dependence on it.

However, oxygen therapy actually improves energy and your breathing to help you embrace a better quality of life. It improves the oxygen exchange in your body and prevents certain COPD complications. Use oxygen as directed or check with your doctor or case manager on how long to use them for.



Manage acute exacerbations

Acute exacerbation means a worsening, or 'flare-up' of symptoms/bad attack, usually caused by an infection. The cause of a 'flare-up' is not always known, but people with COPD tend to have repeated infections. Prevent infections or detect them early by being aware of your symptoms.

Signs of acute exacerbations:

- Changes in your mucus colour and amount
- More mucus or difficulty coughing mucus up from your lungs
- More severe cough or frequent coughing
- Cold or flu symptoms, such as runny nose, sore throat, achy feeling, chills, fever, or feeling of feverishness
- Increased shortness of breath with activities or at rest
- Wheezing or whistling sound in the chest



It is very important to recognise symptoms early to prevent bad attacks or a hospitalisation. Participate in a treatment plan with your doctor or case manager to become the master of your disease.

- Follow your doctor's prescription carefully and complete the full course of antibiotics even if you start to feel better
- Use cough mixtures to bring up extra mucus
- Talk to your doctor about oxygen therapy. It may need to be changed
- Take other medication, such as steroids and bronchodilators during an acute exacerbation even if you do not normally do so

How do I plan ahead?

Planning for end-of-life circumstances is necessary if you have advanced COPD. Discuss your concerns with your doctor, case manager or medical social worker, and involve your family to ensure that your wishes are respected even when you are too ill to communicate them.

Care near the end-of-life

It has been shown that the quality of end-of-life care in COPD patients worsens as compared to patients living with other diseases. COPD patients have poorer symptom control, spend progressively more time in the hospital towards their end of life and are more likely to die in hospitals. A major area of end-of-life care for COPD patients involves preparing for the dying process, as well as determining the choice of interventions during the end phase of life.

Speak to your doctor, case manager or healthcare professionals to know more.

Remember:

Doctors cannot cure COPD, but they can help to improve your symptoms and slow down the damage to your lungs.

When you follow the instructions of your doctor and your healthcare professionals,

- You will feel less short of breath
- You cough less
- You become stronger and get around better
- You are in a better mood

Notes:

Notes:

For more information

Ng Teng Fong General Hospital and Jurong Community Hospital

1 Jurong East St 21, Singapore 609606

www.ntfgh.com.sg | www.jch.com.sg

Clinic opening hours

Monday – Friday: 8.30am – 5.30pm

Saturday: 8.30am – 12.30pm (Selected clinics only*)

Dental Clinic: Monday – Thursday: 8.00am – 5.30pm, Friday: 8.00am – 5.00pm

*Please refer to our websites for more details.

General enquiries & appointments

General enquiries line: 6908 2222 (24-hr)

Fax: 6716 5500 | Email: contactus@nuhs.edu.sg

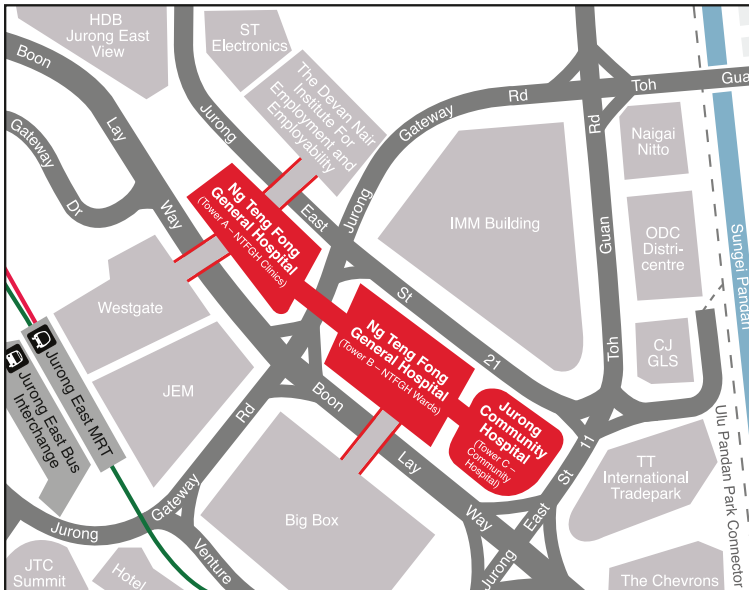
Appointment line: 6908 2222 (Monday – Friday: 8.00am – 5.30pm, Saturday: 8.00am – 12.30pm)

Fax: 6716 2200 | Email: appointment@nuhs.edu.sg

Dental appointment line: 6716 2233 (Monday – Friday: 8.00am – 5.30pm)

Fax: 6716 2200 | Email: JHCampus_Dental@nuhs.edu.sg

Getting there



By train

Alight at Jurong East MRT Station

By bus

Jurong East Bus Interchange

41, 49, 51, 52, 66, 66B, 78, 78A, 79, 79A, 97, 97E, 98, 98M, 105, 143, 143M, 160, 160A, 160M, 183, 183B, 197, 333, 334, 335, 506

Along Boon Lay Way

49, 99, 333, Private bus service 625, 990

Disclaimer:

The information in this brochure is meant for educational purposes and should not be used as a substitute for medical diagnosis or treatment. Please seek your doctor's advice before starting any treatment or if you have any questions related to your health, physical fitness or medical condition. Information is accurate at the time of printing.