## Increasing COPD severity

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical symptoms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● few symptoms</td>
<td>● breathless on level ground</td>
<td>● breathless on minimal exertion</td>
</tr>
<tr>
<td>● breathless on moderate exertion</td>
<td>● increasing limitation of daily activities</td>
<td>● daily activities severely curtailed</td>
</tr>
<tr>
<td>● little or no effect on daily activities</td>
<td>● recurrent chest infections</td>
<td>● exacerbations of increasing frequency and severity</td>
</tr>
<tr>
<td>● cough and sputum production</td>
<td>● exacerbations requiring oral corticosteroids and/or antibiotics</td>
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</tbody>
</table>

| Typical lung function | FEV<sub>1</sub> ~ 60-80% predicted | FEV<sub>1</sub> ~ 40-59% predicted | FEV<sub>1</sub> < 40% predicted |

## Confirm diagnosis.
Confirm post-bronchodilator airflow limitation (FEV<sub>1</sub>/FVC < 0.70) using spirometry. Any pattern of cough with or without chronic sputum production may indicate COPD.

## Optimise function. Prevent deterioration. Develop a plan of care.

### Non-pharmacological interventions

- **Reduce risk factors**
  - Avoid exposure to risk factors including tobacco smoke and air pollution, support smoking cessation, recommend annual influenza vaccine and pneumococcal vaccine according to immunisation handbook.

- **Optimise function**
  - Encourage regular exercise and physical activity, review nutrition, provide education, develop GP management plan and written COPD action plan (and initiate regular review).

- **Optimise treatment of co-morbidities**
  - Especially cardiovascular disease, anxiety, depression, lung cancer and osteoporosis.

- **Refer**
  - Symptomatic patients to pulmonary rehabilitation.

## Pharmacological interventions (inhaled medicines)

### Start with short-acting relievers:
- (used as needed):
  - SABA (short-acting beta<sub>2</sub>-agonist) OR SAMA (short-acting muscarinic antagonist)

### Add long-acting bronchodilators:
- LAMA (long-acting muscarinic antagonist) OR LABA (long-acting beta<sub>2</sub>-agonist)
  - Consider need for combination LAMA/LABA depending on symptomatic response.

### Consider adding ICS (inhaled corticosteroids):
- Single inhaler triple therapy (ICS/LABA/LAMA) may be suitable.*

*In patients with ≥2 severe exacerbations requiring hospitalisation or ≥3 moderate exacerbations in the previous 12 months, AND significant symptoms despite LAMA/LABA or ICS/LABA therapy. OR in patients stabilised on a combination of LAMA, LABA and ICS.

### Consider advanced care planning
- Domiciliary oxygen therapy, long-term non-invasive ventilation, surgery and bronchoscopic interventions, if indicated.

## Stepwise Management of Stable COPD

### Reduce risk factors

- Avoid exposure to risk factors including tobacco smoke and air pollution, support smoking cessation, recommend annual influenza vaccine and pneumococcal vaccine according to immunisation handbook.

### Optimise function

- Encourage regular exercise and physical activity, review nutrition, provide education, develop GP management plan and written COPD action plan (and initiate regular review).

### Optimise treatment of co-morbidities

- Especially cardiovascular disease, anxiety, depression, lung cancer and osteoporosis.

### Refer symptomatic patients to pulmonary rehabilitation

### Initiate advanced care planning

### Manage advanced lung disease with domicile oxygen therapy, long-term non-invasive ventilation, surgery and bronchoscopic interventions, if indicated.

## Refer patients to Lung Foundation Australia for information and support - Freecall 1800 654 301

Lung Foundation Australia has a range of resources to promote understanding of COPD and assist with management.

Based on The COPD-X Plan: Australian and New Zealand Guidelines for the Management of COPD and COPD-X Concise Guide

**Refer to PBS criteria: www.pbs.gov.au**

Register at copdx.org.au to receive an alert when the COPD-X Guidelines are updated

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**Relievers**

<table>
<thead>
<tr>
<th>SABA: Short-acting beta₂-agonists</th>
<th>SABA</th>
<th>SAMA</th>
<th>LAMA</th>
<th>LABA</th>
<th>LAMA/LABA</th>
<th>ICs/LABA</th>
<th>ICs/LABA/LABA</th>
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<tbody>
<tr>
<td>salbutamol (Ventolin™, Aptomir™, Asmol™)</td>
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**Maintenance**

**LAMAs: Long-acting muscarinic antagonists**

- INCRUSE® (umeclidinium)
- SPIRAVA® (tiotropium)
- ZONDA® (budesonide)

**LAMA/LABA combinations**

- Ultibro®/Respimat®
- Symbicort®
- Ellipta®
- Seretide®/Salmoplex®

**LABAs: Long-acting beta₂-agonists**

- Onbrez®
- Foradil®
- Seretide®

**ICS/LABA combinations**

- Fluticasone propionate/salmeterol (Serevent®/Salmepro®)
- Umeclidinium/vilanterol (Anoro®)
- Fluticasone propionate/beclometasone (Pulmicort®)

**ICS: Inhaled corticosteroids (for patients with COPD and Asthma)**

- Fluticasone propionate
- Fluticasone furoate
- Fluticasone/umeclidinium

**Flare Up Medicines**

1. Antibiotics (Refer to Therapeutic Guidelines: Antibiotic: www.tg.org.au)
2. Oral steroids (prednisone, prednisolone)

**Notes**

- Handihaler, Breezhaler, Zonda and Aerolizer devices require a capsule to be loaded into the device. All other devices are preloaded.
- Where possible, metered dose inhalers (MDI) should be used with a spacer
- ICS monotherapy is not indicated for COPD without co-existing asthma
- Shaded = PBS listed for asthma only

**Watch inhaler device technique videos on your device through ZAPPAR**

1. Download ZAPPAR from Google Play or iTunes app store.
2. Open the app.
3. Scan this page.
4. Choose the inhaler device video.

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**Green tick indicates therapies that can be used together**