

# Breathing *easier*

A woman with her arms raised in a field of daisies under a blue sky with clouds. She is wearing a blue and white striped long-sleeved shirt and white pants. The scene is bright and sunny, suggesting a clear day.

**A Guide for Asthma and COPD Patients  
in the Champlain Region**

Second Edition

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Second Edition

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Champlain Lung Health Network  
c/o Champlain Local Health Integration Network  
1900 City Park Drive, Suite 204  
Ottawa, Ontario, Canada K1J 1A3  
Tel: 613-747-6784 or 1-866-902-5446  
Fax: 613-747-6519  
E-mail: [champlain@lhins.on.ca](mailto:champlain@lhins.on.ca)

This lung patient guide is also available online at [www.champlainlhins.on.ca](http://www.champlainlhins.on.ca) and at [www.champlainhealthline.ca/listServices.aspx?id=10513](http://www.champlainhealthline.ca/listServices.aspx?id=10513)

#### **Disclaimer**

*This guide is designed to provide information on known lung health resources in the Champlain region, at the time of publication. It was created by a lung patient for other lung patients' general information. This guide cannot be used to diagnose or treat asthma, COPD or any other condition. It cannot be used as a substitute for obtaining medical advice, nor for seeking treatment from a qualified physician. Individuals with breathing problems should seek treatment from a qualified health care provider. The author and funders are not responsible for errors or omissions contained in this guide.*

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## ***Ode to 3 Raymond Street***

*COPD is our affliction*

*Here we trade it for affection*

*When work is done and chairs put back*

*We settle down for talk and a snack*

*Our group is like a family  
and that is what we try to be*

*We have concern for one another  
just like a sister or a brother*

*So that is why, you see  
3 Raymond Street is the place to be!!*

Copyright © by Don Clarke

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Mr. Don Clarke (1927–2011) wrote this poem in honour of The Lung Association's Shortness of Breath Maintenance Program, previously located at 3 Raymond Street in Ottawa, Ontario, and currently located at 2319 St. Laurent Boulevard in Ottawa, Ontario. Thank you to Mrs. Vera Clarke for granting permission to reprint Mr. Clarke's poem.

## Preface

**Between 2008–2009, the Champlain Local Health Integration Network (LHIN) distributed 10,000 copies of the first edition of *Breathing Easier to hospitals, health care providers, asthma and COPD programs, community health and resource centres, and the general public in Eastern Ontario. On April 15, 2009, the Queensway Carleton Hospital hosted a special media event to officially launch the first edition of *Breathing Easier* and to demonstrate spirometry, a simple breathing test to diagnose lung disease. The event garnered extensive media coverage and the Champlain LHIN was inundated with requests from the public for copies of the lung patient guide.***

Evidently, this guide filled a need in the community—a need that even I underestimated when I was first inspired to write a resource book for asthma patients in my community following a severe respiratory infection and life-threatening asthma flare-up in 1994. It wasn't the first—or the last time—that I had a close call with asthma.

As a child, my asthma and allergy treatment plan consisted of hiding under furniture to avoid the dreaded camphor, eucalyptus oil, and menthol chest rub that lurked in the medicine cabinet (the current product label warns that it is not for use in individuals with chronic lung disease or shortness of breath); oatmeal baths when I broke out in hives; and rushed trips to the emergency room, lying on a pillow on the front seat of my dad's car (without a seat belt, of course), fervently hoping that I would get there in time. When I was eight years old, I almost didn't arrive in time. I remember the tortuous trip to CHEO in a taxi late at night. I remember my mom carrying me in her arms into the ER, the nurse whisking me away, and the team of doctors and nurses who saved me. I was cyanotic when I arrived and spent six days in the hospital. I remember leaving the hospital having trouble walking, that horrible asthma flare-up feeling in my lungs, fearing that this was how the rest of my life would unfold.

Like so many other asthma patients growing up in the 1970s, I received antibiotics and allergy shots, but I suffered through bronchitis, pneumonia, asthma attacks, and allergic reactions without the plethora of asthma and allergy medications that are available today. Everyone smoked around us. Smoke-free laws were 30 years away. I was exposed to second-hand

smoke at home, at relatives' homes, at school (my classroom was opposite the teachers' smoking lounge), at university, at work, in shopping malls, in medical buildings, and even in the taxi that drove me home after an asthma nebulizer treatment in the ER. The Epipen®, used to treat both life-threatening allergic reactions and asthma attacks, didn't come onto the market until 1980, replacing the cumbersome Ana-Kit syringe. The first Canadian guidelines for the diagnosis and management of asthma weren't published until 1989<sup>1</sup> and the first guidelines for the emergency management of asthma in adults weren't published until 1996.<sup>2</sup> The City of Ottawa didn't graduate its first paramedics until 1994 and didn't adopt the 911 system until 1998. It's a miracle that anyone with lung disease survived all those years without the benefits of our current medical system. On the upside, spirometry was invented almost 2,000 years ago; prednisone was discovered in 1950 and was commercially available in 1955; and the first peak flow meter was developed in 1959.<sup>3</sup>

**After my asthma came back with a vengeance in 1994,** I had uncontrolled symptoms for several years. By 1998, I was cyanotic yet again. My asthma treatment plans weren't working. And the city of Ottawa needed to pass smoke-free bylaws STAT! I felt like I was on my own, trying to figure out how to breathe, until 1999, when I met Janice Bissonnette, a registered nurse and asthma educator at the Lung Association's Asthma Education Centre in Ottawa. Janice ensured that I received the proper medical treatment and taught me how to manage asthma symptoms. Rosario Holmes, a registered respiratory therapist and certified respiratory educator at the Asthma Education Centre, continued to provide excellent care and later taught me respiratory rehabilitation exercises to help me regain my strength and to improve my asthma control. Janice and Rosario inspired me to create my own health care team who would work with me so that we could all take better care of my lungs.

At the same time, I volunteered with the Ottawa Council on Smoking or Health, helping to advocate for smoke-free laws for the city of Ottawa and for the province of Ontario. These laws would serve as a model for communities across Canada and the world.

After repeatedly being told that I was “*a dime a dozen*” and that there were “*lots of other asthma patients out there like you*” I wondered if those patients were struggling on their own, or if they knew where to turn for help. In the



early 2000s, I finally put pen to paper and started writing the first edition of *Breathing Easier*. I wanted to share my knowledge with other lung patients so that they would know where to turn for help in our community and learn how to gain better control of their lung disease. I hope my guide will help to:

- Educate lung patients, their family, friends, caregivers, and health care providers about lung disease and about lung health services in our community.
- Empower patients to seek out the lung health resources that they need.
- Help patients to navigate our local health care system.
- Reduce the number of lost school and work days.
- Reduce the number of emergency room visits and hospitalizations.
- Help patients to better manage their health and improve their quality of life.

I am inspired by health care providers who work tirelessly to care for lung patients and whose compassion and empathy know no bounds; and by community volunteers who advocate for lung patients. Lung patients also have power. We can help ourselves and each other through prevention, education, chronic disease self-management, and advocacy.

I am overwhelmed by the positive feedback that I have received over the years from patients and health care providers who felt that the first edition of the lung patient guide was an invaluable resource. I hope this second edition will be just as helpful and inspiring.

**Carmela Graziani**, *Writer and Asthma Patient*

## Table of Contents

1. Introduction	1
<hr/>	
2. What is the Champlain Lung Health Network?	3
<hr/>	
3. Snapshot of Asthma and COPD in the Champlain Region	5
<hr/>	
4. Asthma	8
4.1 What is Asthma?	8
4.2 Asthma Symptoms	8
4.3 Asthma Triggers	9
4.4 How is Asthma Diagnosed?	10
4.5 Is Your Asthma Under Control?	12
4.6 Asthma Medications	14
4.7 Tools for Asthma Patients	16
4.8 Asthma Patient Checklist	20
4.9 Asthma Education Programs in the Champlain Region	21
4.10 Asthma Treatment Guidelines and Care Pathways	25
<hr/>	
5. COPD	26
5.1 What is COPD?	26
5.2 What Causes COPD?	26
5.3 How is COPD Diagnosed?	28
5.4 Are You at Risk for COPD?	30
5.5 COPD Triggers	31
5.6 COPD Attacks	31
5.7 COPD Medications	32
5.8 Tools for COPD Patients	33
5.9 COPD Patient Checklist	38
5.10 COPD Education Programs in the Champlain Region	39
5.11 COPD Treatment Guidelines and Care Pathways	43
<hr/>	
6. Obstructive vs. Restrictive Lung Diseases	44
<hr/>	
7. Medication Tips Shared by Patients	45

8. Quitting Smoking	46
8.1 Nicotine Addiction	46
8.2 Smoking Cessation Medications	48
8.3 Smoking Cessation Programs in the Champlain Region	50
8.4 Other Smoking Cessation Resources	52
8.5 Electronic Cigarettes	53
<hr/>	
9. Respiratory Rehabilitation Programs in the Champlain Region	55
<hr/>	
10. Oxygen Therapy	61
<hr/>	
11. Resources for Lung Patients in the Champlain Region	65
<hr/>	
12. Financial Assistance for Lung Patients	72
<hr/>	
13. Non-Urgent Transportation Service in the Champlain Region	76
<hr/>	
14. Home Care for Patients with Chronic Lung Disease	77
<hr/>	
15. Hospice Palliative Care Services in the Champlain Region	79
<hr/>	
16. Next Steps for the Champlain Lung Health Network	84
<hr/>	
References	85

## Introduction

Much has changed in lung health in the Champlain region since the first edition of *Breathing Easier* was published in 2008:

- The province of Ontario continues to invest in the **Asthma Program**,<sup>4,5</sup> including the **Primary Care Asthma Program (PCAP)** in various community health centres.
- Municipalities and the province of Ontario have adopted stronger smoke-free laws (e.g., smoke-free cars, smoke-free outdoor public places and workplaces).
- Smoking rates in some parts of the Champlain region have decreased.
- New medications are available to treat asthma and COPD.
- New treatment guidelines are available for asthma, COPD, and respiratory rehabilitation.<sup>6</sup>

Unfortunately, too many gaps in lung health services continue to exist:

- The province of Ontario still does not have a comprehensive lung health strategy, including a COPD strategy.<sup>7</sup>
- Ontario school boards are not legally mandated to have an asthma management plan. Some schools do not allow children to carry their rescue inhalers. This policy resulted in the death of 12-year-old Ryan Gibbons.<sup>8,9</sup>
- Health care for lung disease is still poorly funded and disorganized compared to other chronic diseases such as heart disease, cancer, and diabetes.
- Tobacco use is still the leading cause of *preventable* disease, disability, and death.
- Smoking rates in some parts of the Champlain region are very high, resulting in high rates of lung disease. The current smoking rates in **three out of four public health units** in the Champlain region exceed both the provincial and national current smoking rates (see *Tobacco Use in the Champlain Region* in Chapter 3).
- Lung disease is still one of the top reasons for emergency room visits and hospitalizations. It poses a huge economic burden on our community.

- Many primary care providers are not referring patients to spirometry (lung function testing), respirologists, allergists, registered respiratory therapists/certified respiratory educators, and respiratory rehabilitation.
- Many health care providers are not aware of the latest clinical practice guidelines for asthma and COPD.
- Many asthma and COPD patients have poor control of their symptoms.
- Many COPD patients do not receive proper end-of-life and hospice palliative care.

Some factors that explain these gaps include:

- The invisibility of lung disease.
- The stigma associated with tobacco addiction; the tobacco industry's role in perpetuating nicotine addiction; and patients' struggles to quit smoking.
- Exposure to second-hand smoke in public places, work places, and at home, especially in multi-unit dwellings.
- A lack of public awareness about the long-term effects of exposure to indoor and outdoor air pollutants.
- A lack of awareness and education among patients, family members and caregivers, health care providers, politicians, and the general public about lung disease, medications, treatment plans, and community resources.

Many lung patients suffer in silence for years before they are diagnosed. Sometimes they and their health care providers may attribute their breathing problems to *colds that don't seem to go away, to being out of shape, or to getting older.*

Family members, friends, co-workers, and even some health care professionals, may not take their symptoms seriously. Lung patients are often told that *their asthma can't be that bad, that they're just not coping, that they're too young to have COPD, or that they can't be sick because they look fine.* When lung disease is left *untreated or undertreated*, it can result in permanent lung damage, disability, and death.

Living with a chronic lung disease can leave people feeling scared and frustrated. Lung patients can't keep up with school, work, family responsibilities, daily activities, exercise, and social activities when they expend more and more energy just trying to breathe. They often find themselves caught up in a cycle of medical appointments, emergency room visits, and hospitalizations, not knowing why they are sick or how to get better.

The information and resources in this guide can help lung patients and their families, caregivers, and health care providers to break this cycle and to learn to work together as a team towards better breathing.

## What is the Champlain Lung Health Network?

The Champlain Local Health Integration Network (LHIN) created the Champlain Lung Health Network in 2006. For the first time, patients, respiratory therapists, physicians, hospitals, community health centres, and health organizations from across the Champlain region came together to improve lung health resources for asthma and COPD patients.

The mission of the Champlain Lung Health Network is to:

- Increase public awareness about lung disease.
- Improve the diagnosis and treatment of lung disease in the Champlain region.
- Improve access to lung health services in the rural and urban parts of the Champlain region.
- Reduce morbidity and mortality rates of lung disease in the Champlain region.
- Improve patients' quality of life.

The Champlain Lung Health Network developed resources for patients, caregivers, and health care providers:

- ***Gaps Analysis: Challenges Affecting the Diagnosis and Treatment of Lung Disease within the Champlain LHIN (2006)***
- ***Champlain Lung Health Network Action Plan: Goals, Objectives, and Strategies (2006–2008)***
- ***Inventory of Lung Health Services in the Champlain Region (2008)***

It was evident that lung health in Eastern Ontario had been neglected for far too long. Patients and caregivers struggled to find timely and appropriate lung health services. Health care providers were frustrated by the number of patients who were needlessly suffering permanent lung damage, health complications, disability, and premature death.

Unfortunately, the Champlain Lung Health Network disbanded in 2008 due to a lack of funding. Following a four-year hiatus, the Champlain Lung Health Network reconvened in 2012 to address the ongoing gaps in asthma and COPD treatment across Eastern Ontario.

Lung patients and caregivers continue to face challenges accessing diagnostic tests, medications, respiratory specialists, education programs, smoking cessation treatment, respiratory rehabilitation, and hospice palliative care.

Respirologists, allergists, nurse practitioners, respiratory therapists/certified respiratory educators, rehabilitation specialists, and hospice palliative care specialists are concerned about delays in patient diagnosis, treatment, and referrals.

We hope that this renewed focus on lung health in the Champlain region—including this second edition of *Breathing Easier* and an updated *Inventory of Lung Health Services in the Champlain Region*—will help to address some of these ongoing challenges.

### Member Organizations of the Champlain Lung Health Network

- Arnprior Family Health Team
- Champlain Local Health Integration Network
- Children's Hospital of Eastern Ontario
- Cornwall Community Hospital
- Hôpital Général de Hawkesbury & District General Hospital
- Hôpital Montfort Hospital
- Kemptville District Hospital
- Lower Outaouais Family Health Team
- Medigas
- North Lanark County Community Health Centre
- The Lung Association (Ottawa, Renfrew County, Cornwall Community Office)
- The Ottawa Hospital
- The Ottawa Hospital Rehabilitation Centre
- The Ottawa Hospital Research Institute
- Praxair
- Queensway Carleton Hospital
- Seaway Valley Community Health Centre
- Somerset West Community Health Centre
- University of Ottawa, School of Rehabilitation Sciences

### Snapshot of Asthma and COPD in the Champlain Region



### Asthma in the Champlain Region:

- Accounted for:
  - 49,166 **general practitioner and family physician visits** in 2011–2012<sup>10</sup>
  - 4,781 **emergency department visits** in 2013–2014<sup>11</sup>
  - 325 **hospitalizations** in 2013–2014<sup>12</sup>
- Average **number of days** spent in hospital: 4<sup>13</sup>
- Cost of treating all **hospitalized** asthma patients in 2013: \$1,485,407<sup>14</sup>
- Cost of treating asthma patients in **emergency departments** in 2013–2014: \$892,408<sup>15</sup>
- 10% of all Champlain residents had asthma in 2012, compared to 8% of all Ontario residents<sup>16</sup>
- 17% of 12- to 19-year-olds have asthma, compared to 11% of Ontario youth<sup>17</sup>



- Percentage of Champlain residents with diagnosed asthma by **health unit**<sup>18</sup>:
  - Eastern Ontario: **11.2%**
  - Leeds, Grenville and Lanark District: **9.6%**
  - Ottawa: **9.6%**
  - Renfrew County and District: **8.1%**
- Areas in the Champlain region with the **highest rates of diagnosed asthma** in 2011–2012<sup>19</sup>:
  - Prescott-Russell
  - Stormont, Glengarry, Cornwall, and Akwasasne
  - Almonte and Carleton Place
- Areas with the **lowest rates of diagnosed asthma** in 2011–2012<sup>20</sup>:
  - South Renfrew
  - Arnprior and Ottawa West

### COPD in the Champlain Region:

- Accounted for:
  - 18,310 **general practitioner and family physician visits** in 2013–2014<sup>21</sup>
  - 7,863 **emergency department visits** in 2013<sup>22</sup>
  - 2,782 **hospitalizations** in 2013–2014<sup>23</sup>
  - 335 **deaths** per year in Eastern Ontario<sup>24</sup>
- Average number of days spent in hospital: 7.4<sup>25</sup>
- The leading cause of **hospitalization** in the Champlain region<sup>26</sup>
- One of the top three reasons for **hospital readmissions within 30 days**<sup>27</sup>
- Cost of treating all COPD patients in **hospital** in 2013: \$22,400,000<sup>28</sup>
  - Average cost of treating a COPD patient in hospital: \$8,500<sup>29</sup>
  - Average cost of treating the most acute COPD patients in hospital: \$37,000<sup>30</sup>
- Cost of treating COPD patients in **emergency departments** in 2013–2014: \$3,480,942<sup>31</sup>
- 3.7% of Champlain residents have COPD compared to 3.9% of Ontario residents<sup>32</sup>
  - 3.4% of women and 4% of men have COPD<sup>33</sup>

- Percentage of Champlain residents with COPD by **health unit**<sup>34</sup>:
  - Eastern Ontario: **6.8%**
  - Leeds, Grenville and Lanark District: **4.4%**
  - Renfrew County and District: **3.9%**
  - Ottawa: **3%**
- Areas in the Champlain region with the **highest rates of diagnosed COPD** in 2011–2012<sup>35</sup>:
  - Prescott-Russell
  - Stormont, Glengarry, Cornwall, and Akwasasne
  - Almonte and Carleton Place
- Areas with the **lowest rates of diagnosed COPD** in 2011–2012<sup>36</sup>:
  - South West Ottawa and North Grenville
  - Arnprior and Ottawa West

### Tobacco Use in the Champlain Region:

- Current smoking rates (daily or occasional smokers) by **health unit**<sup>37</sup>:
  - Leeds, Grenville and Lanark District: **26.6%**
  - Eastern Ontario: **23.5%**
  - Renfrew County and District: **21.9%**
  - Ottawa: **14.3%**

### Tobacco Use in Ontario:

- **18%** of Ontario residents are current (daily or occasional) smokers<sup>38</sup>
- Number one cause of **preventable** disease, disability, and death<sup>39</sup>
- Causes **13,000 deaths** every year<sup>40</sup>
- Costs the health care system **\$1.6 billion**<sup>41</sup>
- Results in **\$4.4 billion** in productivity losses<sup>42</sup>

### Tobacco Use in Canada:

- **19%** of Canadians are current (daily or occasional) smokers<sup>43</sup>
- Average number of cigarettes smoked per day: **14.4**<sup>44</sup>
- Smoking one pack of cigarettes per day for a year is the equivalent of inhaling **73,000 puffs**<sup>45</sup>
- Number one cause of **preventable** disease, disability, and death<sup>46</sup>
- Causes more than **37,000 premature** deaths each year<sup>47</sup>
- More than **1,000** Canadians who never smoked die each year from **exposure to second-hand smoke**<sup>48</sup>

# CHAPTER 4

## Asthma

### 4.1 What is Asthma?

Asthma is one of the most common chronic diseases among children and adults, accounting for many lost school and work days, and repeated trips to emergency rooms. Chronic means that you have it all the time, even when you do not have any symptoms. There is no cure for asthma, but with good asthma management, you should usually be symptom-free and be able to enjoy a full and active life. To stay healthy and safe, you will need to follow your **Asthma Action Plan** at all times, even when you feel well.

#### Tip ↘

An **Asthma Action Plan** is a set of instructions written out by your health care provider that can help you better manage your asthma. It can help you decide what to do if you have asthma symptoms so that you get them under control as soon as possible.

About 8%<sup>49</sup> or 2.4 million<sup>50</sup> Canadians have asthma. When poorly treated and managed, asthma can be fatal. In 2010, 239 Canadians died from asthma attacks, and it is estimated that 400 Canadians per year may die from asthma attacks by 2030.<sup>51</sup> Most deaths from asthma are preventable if patients receive proper education and treatment.<sup>52</sup>

#### Asthma in Ontario:

- **1 in 3 Ontarians** is at risk of developing asthma.<sup>53</sup>
- Asthma is the leading cause of hospitalization for children and is a significant cause of school and work absenteeism.<sup>54</sup>

### 4.2 Asthma Symptoms

People with asthma have sensitive airways. Allergens and irritants may trigger swelling, inflammation, the production of extra mucus, and airway spasms. Asthma symptoms include:

- Shortness of breath
- Chest tightness

- Coughing
- Wheezing
- Waking up at night with any of these symptoms
- Inability to perform daily physical activities (e.g., school, work, exercise).

In children, asthma attacks are often triggered by colds and other viral infections. The cough and extra mucus caused by asthma, along with the fever caused by the virus, can lead to symptoms (and chest X-ray changes) that mimic bronchitis or pneumonia. Asthma is the commonest cause of recurrent bronchitis or pneumonia in children.

### 4.3 Asthma Triggers

It's important to avoid asthma triggers because they can cause inflammation, swelling, and narrowing of the airways. Asthma triggers fall into two categories: **allergic** triggers and **irritant** triggers. Not everyone has the same triggers. Put a check mark beside the ones that affect you:

#### Allergic Triggers:

- Dust mites
- Pet dander, saliva, and urine (all animals)
- Cockroaches
- Pollen (trees, grass, weeds, hay)
- Mould

#### Irritant Triggers

- Colds and other respiratory infections (viral, bacterial, fungal)
- Weather (cold air, hot and humid air, thunderstorms)
- Outdoor pollution
- Fumes/chemicals
- Perfumes/air fresheners
- Second-hand smoke
- Smoke (fireplace/wood stove)

#### Tip ↘

Other factors that can trigger asthma include: sinusitis, rhinitis, nasal polyps, obesity, gastroesophageal reflux disease, food and drug reactions, exercise, and hormonal changes due to menstruation and pregnancy.

## 4.4 How is Asthma Diagnosed?

The diagnosis of asthma may be suspected by the presence of suggestive symptoms (see *Section 4.2*), and the absence of evidence of another disease. In adults and children over 6 years of age, the diagnosis of asthma is confirmed by a simple breathing test called **spirometry**, which measures how much air you can blow out of your lungs and how fast you can blow it out. Spirometry is a painless test that can be done in a doctor's office or clinic and it takes just a few minutes. Spirometry measures<sup>55</sup>:

- **Forced Vital Capacity (FVC)**: The largest amount of air that you can breathe out after you take your biggest breath in.
- **Forced Expiratory Volume (FEV-1)**: The amount of air you can force out of your lungs in one second.

If the amount of air you blow out in the first second is low, you might have asthma. Your airways may be inflamed or obstructed and you will not be able to **breathe out** as much air as someone who does not have lung disease. If you are having trouble breathing, but your spirometry test results are normal, your doctor or nurse practitioner may need to order other tests to confirm an asthma diagnosis (e.g., sputum eosinophil count test, bronchial challenge, or exhaled nitric oxide test).

### Tip ↘

This video by the Canadian Lung Association shows how a spirometry test works: [www.youtube.com/watch?v=ZZdSkvf9I6U](http://www.youtube.com/watch?v=ZZdSkvf9I6U).

After you are diagnosed with asthma and are taking asthma medications, your doctor or nurse practitioner should order a **spirometry test at least once or twice a year** to make sure that you are taking the **correct medications** and the **correct doses** to keep your symptoms under control.

Children under 6 years of age are unable to perform spirometry. In this age group, the diagnosis is confirmed by showing an immediate, but transient improvement in symptoms with a reliever medication (see *Section 4.6*) (typically, an improvement is seen within 10 minutes of taking a rescue inhaler and the improvement lasts about 4–6 hours), or gradual improvement after starting a controller medication (typically, improvement starts after taking a controller medication every day for 1–6 weeks).

Modern asthma medications are extremely effective. If you don't improve after taking asthma medications correctly, for the recommended period of

time, you should inform your health care provider, as this may suggest that a different diagnosis should be considered.

In adults, there are four categories of asthma severity:

- Intermittent
- Mild persistent
- Moderate persistent
- Severe persistent.

In children, asthma severity is categorized differently. Some children have asthma triggered only by colds and other viral infections. This type of intermittent asthma may be mild (you can manage attacks at home) or moderate/severe (needing unscheduled visits to health care practitioners, emergency department visits, or hospitalizations). Other children have persistent asthma, with attacks triggered by viral infections or exposure to allergens, as well as symptoms between major attacks—for example, with exercise. The categories of asthma in children are:

- Intermittent
  - Mild
  - Moderate/severe
- Persistent
  - Mild
  - Moderate/severe

Your doctor or nurse practitioner can determine which category you fall into based on:

- The severity of your symptoms.
- How often you have symptoms.
- The amount of medication you need to control your symptoms.
- Your spirometry test results (adults and children 6 years of age and older).
- Your ability to do daily activities.

Remember that:

- Asthma classification is based on symptoms before treatment.
- Asthma classification may change over time.
- A person in *any category* can have severe asthma attacks.

### Tip ↘

If you continue to feel short of breath while taking asthma medications, ask your doctor to rule out other health conditions (e.g., other lung diseases, heart disease, iron deficiency or anemia, poor physical conditioning).

## 4.5 Is Your Asthma Under Control?

### Too Many Patients Have Poorly Controlled Asthma

Studies show that 60% of Canadians with asthma don't have their symptoms under control.<sup>56,57</sup>

The Champlain Lung Health Network recommends that every asthma patient should have a written **Asthma Action Plan** (see *Section 4.7*). You need to know:

- How to reduce contact with your asthma triggers.
- What symptoms you are experiencing and how often they occur.
- The warning signs that your asthma is getting worse and how to take control of your asthma.
- The difference between **reliever** (rescue) and **controller** (preventer) medications.
- When to take your medications.
- How to properly use your inhalers and spacer device so that you get the most out of the medications.
- How a peak flow meter may help you to monitor your lung function at home (if this device is recommended by a health care professional).

#### Tips ↘

- Ask a member of your health care team to review all of your asthma medications and your **Asthma Action Plan at least once or twice a year**.
- If you or your child has **persistent uncontrolled asthma**, despite receiving appropriate medication and education about asthma, you or your child may need a referral to an asthma specialist (respirologist or allergist).
- If you change or stop your asthma medications too quickly, the swelling and inflammation in your airways may worsen, putting you at risk of a **severe and potentially life-threatening asthma attack**.
- If you need a fast-acting bronchodilator while **exercising**, you may need a combination inhaler (long-acting bronchodilator and corticosteroid).

## The 30 Second Asthma Test®

	Yes	No
1. Do you use your fast-acting reliever inhaler 4 or more times a week? (Including doses used for exercise)	<input type="checkbox"/>	<input type="checkbox"/>
2. Do you cough, wheeze, or have a tight chest because of your asthma? (4 or more days a week)	<input type="checkbox"/>	<input type="checkbox"/>
3. Do coughing, wheezing, or chest tightness wake you at night? (1 or more times a week)	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you stop exercising because of your asthma? (In the past 3 months)	<input type="checkbox"/>	<input type="checkbox"/>
5. Do you ever miss work, school, or social activities because of your asthma? (In the past 3 months)	<input type="checkbox"/>	<input type="checkbox"/>

**Even one "yes" means see your doctor.  
Your asthma is not under control.**

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Your health care team (e.g., primary care physician, respirologist, allergist, nurse practitioner, registered respiratory therapist/certified respiratory educator, pharmacist) can teach you how to properly manage your asthma.

### Did You Know?

- One study found that 90% of parents believed that their child's asthma was controlled. In fact, just 45% of the children in the study had their asthma under control.<sup>58</sup>
- Chronic inflammation in the airways can lead to permanent lung damage and decreased lung function. This process is called **airway remodeling**.

## 4.6 Asthma Medications

You may need different types of asthma medications to treat your symptoms:

- **Relievers (or rescue inhalers):**
  - Fast-acting **bronchodilators** provide immediate relief from asthma symptoms by relaxing the muscles that constrict the airways. You should get relief within minutes of using a reliever inhaler. The effects should last between four to six hours.
- **Controllers (or preventers):**
  - **Controller medications** need to be taken every day (even when you or your child feels well) during the season(s) when you or your child is at risk of having asthma attacks or asthma symptoms.
  - **Corticosteroid inhalers and pills** reduce the swelling and inflammation in your airways.
  - **Long-acting bronchodilators** help to relax the muscles that constrict the airways for up to 12 hours.
  - **Combination inhalers** contain a corticosteroid and a long-acting bronchodilator.
  - **Anti-leukotriene receptor antagonists** are non-steroid pills that can help to prevent inflammation and relax the muscles that constrict the airways.
  - **Immunoglobulin E (IgE) blockers** may help moderate to severe persistent asthma patients who have year-round allergies and who do not get relief from corticosteroids.

## A YOUNG ASTHMA PATIENT'S STORY

Hello, my name is Markus and I am nine years old. I have been living with asthma for a few years now. In the beginning it was difficult to manage, especially since my body was smaller and weaker. I had a lot of problems especially during the winter months when the weather turned cold. Every time I got a cold, I almost immediately developed a terrible cough which affected my lungs. I visited the Emergency Room at CHEO many times with respiratory problems, such as coughing, wheezing, and a tight feeling in my chest. One time, I was almost unable to breathe at all, which was very scary.

For four or five years in a row, I had to visit the Emergency Room of the Kemptville District Hospital or CHEO because I was having extreme difficulty breathing and pain in my chest. Last year for the first time, I had no hospital visits related to my asthma. I think there are two reasons for this: Firstly, I am getting



bigger and stronger, and can resist better. Secondly, I now swim and play soccer every day during the summer and skate in the winter. All of these sports make me strong and healthy. At first I was a little bit afraid that I would have problems breathing while playing soccer, because there is a lot of running involved. My doctor encouraged me to try, and I have found that sports activities actually help make my body strong and my lungs more efficient. As long as I keep my blue puffer handy, and use my orange one regularly, I have no difficulty at all.

Besides asthma, I also have eczema and a severe allergy to peanuts. Some doctors and researchers believe that there is a link between all three of these things. They have found that roughly 1% of children have peanut allergies, while 9% have asthma. Some believe that an allergic reaction to peanuts can set off an asthma attack and worsen the effect. I know that I need to be careful and avoid asthma triggers and peanuts.

I hope that there will be a cure for asthma (and peanut allergies) in the future. For now, I will keep playing sports and enjoying my life.

—Markus H., Student, Athlete, and Asthma Patient

## Tips ↘

- These videos by the Canadian Lung Association show you **how to properly use different types of inhalers**: [www.on.lung.ca/page.aspx?pid=413](http://www.on.lung.ca/page.aspx?pid=413). Your primary care physician, respirologist, allergist, nurse practitioner, registered respiratory therapist/certified respiratory educator, and pharmacist can review your technique.
- Asthma attacks can tire out the muscles in your neck, chest, and back. Muscle fatigue can cause chronic pain. Asthma patients can also develop **costochondritis**, an inflammation of the cartilage that connects the ribs to the breastbone (sternum). Ask a health care provider or a registered massage therapist for advice on relieving muscle fatigue and pain (e.g., using cold and hot compresses, self-massage techniques, and muscle stretching exercises).

## 4.7 Tools for Asthma Patients

### ✓ Asthma Action Plan

An **Asthma Action Plan** is a set of written instructions that will help you to manage your asthma symptoms. Your Asthma Action Plan will tell you if you are in the **Green Zone** (*Controlled Asthma*), **Yellow Zone** (*Uncontrolled Asthma*), or **Red Zone** (*Dangerously Uncontrolled Asthma*). Your personalized Asthma Action Plan will describe your triggers, symptoms, medications,

and instructions for regaining control of your asthma. To request a copy of the Asthma Action Plan, call the Ontario Lung Association's **Asthma Action Helpline at 1-888-344-5864**, email a certified respiratory educator at [info@on.lung.ca](mailto:info@on.lung.ca), or download a copy at: [www.lung.ca/lung-health/lung-diseases/asthma-action-plan](http://www.lung.ca/lung-health/lung-diseases/asthma-action-plan). Ask your primary care physician, nurse practitioner, respirologist, or allergist to fill it out for you and to update it whenever your asthma symptoms change or whenever your medications change. A health care provider (e.g., nurse practitioner,

## Tip ↘

*If your medications are not working and you are having trouble breathing, call 911 and go to your nearest emergency room. Sometimes asthma patients feel uncomfortable or nervous about seeking emergency medical treatment. Going to the emergency room when you are having a severe asthma attack is part of your Asthma Action Plan!*

physician assistant, registered respiratory therapist/certified respiratory educator) can review your **Asthma Action Plan** with you to make sure that you understand your doctor's instructions.

### ✓ Respirologist

A respirologist (lung specialist) can order breathing tests to confirm an asthma diagnosis, prescribe medications, monitor your symptoms, fill out and update your Asthma Action Plan, refer you to an asthma education program, and decide whether you need respiratory rehabilitation. Adult and pediatric respirologists are available in the Champlain region.

### ✓ Allergist

An allergist (allergy specialist) can find out whether allergies are making your asthma worse or whether other allergic diseases are present (e.g., hay fever or allergic rhinitis, or food allergies); order breathing tests to confirm an asthma diagnosis; prescribe medications; monitor your symptoms; fill out and update your Asthma Action Plan; or refer you to an asthma education program. Adult and pediatric allergists are available in the Champlain region.

### ✓ Registered Respiratory Therapist and Certified Respiratory Educator

A registered respiratory therapist is a health professional who is trained to test and educate children and adults who have breathing problems. A certified respiratory educator is a health care professional (e.g., nurse, nurse practitioner, respiratory therapist, or pharmacist) who is trained to teach you about your asthma symptoms, triggers, medications, and treatment plans. You can speak to a registered respiratory therapist/certified respiratory educator free of charge by calling the Lung Association's **Asthma Action Helpline at 1-888-344-5864**. The Canadian Lung Association can also refer you to a certified respiratory educator in the Champlain region. See *Section 4.9* in this guide for a list of **free asthma education programs** in the Champlain region. Bring your **Asthma Action Plan**, your medications, and a copy of your spirometry test results so that you can discuss your treatment plan.

### ✓ Asthma Daily Diary

If you have moderate to severe asthma attacks, use an **Asthma Daily Diary** to track your symptoms and the amount of medication you are taking. Follow your **Asthma Action Plan** at the first sign of worsening asthma. Call the Lung Association's **Asthma Action Helpline at 1-888-344-5864** to order a copy or download a copy at: [www.on.lung.ca/page.aspx?pid=408](http://www.on.lung.ca/page.aspx?pid=408).

What should you record in your asthma diary?

- Your daily and night-time symptoms (wheezing, cough, chest tightness, shortness of breath, or night-time awakenings).
- The severity of your symptoms (none, mild, moderate, or severe).
- The number of puffs that you take from your bronchodilator (reliever) and corticosteroid (controller) medications.
- The dose of any other asthma or allergy medication that you are taking (e.g. corticosteroid pills, antihistamines).
- Your triggers (e.g., infections, allergic reactions, weather changes, air pollution).

Ask your primary care physician, nurse practitioner, respirologist, allergist, or registered respiratory therapist/certified respiratory educator to review your asthma diary at your next appointment.

#### Tip ↘

An asthma trigger will cause inflammation and swelling of your airways. Your asthma symptoms may worsen and your **peak flow meter readings** may drop. Follow your **Asthma Action Plan** and seek immediate medical attention.

#### ✓ Peak Flow Meter

Patients can do their own breathing tests at home by using a **peak flow meter**. This simple device can help you to monitor your lung function and check if your asthma is under control. Children need to be at least 6 years of age to use a peak flow meter accurately. Your primary care physician, nurse practitioner, registered nurse, respirologist, allergist, registered

respiratory therapist/certified respiratory educator, or pharmacist can show you how to use a peak flow meter, how to record your results on a chart, and how to know if your results match the **Green Zone, Yellow Zone or Red Zone** of asthma control on your **Asthma Action Plan**. For more information, visit: [www.lung.ca/diseases-maladies/help-aide/devices-dispositifs/peakflow-debitmetre\\_e.php](http://www.lung.ca/diseases-maladies/help-aide/devices-dispositifs/peakflow-debitmetre_e.php).

#### ✓ Spacer Device for Your Metered Dose Inhaler

If you use metered dose inhalers, you need a spacer device to help you inhale the medication. (Other types of inhalers, such as the Diskus® or Turbuhaler®, use different delivery systems and don't require a spacer.) The spacer is a tube that attaches to your inhaler. It helps to deliver medication into the deepest parts of your lungs, making it easier for the medication to treat the swelling, inflammation, and spasms in your airways. If you use a

corticosteroid (controller) inhaler without a spacer, most of the medication will end up in the back of your throat. Use a spacer and rinse your mouth after using your corticosteroid (controller) inhaler to prevent **thrush**, a fungal infection of the mouth and throat. Your primary care physician, nurse practitioner, registered nurse, respirologist, allergist, registered respiratory therapist/certified respiratory educator, or pharmacist can show you how to use a spacer device.

#### ✓ Respiratory Rehabilitation

If you have moderate to severe asthma with frequent and prolonged asthma attacks, ask your health care provider to refer you to a respiratory rehabilitation program. The combination of specially designed exercises and lung health education can help you to:

- Regain control of your asthma symptoms.
- Improve your lung function.
- Reduce disability.
- Regain the strength and energy you need for your daily activities.

See *Chapter 9* for a list of respiratory rehabilitation programs in the Champlain region.

#### ✓ Asthma Health Care Team

You may need different health care providers to help you manage your asthma:

- A primary care physician
- A nurse or nurse practitioner
- A respirologist
- A registered respiratory therapist/certified respiratory educator
- An allergist
- An ear, nose and throat specialist
- An osteoporosis specialist
- An environmental medicine specialist

#### Tip ↘

Your shortness of breath and your ability to exercise should improve within the first two weeks of starting respiratory rehabilitation.



The Champlain Lung Health Network encourages asthma patients to take an active role in managing their health. Speak up, request referrals to specialists as needed, and advocate for yourself to ensure that you receive the best possible care.

- A physical rehabilitation specialist
- A registered massage therapist
- A physiotherapist
- An occupational therapist
- A smoking cessation counsellor
- A dietitian
- A social worker
- A pharmacist
- A psychologist.

#### 4.8 ✓ Asthma Patient Checklist

##### Are You in Control of Your Asthma?

- I know my asthma triggers. I avoid them when possible.
- I understand the differences between **reliever (rescue)** and **controller (preventer)** medications.
- I have an **Asthma Action Plan**. I monitor my symptoms. I can recognize the warning signs of worsening asthma. I know how to follow my treatment plan. I know what to do during a severe asthma attack.
- My primary care physician, nurse practitioner, respirologist, allergist, registered respiratory therapist/certified respiratory educator, and/or pharmacist taught me how to use my inhalers and spacer device.
- I use an **Asthma Daily Diary** to track my symptoms, triggers, and the doses of my medications.
- I use a **peak flow meter** to monitor my lung function. I record the results in a chart.
- I visit my primary care physician, nurse practitioner, respirologist, allergist, and/or registered respiratory therapist/certified respiratory educator at least once or twice a year to discuss my medications, my **Asthma Action Plan**, my **Asthma Daily Diary**, and my **peak flow meter readings**.

#### Tip ↘

Pharmacists can give flu shots to Ontarians five years of age and older. To find a **flu shot clinic** near you, visit: [www.health.gov.on.ca/en/public/programs/publichealth/flu](http://www.health.gov.on.ca/en/public/programs/publichealth/flu) or contact your local public health unit (see page 50).

- I have a spirometry (lung function test) at least once a year.
- I live and work in a 100% smoke-free environment.
- I have quit smoking.
- I participate in a respiratory rehabilitation program if my asthma is severe and it affects my quality of life.
- My asthma symptoms do not prevent me from going to school or to work.
- My asthma symptoms do not prevent me from exercising.
- I receive a flu shot once a year to reduce the risk of infection, hospital admissions, and death.
- I receive a pneumonia vaccination every 5–10 years to reduce the risk of infection, hospital admissions, and death.

#### 4.9 Asthma Education Programs in the Champlain Region

##### Hospitals:

- **Children’s Hospital of Eastern Ontario**  
401 Smyth Road, Ottawa, Ontario  
Tel: 613-737-7600  
[www.cheo.on.ca](http://www.cheo.on.ca) and [www.cheo.on.ca/en/asthmaoverview](http://www.cheo.on.ca/en/asthmaoverview)  
*\*Available for patients admitted to the hospital or seen in the emergency department. Requires a referral from a doctor.*
- **Cornwall Community Hospital Outpatient Respiratory Care Clinic**  
840 McConnell Avenue, Cornwall, Ontario  
Tel: 613-938-4240  
[www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic](http://www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic)
- **The Ottawa Hospital:**
  - **Civic Campus**  
1053 Carling Avenue, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*
  - **General Campus**  
501 Smyth Road, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*



- **Riverside Campus**  
1967 Riverside Drive, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*
- **The Ottawa Hospital Rehabilitation Centre**  
505 Smyth Road, Ottawa, Ontario  
Tel: 613-737-7350 ext. 75318  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*

### Community Health Centres:

*\*Education sessions at all of the following community health centres are provided by a registered respiratory therapist/certified respiratory educator who will also assess patients' symptoms and evaluate their treatment plan. Patients can refer themselves or be referred by a health care provider.*

- **Carlington Community Health Centre**  
900 Merivale Road, Ottawa, Ontario  
Tel: 613-722-4000  
[www.carlington.ochc.org](http://www.carlington.ochc.org)
- **Centretown Community Health Centre**  
420 Cooper Street, Ottawa, Ontario  
Tel: 613-233-4433 or TTY: 613-233-0651  
[www.centretownchc.org](http://www.centretownchc.org)
- **North Lanark Community Health Centre**  
207 Robertson Drive, Lanark, Ontario  
Tel: 613-259-2182  
[www.northlanarkchc.on.ca](http://www.northlanarkchc.on.ca)
- **Pinecrest Queensway Community Health Centre**  
1365 Richmond Road, Ottawa, Ontario  
Tel: 613-820-4922  
[www.pqchc.com](http://www.pqchc.com)
- **Rainbow Valley Community Health Centre**  
49 Mill Street, Killaloe, Ontario  
Tel: 613-757-0004  
[www.rainbowvalleychc.on.ca](http://www.rainbowvalleychc.on.ca)

- **Sandy Hill Community Health Centre**  
221 Nelson Street, Ottawa, Ontario  
Tel: 613-789-1500  
[www.sandyhillchc.on.ca](http://www.sandyhillchc.on.ca)
- **Seaway Valley Community Health Centre Lung Health Program**  
353 Pitt Street, Cornwall, Ontario  
Tel: 613-936-0306  
[www.seawayvalleychc.ca](http://www.seawayvalleychc.ca)  
*\*Requires a referral from a doctor or a nurse practitioner. A registered respiratory therapist provides education. The program also offers spirometry.*
- **Somerset West Community Health Centre**  
55 Eccles Street, Ottawa, Ontario  
Tel: 613-238-8210 ext. 2370  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)
- **Somerset West Community Health Centre – Rosemount Branch**  
30 Rosemount Avenue, Ottawa, Ontario  
Tel: 613-688-1177  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)
- **South East Ottawa Community Health Centre**  
1355 Bank Street, Suite 600, Ottawa, Ontario  
Tel: 613-737-5115  
[www.seochc.on.ca](http://www.seochc.on.ca)
- **South Nepean Community Health Centre**  
4100 Strandherd Drive, Suite 201, Nepean, Ontario  
Tel: 613-288-2820  
[www.pqchc.com/south-nepean-chc](http://www.pqchc.com/south-nepean-chc)
- **Wabano Centre for Aboriginal Health**  
299 Montreal Road, Ottawa, Ontario  
Tel: 613-748-0657  
[www.wabano.com](http://www.wabano.com)
- **Whitewater Bromley Community Health Centre Satellite**  
20 Robertson Drive, Beachburg, Ontario  
Tel: 613-582-3685  
[www.wbchc.on.ca](http://www.wbchc.on.ca)

## Family Health Teams (FHTs):

- **Lower Outaouais Family Health Team**  
144 Main Street East, Hawkesbury, Ontario  
Tel: 613-636-0971  
[www.esfbo.ca](http://www.esfbo.ca)  
*\*For FHT patients only. Education provided by a registered nurse/certified respiratory educator.*
- **Ottawa Valley Family Health Team**  
95 Spring Street, Almonte, Ontario  
Tel: 613-256-9370  
[www.ovfht.ca](http://www.ovfht.ca)  
*\*For FHT patients only. Education provided by a registered nurse.*
- **West Champlain Family Health Team**  
715 Mackay Street, Pembroke, ON  
Tel: 613-735-1089  
*\*Spirometry, asthma education, and smoking cessation support provided by a registered respiratory therapist. Accepts patients of all ages from the FHT and from the community.*

## Asthma Education Centres:

- **The Lung Association's Respiratory Health Centre–Ottawa**  
2319 St. Laurent Boulevard, Suite 500 (at Thurston Drive),  
Ottawa, Ontario  
Tel: 613-230-4200  
[www.on.lung.ca](http://www.on.lung.ca)  
*\*Patients can refer themselves. Offers one-on-one education sessions. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*

### Tips ↘

- The **Lung Association's Provider Education Program** offers accredited continuing medical education programs and materials on asthma, spirometry, the Asthma Action Plan, work-related asthma, and the Canadian Thoracic Society's respiratory guidelines. For details: [www.olapep.ca](http://www.olapep.ca).
- The **Global Initiative for Asthma** organizes **World Asthma Day** every May to raise awareness about asthma and to improve asthma care around the world. For details: [www.ginasthma.org](http://www.ginasthma.org).

### Tips ↘

- The province of Ontario has an **Asthma Program** to reduce mortality, morbidity, and health care costs by promoting asthma prevention, management, treatment, research, and surveillance. For details: [www.health.gov.on.ca/en/pro/programs/cdpm/asthma.aspx](http://www.health.gov.on.ca/en/pro/programs/cdpm/asthma.aspx).
- The **Primary Care Asthma Program (PCAP)** is one component of the **Asthma Program**. Patients in primary care settings receive spirometry testing, asthma treatment plans, education, smoking cessation counselling, and follow-up care. If you are a member of a **community health centre** or a **family health team** in the Champlain region, ask about this program. For details: [www.on.lung.ca/pcap](http://www.on.lung.ca/pcap).
- **The Lung Association's Respiratory Health Centre–Arnprior Satellite Site**  
30 Jack Crescent, Arnprior, Ontario  
(Island View Retirement Suites, Activities Room)  
Tel: 613-302-1239  
*\*Referral by a health care provider or patients can refer themselves. Offers one-on-one education sessions one afternoon per week. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*

## 4.10 Asthma Treatment Guidelines and Care Pathways

- **Canadian Thoracic Society:** Asthma Guidelines for the Diagnosis and Management of Asthma in Preschoolers, Children and Adults: [www.respiratoryguidelines.ca/guideline/asthma](http://www.respiratoryguidelines.ca/guideline/asthma)
- **Canadian Thoracic Society:** Guidelines for Spirometry in Primary Care: [www.respiratoryguidelines.ca/cts-2013-spirometry-in-primary-care-asthma](http://www.respiratoryguidelines.ca/cts-2013-spirometry-in-primary-care-asthma)
- **Emergency Department Asthma Care Pathway:** [www.on.lung.ca/edacp](http://www.on.lung.ca/edacp)
- **Global Initiative for Asthma (GINA):** Guide for Asthma Management and Prevention: [www.ginasthma.org](http://www.ginasthma.org)
- **Ontario Primary Care Asthma Program (PCAP):** Asthma Care Map for Primary Care, Asthma Action Plan, and Asthma Diagnosis and Management Algorithm: [www.on.lung.ca/pcap](http://www.on.lung.ca/pcap) and [www.on.lung.ca/Page.aspx?pid=513](http://www.on.lung.ca/Page.aspx?pid=513)

# CHAPTER 5

## COPD

### 5.1 What is COPD?

Chronic Obstructive Pulmonary Disease (COPD) is a chronic lung disease that includes **chronic bronchitis** and **emphysema**.

Patients with chronic bronchitis have a chronic cough and frequent lung infections. Their airways are inflamed and swollen. The cells lining the airways produce excessive mucus. The swelling and excessive mucus obstruct the airways.

Patients with emphysema have damaged airways and damaged alveoli (tiny air sacs at the tips of the airways where oxygen and carbon dioxide are exchanged). The air sacs become less elastic. Air becomes trapped in the lungs, causing them to hyperinflate.

#### Tip ↘

Chronic inflammation in the airways can lead to permanent lung damage and decreased lung function. This process is called **airway remodeling**.

Some COPD patients have either chronic bronchitis or emphysema, while others have both lung diseases. Some patients have overlapping asthma and COPD symptoms, known as Asthma COPD Overlap Syndrome (see: [www.ginasthma.org/documents/14](http://www.ginasthma.org/documents/14)).

### 5.2 What Causes COPD?


Most cases of COPD are **preventable**. Smoking is the number one cause of COPD. About 80% to 90% of COPD cases are caused by smoking.<sup>59</sup> Other risk factors include:

- Exposure to workplace dust (e.g., grain, coal), fumes, and chemicals.
- Exposure to second-hand smoke, especially in childhood.
- Repeated childhood lung infections.

- A rare genetic deficiency of Alpha-1 Antitrypsin, a blood protein that protects the lungs from injury (see: [www.respiratoryguidelines.ca/2012-cts-guideline-alpha-1](http://www.respiratoryguidelines.ca/2012-cts-guideline-alpha-1)). A person who inherits this condition doesn't have enough of this blood protein and is at risk of lung damage and emphysema. They have a very high risk of developing COPD if they smoke.

COPD progresses slowly. It can be treated, but the lung damage cannot be reversed. Early diagnosis and quitting smoking are necessary to slow down the progression of the disease and to preserve remaining lung function and quality of life.

COPD is the **fourth leading cause of death in Canada**. It will be the third leading cause of death by 2020.<sup>60</sup> While mortality rates for heart disease, stroke, and cancer are decreasing, mortality rates for COPD are increasing due to the long-term effects of smoking.

 World COPD Day is celebrated each year in November to raise awareness about COPD prevention and treatment. For details: [www.goldcopd.org](http://www.goldcopd.org).

#### Women at Higher Risk of COPD:

Women are at higher risk of COPD compared to men, even if they did not smoke a lot or never smoked at all. Women are also at higher risk of having severe, early-onset COPD; experiencing more shortness of breath and airway hyper-reactivity; and being hospitalized and dying from COPD.<sup>61</sup> Factors include: physiological differences (e.g., smaller lungs and airways, hormones, weaker respiratory muscles); delays in lung function testing and diagnosis; smoking patterns; and social and psychological barriers to quitting smoking.<sup>62</sup>

#### COPD in Ontario:

- 1 in 4 Ontarians is at risk of developing COPD.<sup>63</sup>
- COPD accounts for:
  - 24% of hospitalizations
  - 24% of emergency department visits
  - 21% of ambulatory care visits
  - 35% of long-term care placements
  - 30% of home care services.<sup>64</sup>

### 5.3 How Is COPD Diagnosed?

COPD is diagnosed by a simple breathing test called **spirometry**, which measures how much air you can blow out of your lungs and how fast you can blow it out. Spirometry is a painless test that can be done in a doctor's office or clinic and it takes just a few minutes. Spirometry measures<sup>65</sup>:

- **Forced Vital Capacity (FVC):** The largest amount of air that you can breathe out after you take your biggest breath in.
- **Forced Expiratory Volume (FEV-1):** The amount of air you can force out of your lungs in one second.

#### Tip ↘

This video by the Canadian Lung Association shows how a **spirometry** test works: [www.youtube.com/watch?v=ZZdSkvf9I6U](http://www.youtube.com/watch?v=ZZdSkvf9I6U).

If there is swelling, inflammation, and excessive mucus in your lungs, you won't be able to **breathe out** as much air as someone who doesn't have COPD.

Your doctor will listen to your lungs, take a medical history, and perform a physical exam. Your doctor may

also order the following tests to assess the severity of your COPD and to rule out other health conditions:

- Body plethysmography (a lung function test that measures how much air you can hold in your lungs).
- A chest X-ray.
- Blood tests (e.g., arterial blood gas analysis which measures how efficiently your lungs move oxygen into your blood and remove carbon dioxide from your blood).
- Exercise tolerance tests (e.g., the Six-Minute Walk Test and the cardiopulmonary exercise test) to assess your degree of fatigue and/or breathlessness.

Your health care provider may refer you to a respirologist (lung specialist) if he/she is unable to confirm if you have COPD, or if he/she requires a consultation with an expert in lung disease management.

Your doctor will determine if you have mild, moderate, severe, or very severe COPD based on:

- Your test results.
- The severity of your symptoms.
- The number and severity of attacks.
- The number of times you are hospitalized.
- The degree of your disability.
- Your quality of life.

If your COPD is mild and/or well controlled, your primary care provider or your respirologist may order a **spirometry test once or twice a year** to monitor your lung function. Your doctor may test your lung function more often if you have many infections and COPD attacks.

Sometimes, patients and/or health care professionals may not recognize COPD symptoms. Patients often think that they are short of breath because they are out of shape or they are getting older. Primary care physicians may mistake a patient's shortness of breath for asthma or a heart condition. And most primary care physicians have not been trained to interpret spirometry test results.

#### Tip ↘

Check the **Medical Research Council's Breathlessness Scale** to assess how short of breath you feel during daily activities: [www.occmmed.oxfordjournals.org/content/58/3/226.full](http://www.occmmed.oxfordjournals.org/content/58/3/226.full).



The Champlain Lung Health Network is concerned that individuals with COPD who live in the Champlain region are not diagnosed quickly enough. Many patients experience symptoms for many years before they are diagnosed, resulting in permanent lung damage, disability, and recurring ER visits and hospitalizations.



## 5.4 Are You At Risk for COPD?

### THE CANADIAN LUNG HEALTH TEST

Smokers and former smokers are at risk of developing COPD—Chronic Obstructive Pulmonary Disease (sometimes called emphysema or chronic bronchitis). If you are over 40 and smoke or used to smoke, you may already have COPD. Some non-smokers may also develop COPD.

Take this quick test:

	YES	NO
1. Do you cough regularly?	<input type="checkbox"/>	<input type="checkbox"/>
2. Do you cough up phlegm regularly?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do even simple chores make you short of breath?	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you wheeze when you exert yourself, or at night?	<input type="checkbox"/>	<input type="checkbox"/>
5. Do you get frequent colds that persist longer than those of other people you know?	<input type="checkbox"/>	<input type="checkbox"/>

If you answered ‘Yes’ to any of these questions, you could have COPD and should speak with your doctor about taking a simple breathing test called *spirometry*.

The Canadian Lung Health Test is reproduced with permission from the website of the Canadian Lung Association. [www.lung.ca](http://www.lung.ca). All rights reserved.

**NOTE:** The Canadian Lung Health Test is subject to change over time. Please check the Canadian Lung Association website for the most recent version.

**Disclaimer:** This COPD test from the Canadian Lung Association website is for information purposes only. It should not replace a complete medical examination by a doctor. If you think you may have COPD or are worried about your health, please see your doctor.

## 5.5 COPD Triggers

Various factors can trigger COPD attacks:

- Smoking
- Viral or bacterial infections (e.g., colds, bronchitis, pneumonia)
- Weather changes
- Indoor or outdoor air pollution (e.g., allergens, second-hand smoke, smog)
- Workplace dust or chemicals
- Emotions or stress
- Heart disease.

## 5.6 COPD Attacks

The warning signs of a COPD attack include:

- An increase in the amount or thickness of mucus
- Yellow, green, or brown mucus
- Increased shortness of breath
- Severe and worsening cough
- Chest pain
- Fever
- Feeling tired and unwell
- Swollen ankles
- Trouble sleeping at night due to increased trouble breathing
- Having to sleep sitting up or needing more pillows to sleep
- Morning headaches
- Feeling dizzy or confused
- Blue lips or fingernails.

### Tip ↘

COPD attacks can tire out the muscles in your neck, chest, and back. Muscle fatigue can cause chronic pain. COPD patients can also develop **costochondritis**, an inflammation of the cartilage that connects the ribs to the breastbone (sternum). Ask a health care provider or a registered massage therapist for advice on relieving muscle fatigue and pain (e.g., using cold and hot compresses, self-massage techniques, and muscle stretching exercises).

If you are having a COPD attack, follow your **COPD Action Plan** (see Section 5.8). Your primary care physician, respirologist, or nurse practitioner may need to adjust the dose of your medications or you may need to be hospitalized so that you can receive specialized treatment. Review the checklist of COPD triggers with your health care providers so you can understand what triggered your attack and how to prevent another one.

## 5.7 COPD Medications

Different COPD medications can reduce or relieve your symptoms:

- **Bronchodilators:**
  - **Fast-acting bronchodilators** provide immediate relief from COPD symptoms by relaxing the muscles that constrict the airways. You should get relief within minutes of using a reliever inhaler. The effects should last between four to six hours.
  - **Long-acting bronchodilator** inhalers help to relax the muscles that constrict the small airways for up to 12 hours.
  - **Fast-acting anticholinergic** inhalers help to relax the muscles that constrict the large airways (bronchi). They work in about 15 minutes and last for six to eight hours.
  - **Long-acting anticholinergic** inhaler and **long-acting muscarinic antagonist** inhaler take about 20 minutes to work and last for 12 to 24 hours.

### Tips ↘

- *These videos by the Canadian Lung Association show you **how to properly use different types of inhalers**: [www.on.lung.ca/page.aspx?pid=413](http://www.on.lung.ca/page.aspx?pid=413). Your primary care provider, respirologist, nurse practitioner, registered respiratory therapist/certified respiratory educator, and pharmacist can review your technique.*
- *There are many COPD medications available. Your health care provider is the best person to decide on the best **combination of medications** to treat your COPD.*
- *Don't stop taking your COPD medications even if you feel better and your symptoms are under control. The swelling and inflammation in your airways will worsen, putting you at **risk for a severe COPD attack that may lead to hospitalization**.*
- *It's important for COPD patients to rest and to conserve energy. Ask your respirologist, registered respiratory therapist/certified respiratory educator, or rehabilitation specialist to teach you how to do daily tasks differently (e.g., putting on your socks, climbing stairs, housework) so that you feel less short of breath and tired.*

- **Xanthine** pills are bronchodilator medications that relax the muscles in the breathing tubes and help to relieve swelling. There are short- and long-acting xanthines. Your doctor will be careful about prescribing these medications due to their side effects.
- **Corticosteroid inhalers and pills** reduce the swelling and inflammation in your airways.
- **Combination inhalers** that may contain a long-acting bronchodilator and a corticosteroid medication or a long acting muscarinic antagonist.
- **Antibiotics** to treat bacterial lung infections.
- **Flu and pneumonia vaccines** to prevent infections that trigger COPD attacks. These vaccines can help to reduce the risk of hospital admissions and death.
- **Oxygen therapy** to reduce shortness of breath when COPD makes it difficult for you to get enough oxygen from the natural air into the bloodstream. Low blood oxygen is called **hypoxemia**. There are several reasons why someone can feel short of breath. Not all COPD patients need oxygen therapy. Your respirologist will review your test results and determine if it will help you.

## 5.8 Tools for COPD Patients

### ✓ Quitting Smoking

Quitting smoking is the most important thing that patients can do to slow the progression of COPD. Quitting smoking can be difficult. It may take several attempts. Ask your primary care physician, nurse practitioner, nurse, respirologist, registered respiratory therapist/certified respiratory educator, or pharmacist for help in quitting smoking. See *Chapter 8* for a list of smoking cessation resources in the Champlain region.

### ✓ BreathWorks™

BreathWorks™ is the Lung Association's national COPD program. Patients, family members, and caregivers can order free information on COPD symptoms, diagnosis, and treatment. Call the BreathWorks™ Helpline at **1-866-717-COPD (2673)** to speak to a certified respiratory educator and visit: [www.on.lung.ca/breathworks](http://www.on.lung.ca/breathworks).

## ✓ COPD Action Plan

A COPD Action Plan is a personalized set of written instructions that describes your triggers and symptoms, and what to do when you have a COPD attack (e.g., when to change the dose of a medication, when to seek emergency treatment). Your COPD Action Plan will tell you if you are in the **Green Zone** (*I Feel Well*), **Yellow Zone** (*I Feel Worse*), or **Red Zone** (*I Feel Much Worse*). Download a copy at: [www.respiratoryguidelines.ca/updated-cts-copd-action-plan](http://www.respiratoryguidelines.ca/updated-cts-copd-action-plan) and ask your primary care provider, respirologist, or nurse practitioner to fill it out and to update it whenever the severity of your symptoms changes or whenever your medications change. A health care provider (e.g., nurse practitioner, physician assistant, registered respiratory therapist/certified respiratory educator) can review your COPD Action Plan with you to make sure that you understand your doctor's instructions.

## ✓ Respirologist


A respirologist (lung specialist) can order tests to confirm a COPD diagnosis; prescribe medications; monitor your symptoms; fill out and update your COPD Action Plan; assess whether you need respiratory rehabilitation, oxygen therapy, or surgery; and help you to plan end-of-life and hospice palliative care.

## ✓ Registered Respiratory Therapist and Certified Respiratory Educator

A registered respiratory therapist is a health care professional who is trained to test and educate people who have breathing problems. A certified respiratory educator is a health care professional (e.g., nurse, nurse practitioner, registered respiratory therapist, or pharmacist) who is trained to teach you about your COPD symptoms, triggers, medications, and treatment plans. To speak to a certified respiratory educator free of charge, call The Lung Association's BreathWorks™ Helpline at **1-866-717-COPD (2673)**. The Lung Association can refer you to a registered respiratory therapist/certified respiratory educator in the Champlain region. See *Section 5.10* in this guide for a list of free **COPD education programs** in the Champlain region. Bring your COPD Action Plan, your medications, and a copy of your spirometry test results so that you can discuss your treatment plan.

## ✓ Standby Prescriptions of Corticosteroid Medications and Antibiotics

COPD patients are at high risk of frequent viral and bacterial lung infections which can significantly affect their lung function. The Champlain Lung Health Network recommends that all COPD patients have standby prescriptions for corticosteroid (controller) medications (e.g., corticosteroid pills and antibiotics) in case of a COPD attack or lung infection. COPD patients need to have these medications on hand in case they feel ill in the evenings or on the weekends when their health care providers are not available. Ask your health care provider to either give you extra medication that you can keep at home, or to write a prescription for controller medications and antibiotics that your pharmacy can keep on hold. Ask your doctor to write down instructions in your **COPD Action Plan** explaining when and how to use standby medications.



If you do not feel better after you have finished your antibiotics, contact your health care provider immediately. If your doctor or nurse practitioner is not available and you are having trouble breathing, go to your nearest emergency room. Sometimes COPD patients feel uncomfortable or nervous about seeking emergency medical treatment. Remember that going to the emergency room when you are having a severe attack is part of your COPD Action Plan.

## ✓ Spacer Device for Your Metered Dose Inhaler

If you use metered dose inhalers you will need a spacer device to help you inhale the medication. (Other types of inhalers, such as the Diskus® or Turbuhaler®, use different delivery systems and don't require a spacer.) The spacer is a plastic tube that attaches to your inhaler. It helps to deliver medication into the deepest parts of your lungs in order to better treat the swelling and inflammation. Using a spacer device and rinsing your mouth after using your corticosteroid (controller) inhaler will help to prevent **thrush**, a fungal infection of the mouth and throat.

## ✓ Respiratory Rehabilitation

It's important for COPD patients to stay active and to exercise. Many COPD patients are afraid to exercise because they feel short of breath at rest, and they are afraid of feeling more short of breath while exercising. But COPD patients who stop exercising get caught in a downward cycle of increased



The Champlain Lung Health Network urges health care providers to refer all of their COPD patients to a respiratory rehabilitation program.

shortness of breath and fatigue. If you feel short of breath when performing mild to moderate exercise, such as hurrying on a level ground or walking up a slight hill, ask your doctor or nurse practitioner to refer you to a respiratory rehabilitation program. Respiratory rehabilitation programs combine specialized exercises and

education, and some offer support groups. These programs can significantly improve your quality of life. COPD patients feel less short of breath and they have more energy for daily activities. See *Chapter 9* for a list of respiratory rehabilitation programs in the Champlain region.

### ✓ Proper Nutrition

Some COPD patients have trouble losing weight because their shortness of breath makes it difficult to exercise. Other COPD patients lose too much weight and muscle mass due to their shortness of breath. It's difficult to eat or to have an appetite when you feel short of breath. Ask your doctor to refer you to a dietitian if you struggle to maintain a healthy weight.

### ✓ Surgery

A small number of COPD patients may need surgery to remove the most damaged parts of their lungs. This procedure is called **lung volume reduction surgery**. Your respirologist will determine if you need surgery.

### ✓ Lung Transplant

A very small number of patients with severe COPD may need a lung transplant. Your respirologist will determine if you qualify for a lung transplant.

### ✓ Assistive Devices

COPD patients tire easily, especially when carrying things, including a portable oxygen unit. Using a four-wheeled walker with a seat and back support, and using the walker basket to carry your portable oxygen unit will help you to rest as needed; to conserve energy; and to perform activities of daily living (e.g., eating, bathing, dressing, toileting, walking). A walker is also a therapeutic device. By placing your hands on the handles of an appropriately fitted walker, you help to stabilize your body in such a way that it can help you to breathe more effectively. Using a walker and effective breathing techniques can greatly reduce shortness of breath.

### ✓ Hospice Palliative Care

COPD patients should discuss end-of-life issues (e.g., advanced care planning, power of attorney, resuscitation orders) with their families and health care providers early on. See *Chapter 15* for a list of hospice palliative care resources in the Champlain region.

### ✓ COPD Health Care Team

You may need different health care providers to help you manage your COPD:

- A primary care physician
- A nurse or nurse practitioner
- A respirologist
- A registered respiratory therapist/certified respiratory educator
- An allergist
- An ear, nose and throat specialist
- An osteoporosis specialist
- A smoking cessation counsellor
- A physical rehabilitation specialist
- A registered massage therapist
- A physiotherapist
- An occupational therapist
- A dietitian
- An oxygen therapy supplier
- A social worker
- A pharmacist
- A psychologist.

#### Tip ↘

*The Champlain region has high rates of COPD due to an aging population that smoked or continues to smoke, and high rates of emergency room visits and hospital readmissions due to COPD attacks. Many COPD patients have other chronic diseases such as heart disease or diabetes that may cause additional complications. The Champlain Lung Health Network encourages patients to take an active role in managing their COPD. Speak up, request referrals to specialists as needed, and advocate for yourself to ensure that you receive the best possible care.*



## 5.9 ✓ COPD Patient Checklist

- I know my COPD triggers and I try to avoid them when possible.
- I have a COPD Action Plan. I know how to monitor my symptoms, how to recognize the early warning signs of a lung infection or a COPD attack, and how to follow my treatment plan.
- I understand the differences between **reliever (rescue)** and **controller (preventer)** medications.
- My primary care physician, respirologist, nurse practitioner, registered respiratory therapist/certified respiratory educator, or pharmacist taught me how to use my inhalers and spacer device.
- I visit my primary care physician, respirologist, nurse practitioner, and/or registered respiratory therapist/certified respiratory educator at least once or twice a year to discuss my medications and COPD Action Plan.
- I have standby prescriptions for controller (preventer) medications and antibiotics.
- I have a spirometry test at least once or twice a year to monitor my lung function.
- I live and work in a 100% smoke-free environment.
- I have quit smoking.
- I participate in an on-going respiratory rehabilitation program.
- I have discussed oxygen therapy, surgery, and end-of-life issues with my family and my health care providers.
- I receive a flu shot every year to reduce the risk of infection, hospital admissions, and death.
- I receive a pneumonia vaccination every 5–10 years to reduce the risk of infection, hospital admissions, and death.

### Tip ↘

Pharmacists can administer flu shots. To find a **flu shot clinic** near you, visit: [www.health.gov.on.ca/en/public/programs/publichealth/flu](http://www.health.gov.on.ca/en/public/programs/publichealth/flu) or contact your local public health unit (see page 50).

## 5.10 COPD Education Programs in the Champlain Region

### Hospitals:

- **Cornwall Community Hospital  
Outpatient Respiratory Care Clinic**  
840 McConnell Avenue, Cornwall, Ontario  
Tel: 613-938-4240  
[www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic](http://www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic)
- **Kemptville District Hospital**  
2675 Concession Road, Kemptville, Ontario  
Tel: 613-258-6133  
[www.kdh.on.ca](http://www.kdh.on.ca)  
*\*Provides group programs on-site and via the Ontario Telemedicine Network.*
- **Pembroke Regional Hospital**  
705 Mackay Street, Pembroke, Ontario  
Tel: 613-732-2811  
[www.pemreghos.org](http://www.pemreghos.org)  
*\*Provides education as part of the respiratory rehabilitation program.*
- **Queensway Carleton Hospital**  
3045 Baseline Road, Ottawa, Ontario  
Tel: 613-721-2000  
[www.qch.on.ca](http://www.qch.on.ca)  
*\*Provides education in the outpatient clinic.*
- **The Ottawa Hospital:**
  - **Civic Campus**  
1053 Carling Avenue, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*
  - **General Campus**  
501 Smyth Road, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*

- **Riverside Campus**  
1967 Riverside Drive, Ottawa, Ontario  
Tel: 613-722-7000 or TTY: 613-761-4024  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Requires a referral from a doctor.*

- **The Ottawa Hospital Rehabilitation Centre**  
505 Smyth Road, Ottawa, Ontario  
Tel: 613-737-7350 ext. 75318  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Provides education as part of the respiratory rehabilitation program. Patients require a referral from a physician.*
- **Hôpital Montfort**  
713 Montreal Road, Ottawa, Ontario  
Tel: 613-746-4621  
[www.hopitalmontfort.com/en](http://www.hopitalmontfort.com/en)  
*\*Provides education as part of the respiratory rehabilitation program.*

#### Community Health Centres:

*\*Education sessions at all of the following community health centres are provided by a registered respiratory therapist/certified respiratory educator who will also assess patients' symptoms and evaluate their treatment plan. Patients can refer themselves or be referred by a health care provider.*

- **Carlington Community Health Centre**  
900 Merivale Road, Ottawa, Ontario  
Tel: 613-722-4000  
[www.carlington.ochc.org](http://www.carlington.ochc.org)
- **Centretown Community Health Centre**  
420 Cooper Street, Ottawa, Ontario  
Tel: 613-233-4433 or TTY: 613-233-0651  
[www.centretownchc.org](http://www.centretownchc.org)

- **North Lanark Community Health Centre**  
207 Robertson Drive, Lanark, Ontario  
Tel: 613-259-2182  
[www.northlanarkchc.on.ca](http://www.northlanarkchc.on.ca)
- **Pincrest Queensway Community Health Centre**  
1365 Richmond Road, Ottawa, Ontario  
Tel: 613-820-4922  
[www.pqchc.com](http://www.pqchc.com)
- **Rainbow Valley Community Health Centre**  
49 Mill Street, Killaloe, Ontario  
Tel: 613-757-0004  
[www.rainbowvalleychc.on.ca](http://www.rainbowvalleychc.on.ca)
- **Sandy Hill Community Health Centre**  
221 Nelson Street, Ottawa, Ontario  
Tel: 613-789-1500  
[www.sandyhillchc.on.ca](http://www.sandyhillchc.on.ca)
- **Seaway Valley Community Health Centre Lung Health Program**  
353 Pitt Street, Cornwall, Ontario  
Tel: 613-936-0306  
[www.seawayvalleychc.ca](http://www.seawayvalleychc.ca)  
*\*Requires a referral from a doctor or a nurse practitioner. A registered respiratory therapist provides education. The program also offers spirometry.*
- **Somerset West Community Health Centre**  
55 Eccles Street, Ottawa, Ontario  
Tel: 613-238-8210 ext. 2370  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)
- **Somerset West Community Health Centre – Rosemount Branch**  
30 Rosemount Avenue, Ottawa, Ontario  
Tel: 613-688-1177  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)
- **South East Ottawa Community Health Centre**  
1355 Bank Street, Suite 600, Ottawa, Ontario  
Tel: 613-737-5115  
[www.seochc.on.ca](http://www.seochc.on.ca)

- **South Nepean Community Health Centre**  
4100 Strandherd Drive, Suite 201, Nepean, Ontario  
Tel: 613-288-2820  
[www.pqchc.com/south-nepean-chc](http://www.pqchc.com/south-nepean-chc)
- **Wabano Centre for Aboriginal Health**  
299 Montreal Road, Ottawa, Ontario  
Tel: 613-748-0657  
[www.wabano.com](http://www.wabano.com)
- **Whitewater Bromley Community Health Centre Satellite**  
20 Robertson Drive, Beachburg, Ontario  
Tel: 613-582-3685  
[www.wbchc.on.ca](http://www.wbchc.on.ca)

#### Family Health Teams (FHTs):

- **Arnprior and District Family Health Team**  
346 John St. North, Suite 255, Arnprior, Ontario  
Tel: 613-622-5763 or 1-877-622-7691  
[www.arnpriorfht.ca](http://www.arnpriorfht.ca)  
*\*Referral by a health care provider or patients can refer themselves. Education provided by various health care professionals (e.g., registered respiratory therapist/certified respiratory educator, nurse practitioner, pharmacist).*
- **Lower Outaouais Family Health Team**  
144 Main Street East, Suite 201, Hawkesbury, Ontario  
Tel: 613-636-0971  
[www.lofht.com](http://www.lofht.com)  
*\*For FHT patients only. Education provided by a registered nurse/certified respiratory educator.*
- **Ottawa Valley Family Health Team**  
95 Spring Street, Almonte, Ontario  
Tel: 613-256-9370  
[www.ovfht.ca](http://www.ovfht.ca)  
*\*For FHT patients only. Education provided by a registered nurse.*
- **West Champlain Family Health Team**  
715 Mackay Street, Pembroke, ON  
Tel: 613-735-1089  
*\*Spirometry, COPD education, and smoking cessation support provided by a registered respiratory therapist. Accepts patients from the FHT and from the community.*

#### COPD Education Centres:

- **The Lung Association's Respiratory Health Centre–Ottawa**  
2319 St. Laurent Boulevard, Suite 500 (at Thurston Drive),  
Ottawa, Ontario  
Tel: 613-230-4200  
[www.on.lung.ca](http://www.on.lung.ca)  
*\*Patients can refer themselves. Offers one-on-one education sessions. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*
- **The Lung Association's Respiratory Health Centre–Arnprior Satellite Site**  
30 Jack Crescent, Arnprior, Ontario  
(Island View Retirement Suites, Activities Room)  
Tel: 613-302-1239  
*\*Referral by a health care provider or patients can refer themselves. Offers one-on-one education sessions one afternoon per week. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*

#### 5.11 COPD Treatment Guidelines and Care Pathways

- **Canadian Thoracic Society:** COPD Guidelines: [www.respiratoryguidelines.ca/guideline/chronic-obstructive-pulmonary-disease](http://www.respiratoryguidelines.ca/guideline/chronic-obstructive-pulmonary-disease)
- **Canadian Thoracic Society:** Guidelines for Spirometry in Primary Care: [www.respiratoryguidelines.ca/cts-2013-spirometry-in-primary-care-asthma](http://www.respiratoryguidelines.ca/cts-2013-spirometry-in-primary-care-asthma)
- **Global Initiative for Chronic Obstructive Lung Disease (GOLD):** Guides for COPD Diagnosis and Management: [www.goldcopd.com](http://www.goldcopd.com)
- **Ontario Primary Care Asthma Program (PCAP):** COPD Care Map and COPD Diagnosis and Management Algorithm: [www.on.lung.ca/pcap](http://www.on.lung.ca/pcap)

#### Tip for Health Care Providers ↘

The **Lung Association's Provider Education Program** offers accredited continuing medical education programs and materials on COPD, COPD vs. asthma, and the Canadian Thoracic Society's respiratory guidelines. For details: [www.olapep.ca](http://www.olapep.ca).

# CHAPTER 6

## Obstructive vs. Restrictive Lung Diseases

There are many different types of lung diseases.

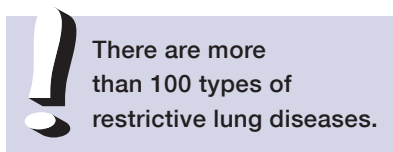
Your health care provider will order various tests (e.g., spirometry, chest x-ray, CT scan, blood tests) to determine if you have an **obstructive lung disease** or a **restrictive lung disease**.

**Obstructive lung diseases** cause inflamed, swollen, and narrowed airways. The lungs produce excess mucus. Patients feel short of breath because they can't *exhale* all of the air out of their lungs. Examples of obstructive lung diseases include:

- Alpha 1-antitrypsin deficiency
- Asthma
- Bronchiectasis
- Bronchitis
- COPD
- Cystic fibrosis.

**Restrictive lung diseases** cause damage to the lung tissue, including the pleura (the lining of the lungs and the chest wall), the chest wall, the alveoli (air sacs where oxygen and carbon dioxide are exchanged), and respiratory muscles. The lungs lose their elasticity and become stiff and scarred. Patients feel short of breath because they can't fully *inhale* air into their lungs. Examples of restrictive lung disease include:

- Asbestosis (caused by inhaling asbestos fibres)
- Connective tissue diseases
- Interstitial lung disease (e.g., sarcoidosis, an autoimmune disease)
- Lung cancer
- Pleurisy
- Pneumonia
- Pulmonary edema
- Pulmonary fibrosis.



Some health conditions that may cause restrictive lung disease include: obesity, neuromuscular disease, spinal cord injuries, cerebral palsy, and scoliosis.

# CHAPTER 7

## Medication Tips Shared By Patients

- Some pharmacies will not honour prescriptions that are more than one year old.
- Ask your pharmacist to write down the expiry dates on the labels of your standby antibiotic and corticosteroid prescriptions.
- Check the expiry dates on all medications.
- Talk to your primary care physician, nurse practitioner, respirologist, allergist, registered respiratory therapist/certified respiratory educator, and your pharmacist about any side effects from your medications. Visit [www.lung.ca](http://www.lung.ca) for information about asthma and COPD medications and their potential side effects.
- Long-term use of some asthma and COPD medications can increase your risk of developing cataracts and glaucoma. Talk to your eye doctor about the use of these medications. Have regular eye check-ups.
- Corticosteroid medications can cause skin bruising.
- Corticosteroid medications can affect your blood sugar levels. If you have diabetes, seek advice from your endocrinologist or diabetes educator.
- Chronic inflammation and higher doses of corticosteroid medication can affect a woman's menstrual cycle. Don't forget to get a check-up with a gynecologist.
- Women who are considering pregnancy should talk to their specialists about the side effects of asthma and osteoporosis medications.
- Long-term use of corticosteroid medications can increase your risk of developing osteoporosis. You should have a bone density scan to check for bone density loss, which can increase your risk of fractures.
- Patients should do regular weight-bearing exercises to strengthen their muscles and their bones.
- Antibiotics and corticosteroid medications can lead to disturbances in the bacterial flora in your body and increase your risk of developing fungal infections (e.g., in the mouth and throat, in the vaginal tract, in the digestive tract, on the skin). You may need anti-fungal medications. Seek advice from your doctor, nurse practitioner, and pharmacist.



# CHAPTER 8

## Quitting Smoking

### 8.1 Nicotine Addiction

“For some, quitting smoking can seem a difficult task. But it’s important to remember that the most significant predictor of smoking cessation success is...the number of times one has tried to quit previously! Never quit quitting! And don’t be afraid to ask for assistance. We know that getting help with cessation significantly improves the chances of success.”

—Dr. Andrew Pipe, Chief, Division of Prevention and Rehabilitation, University of Ottawa Heart Institute, and Canada’s leading expert on smoking cessation

Smoking and exposure to second-hand smoke can trigger an asthma or COPD attack. Second-hand smoke contains more than **7,000 toxic chemicals, 69 of which are known to cause cancer.**<sup>66</sup> There is **no safe level of exposure to second-hand smoke.** Even occasional and brief exposures to second-hand smoke can cause immediate inflammation in your lungs and immediate damage to blood vessels that can cause a heart attack, stroke, or aneurysm.<sup>67</sup>

The tobacco industry created and perpetuates addiction to:

- Traditional tobacco products (e.g., regular cigarettes, light and mild cigarettes, cigars).
- Novel fruit- and candy-flavoured tobacco products<sup>68</sup> (e.g., pipes, water pipes, cigarillos).
- Smokeless tobacco products (e.g., chewing tobacco, snus, dissolvable tobacco lozenges).

All tobacco products are addictive. They pose serious health risks (e.g., asthma and COPD attacks, fatal heart attacks, fatal strokes, certain cancers) and don’t help people to quit smoking.<sup>69,70,71</sup>

#### **Facts about Nicotine Addiction:**

- The tobacco industry targets youth as young as 12 years of age.<sup>72,73</sup>
- Nicotine addiction can develop after the first puff of a cigarette.<sup>74</sup>
- Nicotine is as addictive as heroin, cocaine, or alcohol.<sup>75</sup>
- It can take several attempts to quit smoking.
- 60% to 70% of smokers want to quit.<sup>76</sup>
- 63% of Canadians who have ever smoked have quit.<sup>77</sup>

Quitting smoking is one of the most important things you can do to improve your health. **Quitting takes practice—and a plan.** You can ask any of the following health care providers for advice about quitting smoking and about medications that can help you to quit:

- Primary care doctors and nurses (e.g., family doctor’s office, family health team, community health centre, walk-in clinic).
- Doctors and nurses in emergency rooms and hospitals.
- Public health nurses.
- Lung health specialists (e.g., respirologists, registered respiratory therapists/certified respiratory educators).
- Any other physician specialist (e.g., allergist, cardiologist).
- Dentists and dental hygienists.
- Pharmacists.

 The Canadian Cancer Society says that “quitting is not just about stopping smoking, it’s also about changing how a smoker thinks and feels about smoking.”<sup>78</sup>

## 8.2 Smoking Cessation Medications

**Nicotine replacement therapy** can help to reduce the withdrawal symptoms that some smokers experience while trying to quit. Examples include:

- Nicotine patch
- Nicotine gum
- Nicotine lozenges
- Nicotine inhaler
- Nicotine spray.

There are also prescription medications to help you quit smoking, including Bupropion HCL and Varenicline. Talk to your doctor and pharmacist about possible side effects from any of these medications.

**The Champlain Lung Health Network encourages doctors, nurses, registered respiratory therapists/certified respiratory educators, and pharmacists to provide smoking cessation information to patients at every visit.**

### Tips ↘

- Ask your health care provider if they offer the **Ottawa Model for Smoking Cessation**, an internationally recognized program that successfully helps people to quit smoking. For details: [www.ottawamodel.ca](http://www.ottawamodel.ca).
- Ask your **community health centre** or **family health team** if they offer free Nicotine replacement therapy products as part of the **STOP Program** (Smoking Treatment for Ontario Patients). For details: [www.nicotinedependenceclinic.com](http://www.nicotinedependenceclinic.com).
- Pharmacists in all community pharmacies can help you to quit smoking. Pharmacists provide information about quitting smoking, smoking cessation support, nicotine replacement therapy products, and unlimited follow-up. Pharmacists in Ontario can also prescribe an approved drug to help you quit smoking. Since many pharmacies are open around the clock, smokers can seek help at any time, instead of waiting for a doctor's appointment.

## JEAN'S SMOKING CESSATION JOURNEY

"I was diagnosed with COPD seven years ago at the age of 59. I had gone to the hospital emergency to get antibiotics. I thought it was my usual bout of bronchitis. A chest x-ray showed that I had pneumonia. The ER doctor gave me a prescription for antibiotics and an inhaler to help with my breathing. Had I not been feeling so ill at the time, I may have asked what COPD was all about.

I started smoking in my late 20s at a time when smoking was a really cool thing to do. All my friends, family, and co-workers smoked. Everywhere you went it was socially acceptable. The tobacco industry constantly promoted smoking on billboards, radio, and television.

I attempted to quit smoking many times throughout my life. I used every quit smoking aid available with very little or no success. In 2010, my doctor prescribed Champix. I managed to quit for six months, but regrettably relapsed.

In December 2011, my sister, also a life-long smoker, died of lung cancer. You would think that I would have decided to quit smoking after caring for her and watching her suffer during her final days of life.

In 2013, I complained to my doctor about shortness of breath, extreme lack of energy, and notable weight loss. I was referred to a respirologist. My journey with COPD truly began.

The past year has been challenging. I'm learning to change my lifestyle, to recognize triggers that might cause COPD flare-ups, to listen to my body and not overdo it, to understand how COPD affects my loved ones, and to quit smoking.

I stopped smoking four months ago with the help of Champix again. I'm determined to quit once and for all. This time I'm taking a different approach. I'm learning to be aware of the cravings and urges.

My husband (who is a smoker) is very supportive. We are learning together and taking it one day at a time."

—Jean K., COPD Patient, *The Lung Association's Respiratory Health Centre – Arnprior Satellite Site*

## 8.3 Smoking Cessation Programs in the Champlain Region

Your local public health unit offers smoking cessation programs:

- **Eastern Ontario Health Unit**  
Tel: 613-933-1375 or 1-800-267-7120  
Email: [info@eohu.ca](mailto:info@eohu.ca)  
[www.eohu.ca](http://www.eohu.ca)  
*\*Serves the Counties of Stormont, Dundas, Glengarry, Prescott, Russell, and the City of Cornwall.*
- **Leeds, Grenville and Lanark District Health Unit**  
Tel: 1-800-660-5853  
[www.healthunit.org/smoke](http://www.healthunit.org/smoke)
- **Ottawa Public Health**  
Tel: 613-580-6744 or 1-866-426-8885 or TTY: 613-580-9656  
Email: [healthsante@ottawa.ca](mailto:healthsante@ottawa.ca)  
[www.ottawa.ca/en/residents/public-health/healthy-living/quitting-smoking](http://www.ottawa.ca/en/residents/public-health/healthy-living/quitting-smoking)
- **Renfrew County and District Health Unit**  
Tel: 613-735-8666  
or 1-800-267-1097  
[www.rcdhu.com](http://www.rcdhu.com)  
*\*Serves the County of Renfrew, the City of Pembroke, and the District of South Algonquin.*

### Tip ↘

Dr. Mike Evans talks about successful smoking cessation strategies in his video *Quitting Smoking is a Journey*: [www.youtube.com/watch?v=nylJo7VCdPE](http://www.youtube.com/watch?v=nylJo7VCdPE).

## Other Smoking Cessation Resources in the Champlain Region:

### Community Health Centres:

- **Community Health Centres** in the Champlain region offer group smoking cessation programs and individual counselling. To find one in your area, call 416-236-2593 or visit the Association of Ontario Health Centres: [www.aohc.org](http://www.aohc.org).

### Family Health Teams:

- **Family Health Teams** offer smoking cessation support. To find one in your area, call 1-866-766-0266, email: [FHT.Inquiries.MOH@ontario.ca](mailto:FHT.Inquiries.MOH@ontario.ca), or visit: [www.afhto.ca/our-teams/find-a-fht-near-you](http://www.afhto.ca/our-teams/find-a-fht-near-you).

## Hospitals:

- **Cornwall Community Hospital Respiratory Care Clinic**  
840 McConnell Avenue, Cornwall, Ontario  
Tel: 613-938-4240  
[www.cornwallhospital.ca](http://www.cornwallhospital.ca)
- **University of Ottawa Heart Institute Quit Smoking Program**  
Tel: 613-761-5464  
Email: [quitsmoking@ottawaheart.ca](mailto:quitsmoking@ottawaheart.ca)  
[www.ottawaheart.ca/patients\\_family/quit-smoking-program.htm](http://www.ottawaheart.ca/patients_family/quit-smoking-program.htm)  
*\*Open to Heart Institute patients and the public.*

## Other:

- **The Canadian Cancer Society's Smokers' Helpline** offers free and confidential, evidence-based support, advice, and information about quitting smoking over the telephone and online. Call 1-877-513-5333 or visit: [www.smokershelpline.ca](http://www.smokershelpline.ca). You can also contact a local office of the Canadian Cancer Society:
  - **Ottawa Community Office**  
Tel: 613-723-1744  
Email: [ottawa@ontario.cancer.ca](mailto:ottawa@ontario.cancer.ca)
  - **S.D.G. & Prescott-Russell Community Office**  
Tel: 613-932-1283 or 1-800-669-4181
  - **Renfrew County Community Office**  
Tel: 613-735-2571 or 1-800-255-8873  
Email: [renfrew@ontario.cancer.ca](mailto:renfrew@ontario.cancer.ca)
  - **Lanark, Leeds and Grenville Community Office**  
Tel: 613-267-1058 or 1-800-367-2913  
Email: [lanarklg@ontario.cancer.ca](mailto:lanarklg@ontario.cancer.ca)
- **The Lung Association**  
Tel: 1-888-566-LUNG (5864)  
Email: [info@on.lung.ca](mailto:info@on.lung.ca)  
[www.on.lung.ca](http://www.on.lung.ca)

## 8.4 Other Smoking Cessation Resources

For more information about tobacco addiction, quitting smoking, and the health effects of smoking and second-hand smoke:

- **exposé:** [www.exposeottawa.ca](http://www.exposeottawa.ca)  
*\*A student-led advocacy group in Ottawa high schools, colleges, and universities.*
- **Health Canada:**
  - **Break It Off:** [www.breakitoff.ca](http://www.breakitoff.ca)
  - **Go Smoke-Free:** [www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php](http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php)
  - **On The Road to Quitting:**  
[www.hc-sc.gc.ca/hc-ps/pubs/tobac-tabac/road-voie-eng.php](http://www.hc-sc.gc.ca/hc-ps/pubs/tobac-tabac/road-voie-eng.php)
  - **Quit4Life:** [www.quit4life.com](http://www.quit4life.com)
  - **Smoking and Tobacco:** [www.healthycanadians.gc.ca/health-sante/tobacco-tabac/index-eng.php](http://www.healthycanadians.gc.ca/health-sante/tobacco-tabac/index-eng.php)
  - **Tobacco:** [www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php](http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php)
- **Leave the Pack Behind:** [www.leavethepackbehind.org](http://www.leavethepackbehind.org)
- **The Lung Association: Journey2Quit:** [www.on.lung.ca/journey](http://www.on.lung.ca/journey)
- **The Lung Association: Smoking and Tobacco:**  
[www.lung.ca/lung-health/smoking-and-tobacco](http://www.lung.ca/lung-health/smoking-and-tobacco)
- **PREGNETS:** [www.pregnets.org](http://www.pregnets.org)  
*\*Offers information, resources, and support for pregnant and postpartum women and their health care providers.*
- **Smoke-Free Ontario:** [www.mhp.gov.on.ca/en/smoke-free](http://www.mhp.gov.on.ca/en/smoke-free)

## Did You Know?

- Canada celebrates **National Non-Smoking Week** every January to educate Canadians about the dangers of smoking, to prevent youth from becoming addicted to tobacco products, to help people quit smoking, to promote smoke-free spaces, and to denormalize the tobacco industry. For details: [www.nnsw.ca](http://www.nnsw.ca).
- **World No Tobacco Day** is celebrated every year on **May 31<sup>st</sup>** to highlight the health risks associated with tobacco use, and to advocate for policies to reduce smoking and exposure to second-hand smoke. For details: [www.who.int/tobacco/wntd/en](http://www.who.int/tobacco/wntd/en).

## 8.5 Electronic Cigarettes

There is a debate in the health care community about the use of electronic cigarettes as a harm reduction tool or as a smoking cessation device. Many health organizations, including Health Canada and the World Health Organization, are concerned about the potential risks and the unknown risks of using electronic cigarettes, and about exposure to the vapours produced by electronic cigarettes.

The Champlain Lung Health Network wants lung patients to be aware of the **health risks** posed by using electronic cigarettes:

- The manufacture, quality control, labelling, sale, and advertising of electronic cigarettes are unregulated.
- The long-term effects of exposure to the chemicals in electronic cigarettes and in second-hand vapour are unknown.<sup>79,80</sup>
- Inhaling propylene glycol, a main ingredient in electronic cigarettes, is a known lung irritant<sup>81</sup> and could trigger an asthma attack.<sup>82</sup>
- Preliminary scientific studies show that the aerosol exhaled by electronic cigarette users and the vapor created by electronic cigarettes contains nicotine, carcinogens, heavy metals, and other toxic chemicals.<sup>83,84</sup>
- The ultrafine particles in electronic cigarette aerosol can cause lung inflammation<sup>85</sup> and decreased lung function.<sup>86</sup>
- Nicotine increases heart rate and blood pressure, causes blood vessels to constrict, and decreases blood flow to the heart in individuals with heart disease.<sup>87</sup>
- Health Canada has not approved the use or sale of electronic cigarettes as a smoking cessation device.<sup>88</sup>



- Health Canada has banned the importation, marketing, and sale of electronic cigarettes containing nicotine.<sup>89</sup>
- There is no scientific evidence proving that electronic cigarettes are a safe and effective smoking cessation aid.<sup>90,91</sup> Electronic cigarette companies make health and safety claims without scientific evidence.<sup>92</sup>
- The tobacco industry markets fruit and candy-flavoured electronic cigarettes to youth to trigger a nicotine addiction, and the use of e-cigarettes among youth is increasing.<sup>93,94,95</sup>
- Electronic cigarettes normalize smoking, making it difficult for smokers to quit.<sup>96</sup>
- Manufacturers have failed to disclose the chemical ingredients and the actual amounts of nicotine in electronic cigarettes.<sup>97,98</sup>
- Some electronic cigarettes labelled as nicotine-free actually contain varying amounts of nicotine.<sup>99,100</sup>
- The unregulated amount of nicotine in electronic cigarettes and the repetitive hand-to-mouth habit may cause further addiction and promote the dual use of electronic cigarettes and regular cigarettes.<sup>101,102,103</sup> This poses a further risk of exposure to second-hand smoke and worsening asthma and COPD symptoms.<sup>104</sup>
- Nicotine in electronic cigarettes has caused poisonings in children and adults, and the doses sold in various brands may be fatal to children and adults.<sup>105,106</sup>
- Electronic cigarettes can leak<sup>107</sup> and faulty batteries have exploded, posing a serious risk to patients using oxygen therapy.
- Tobacco companies are buying up electronic cigarette companies and developing their own electronic cigarettes. They use the same marketing tactics to advertise and sell electronic cigarettes as they do to sell regular cigarettes.

Talk to your health care provider if you have questions or concerns about electronic cigarettes.

## Respiratory Rehabilitation Programs in the Champlain Region

### A COPD PATIENT'S EXPERIENCE WITH RESPIRATORY REHABILITATION

"I know the respiratory rehabilitation program at the Somerset West Community Health Centre is keeping me well. If it wasn't for this program, I would not be able to even get up and go to the bathroom. Respiratory rehabilitation is a very important part of my health. It keeps me alive. It is important to exercise at least 3 times per week. Being consistent with my exercises keeps me well. I could miss a week or so when I am not well, but I come back to the program as soon as possible. Previously, I had no exercise program—only medications. I was always unwell and I frequently had to go into the emergency room. I didn't think I would be alive very long. In April 2011, I completed a respiratory rehabilitation program at The Ottawa Hospital and I made a commitment to exercise. I have been able to feel well most days and have not had one visit to the hospital since 2011."

—Giles Duke, COPD Patient

Respiratory rehabilitation programs help individuals with chronic lung disease to "increase their ability to live independently in the community and to overcome the physical limitations resulting from their disease."<sup>108</sup> Respiratory rehabilitation may benefit people who have trouble managing daily activities due to frequent cough, increased sputum, wheezing, and shortness of breath on moderate exertion.

A respiratory rehabilitation program should include:

- Exercise training
- Breathing exercises
- Health education
- Medical treatment
- Psychosocial support.

Respiratory rehabilitation helps patients to:

- Improve their lung function
- Reduce the intensity of their shortness of breath
- Reduce their fear of feeling short of breath
- Reduce depression and anxiety
- Regain muscle strength and stamina
- Improve their exercise tolerance
- Learn more about their lung disease
- Learn breathing and energy conservation techniques
- Reduce the risk of lung attacks and hospitalizations
- Have more energy for daily activities
- Improve their quality of life.

Individuals with chronic lung disease have trouble exercising because they often feel tired and short of breath at rest. But a lack of physical activity causes lung patients to get out of shape and to feel more short of breath. Patients who participate in a respiratory rehabilitation program can learn how to break this cycle of fear, fatigue, inactivity, and shortness of breath.

Having a chronic lung disease can also leave patients feeling frightened, isolated, and depressed. A respiratory rehabilitation program can provide patients with emotional, psychological, and social support.

“A person with lung disease uses more accessory muscles to breathe. Because of inactivity, they lose muscular mass. When muscles are strong and healthy, they help the circulation and the transport of oxygen to the body.”

—Rosario Holmes, Registered Respiratory Therapist and Certified Respiratory Educator, The Lung Association (Ottawa, Renfrew County, Cornwall Community Office)

### Tips ↘

- Your **diaphragm** (main breathing muscle) can feel like it is stuck to the ribcage. You won't be able to fully inhale, and you will feel more short of breath. Respiratory rehabilitation exercises can help to get the diaphragm moving again.
- Shortness of breath can be reduced by using a breathing technique called **pursed lip breathing** and by effectively using the diaphragm. Inhale slowly and deeply through your nose and exhale slowly through your mouth as if blowing through a small straw. To train yourself to use your diaphragm, place your hands on your abdomen. Feel your abdomen fully rise when you inhale and fall when you exhale. This technique will help to alleviate the use of accessory muscles in your neck, chest, and back. It will also optimize the delivery of oxygen to your body, whether or not you use supplemental oxygen. This technique is especially helpful on exertion.
- Some patients notice that the sensation of air moving from an electric floor or table fan can help them to feel less short of breath.

## Respiratory Rehabilitation Programs in the Champlain Region:

### Family Health Teams (FHTs):

- **Lower Outaouais Family Health Team**  
144 Main Street East, Suite 201, Hawkesbury, Ontario  
Tel: 613-636-0971  
[www.lofht.com](http://www.lofht.com)  
*\*Program is offered twice a week for 12 weeks. Patients exercise under the supervision of a kinesiologist. A maintenance rehabilitation program is available at a local gym.*
- **Ottawa Valley Family Health Team**  
95 Spring Street, Almonte, Ontario  
Tel: 613-256-9370  
[www.ovfht.ca](http://www.ovfht.ca)  
*\*Program is offered once a week for seven weeks. Provides modified exercises for patients with chronic disease.*

### Hospitals:

- **Cornwall Community Hospital Respiratory Care Clinic**  
840 McConnell Avenue, Cornwall, Ontario  
Tel: 613-938-4240  
[www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic](http://www.cornwallhospital.ca/en/OutpatientRespiratoryCareClinic)  
*\*Patients need a referral from a doctor. Accepts smokers who intend to quit.*
- **Hôpital Montfort**  
713 Montreal Road, Ottawa, Ontario  
Tel: 613-746-4621  
[www.hopitalmontfort.com/en/cardiovascular-and-pulmonary-health](http://www.hopitalmontfort.com/en/cardiovascular-and-pulmonary-health)  
*\*Patients need a referral from a doctor. Accepts smokers who intend to quit.*
- **Pembroke Regional Hospital**  
705 Mackay Street, Pembroke, Ontario  
Tel: 613-732-2811  
[www.pemreghos.org/outpatient\\_rehab.htm](http://www.pemreghos.org/outpatient_rehab.htm)  
*\*Patients need a referral from a doctor. Accepts smokers who intend to quit within one month.*

- **The Ottawa Hospital Rehabilitation Centre CANVent Respiratory Services**  
505 Smyth Road, Ottawa, Ontario  
Tel: 613-737-7350 ext. 75318  
[www.ottawahospital.on.ca](http://www.ottawahospital.on.ca)  
*\*Patients need a referral from a doctor and they must be smoke-free for at least three months. Accepts patients diagnosed with COPD, asthma, pulmonary fibrosis, bronchiectasis, and sarcoidosis. Patients are assessed by a respirologist and undergo exercise tolerance and breathing tests. Patients either attend an outpatient program (2–3 exercise sessions per week for 12 weeks), or attend an inpatient program (4 weeks of exercise training, 5 days per week, twice daily, and return home on weekends.)*

### Other:

- **Heart Wise Exercise**  
Tel: 613-761-4753  
Email: [heartwise@ottawaheart.ca](mailto:heartwise@ottawaheart.ca)  
<http://heartwise.ottawaheart.ca>  
*\*A partnership between the University of Ottawa Heart Institute and community organizations. Offers exercise programs for individuals with chronic diseases. Does not offer a formal respiratory rehabilitation program, but the University of Ottawa Heart Institute and the Champlain Lung Health Network are working together to ensure that Heart Wise Exercise programs are suitable for people who have COPD or who are at risk of developing COPD. A great option as a maintenance exercise program after a lung patient has completed a respiratory rehabilitation program. Contact the program to find an exercise program in your community.*
- **Somerset West Community Health Centre**  
55 Eccles Street, Ottawa, Ontario  
Tel: 613-238-8210 ext. 2370  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)  
*\*A registered respiratory therapist/certified respiratory educator assesses and manages patients. Accepts smokers, but encourages patients to quit smoking.*
- **Somerset West Community Health Centre – Rosemount Branch**  
30 Rosemount Avenue, Ottawa, Ontario  
Tel: 613-688-1177  
[www.swchc.on.ca/our-programs](http://www.swchc.on.ca/our-programs)  
*\*A registered respiratory therapist/certified respiratory educator assesses and manages patients. Accepts smokers, but encourages patients to quit smoking.*

- **The Lung Association (Ottawa, Renfrew County, Cornwall Community Office)**  
**The Shortness of Breath Maintenance Program**  
 2319 St. Laurent Boulevard, Suite 500 (at Thurston Drive),  
 Ottawa, Ontario  
 Tel: 613-230-4200

[www.on.lung.ca/page.aspx?pid=473](http://www.on.lung.ca/page.aspx?pid=473)

*\*Patients need a referral from a health care provider. One session per week costs \$25.00. Two sessions per week costs \$50.00. Offers maintenance rehabilitation exercises and a support group. Patients exercise under the supervision of a registered respiratory therapist/certified respiratory educator. Accepts patients diagnosed with various lung diseases. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*

- **The Lung Association's Respiratory Health Centre – Arnprior Satellite Site**  
 30 Jack Crescent, Arnprior, Ontario  
 (Island View Retirement Suites, Activities Room)  
 Tel: 613-302-1239

*\*Patients need a referral from a health care provider. Patients do not pay a fee. Patients may consider making a charitable donation to the Lung Association. Offers maintenance respiratory rehabilitation one morning*

*per week. Patients exercise under the supervision of a registered respiratory therapist/certified respiratory educator. Various health care professionals also give occasional talks on lung health. Serves patients from Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*

### Tip ↘

Patients who are enrolled in a respiratory rehabilitation program and who continue to struggle with severe symptoms should speak to their respirologist, nurse practitioner, registered respiratory therapist/certified respiratory educator, or physiotherapist. They may require additional medication, oxygen therapy, or specialized respiratory rehabilitation services.

## Oxygen Therapy

Some COPD patients have *hypoxemia*, an abnormally low concentration of oxygen in the blood. Oxygen therapy will increase the blood oxygen levels, reduce the stress on your heart, and improve your overall health and quality of life.

Supplemental oxygen is not a benign drug. It can cause side effects. It must be prescribed when appropriate by a doctor or a nurse practitioner. Oxygen prescriptions are adjusted according to the patient's needs and level of activity to ensure optimal therapeutic value while minimizing the ill effects of excessive oxygen. A registered respiratory therapist will assist the medical team and titrate the oxygen flow rate according to the recommended oxygen levels for COPD patients.

### How Do I Know If I Need Oxygen Therapy?

There are many reasons why an individual may feel short of breath. Oxygen therapy is not always the best or only therapeutic intervention required. Visit your doctor or nurse practitioner if you have COPD and suffer from one of the following symptoms:

- Headache
- Shortness of breath
- Increased blood pressure
- Rapid heart rate
- Lightheadedness
- A bluish discoloration of the skin, lips, and/or nail beds.

Your doctor or nurse practitioner will determine if you need oxygen therapy by performing a complete assessment of your condition. They will order the following tests to measure your blood oxygen levels to determine if you meet the well-established medical criteria for oxygen therapy:

- A **blood gas analysis**: a small amount of blood is taken from an artery to assess your blood's pH balance, oxygen, and carbon dioxide levels. This test is done while at rest.
- An **oximetry test**: a small sensor is placed on your finger to read the level of oxygen in your blood. This test is performed while at rest, walking, and during sleep.

### Types of Oxygen Therapy:

Three types of oxygen sources can be used at home:

- Compressed gas oxygen cylinders
- Oxygen concentrators
- Liquid bulk oxygen systems.

There are also portable oxygen units:

- Small compressed gas oxygen cylinders and homefill cylinders
- Portable liquid oxygen canisters
- Portable oxygen concentrators.

Your doctor or nurse practitioner will explain each type to you and determine which one best suits your needs.

An **oxygen vendor** of your choice will deliver and set up oxygen equipment at your home. The oxygen vendor health care professional will further explain the types of oxygen sources and ensure that you have the appropriate oxygen system for your activity level. They will teach you and your family how to use and care for the equipment. They will also review potential safety hazards. Your vendor respiratory therapist or registered nurse will determine if you would benefit from an oxygen conserving device to optimize the oxygen delivery to your lungs and to lengthen the duration of your portable oxygen system.

### Tips ↘

- *Your health status may change, especially in the first three months of oxygen therapy. Your doctor or nurse practitioner should reassess you **three months** after you are first prescribed oxygen therapy and yearly thereafter.*
- *Don't deviate from your oxygen prescription without consulting a health care professional who is familiar with your medical history, your oxygen prescription, and your oxygen equipment. If you feel unwell, talk to your doctor, nurse practitioner, registered respiratory therapist, and oxygen vendor respiratory therapist. They can assess if you are getting too little or too much oxygen; if your oxygen equipment is right for you; or if you require additional medical treatments (e.g., antibiotics, corticosteroid medications, chest physiotherapy, or bronchial hygiene therapy to loosen mucus and to prevent infections).*
- *Ask your doctor or nurse practitioner to refer you to a **respiratory rehabilitation program** to help you manage your shortness of breath during daily activities. See Chapter 9 for a list of respiratory rehabilitation programs in the Champlain region.*

### Am I Eligible for Financial Assistance?

The Ontario government's **Assistive Devices Program** (ADP) will pay 100% of the monthly cost for home oxygen therapy equipment, supplies (e.g., masks, nasal cannula, bubble humidifiers), and maintenance services if you:

- Have a valid Ontario Health Card; and
- Have a chronic illness or dysfunction that requires home oxygen therapy; and
- Meet medical eligibility criteria; and
- Are 65 or older; or
- Receive benefits from Ontario Disability Support Program, Ontario Works, or Assistance to Children with Severe Disabilities; or
- Receive professional services through a Community Care Access Centre; or
- Live in a long-term care home.



If you meet the medical criteria for oxygen therapy, your doctor or nurse practitioner will complete the ADP application form, including your oxygen prescription.

If you are between the ages of 18 and 65 years old and meet the medical criteria, ADP will fund 75% of the monthly oxygen fees. If you have private medical insurance, they may fund the remaining 25%.

For more information about the Ontario government's **Home Oxygen Therapy** program, contact:

Ontario Ministry of Health and Long-Term Care  
 Assistive Devices Program  
 Home Oxygen Therapy  
 7<sup>th</sup> Floor, 5700 Yonge Street  
 Toronto, ON M2M 4K5  
 Tel: 1-800-268-6021 or TDD/TTY: 1-800-387-5559  
 Email: [adp@ontario.ca](mailto:adp@ontario.ca)  
[www.health.gov.on.ca/en/public/programs/adp/publications/oxygen.aspx](http://www.health.gov.on.ca/en/public/programs/adp/publications/oxygen.aspx)

### Tip ↘

For more information about oxygen therapy, check the **Oxygen Therapy Clinical Practice Guidelines (November 2013)** by the College of Respiratory Therapists of Ontario: [www.crto.on.ca/pdf/PPG/Oxygen\\_Therapy\\_CBPG.pdf](http://www.crto.on.ca/pdf/PPG/Oxygen_Therapy_CBPG.pdf).

## Resources for Lung Patients in the Champlain Region

### Community Resources:

- To find a family doctor, call **Health Care Connect** at 1-800-445-1822 or visit: [www.health.gov.on.ca/en/ms/healthcareconnect/public](http://www.health.gov.on.ca/en/ms/healthcareconnect/public).
- To find a **family health team** call 1-866-766-0266, email: [FHT.Inquiries.MOH@ontario.ca](mailto:FHT.Inquiries.MOH@ontario.ca), or visit: [www.afhto.ca/our-teams/find-a-fht-near-you](http://www.afhto.ca/our-teams/find-a-fht-near-you).
- To find a **community health and resource centre**, visit **Coalition of Community Health and Resource Centres of Ottawa**: [www.coalitionottawa.ca](http://www.coalitionottawa.ca).
- **Champlain Health Line**: Links to health programs and services in the Champlain region: [www.champlainhealthline.ca](http://www.champlainhealthline.ca).
- **Living Healthy Champlain**: Six-week self-management workshops to help individuals with a chronic disease learn to manage their symptoms. Call 1-877-240-3941 or visit: [www.livinghealthyhamplain.ca](http://www.livinghealthyhamplain.ca).
- **Mobile Primary Health Care Unit**: A medical RV that visits communities throughout Lanark, Leeds, and Grenville counties. It offers primary health care, physical assessments, diagnosis and treatment of acute and chronic conditions, referrals to specialists, and smoking cessation counselling. Call 1-800-465-7646, email: [info@cphcare.ca](mailto:info@cphcare.ca), or visit: [www.cphcare.ca/primary](http://www.cphcare.ca/primary).
- **Telemedicine Program**: Provides health care services to people as close to home as possible. Patients can “visit” a doctor or other health care professional through two-way video-conferencing. Palliative care services are also available via telemedicine. For details: [www.youtube.com/watch?v=ta8nj4fV6BY](http://www.youtube.com/watch?v=ta8nj4fV6BY).

## Allergy, Asthma, and COPD Resources:

- **Adults with Allergies:**  
[www.adultswithallergies.com](http://www.adultswithallergies.com)
- **Allergic Living Magazine**  
Tel: 1-888-771-7747  
Email: [info@allergicliving.com](mailto:info@allergicliving.com)  
[www.allergicliving.com](http://www.allergicliving.com)
- **Allergy/Asthma Information Association**  
Tel: 1-800-611-7011  
Email: [admin@aaia.ca](mailto:admin@aaia.ca)  
[www.aaia.ca](http://www.aaia.ca)
- **Anaphylaxis Canada**  
Tel: 1-866-785-5660  
[www.anaphylaxis.org](http://www.anaphylaxis.org)
- **Asthma in Children (Third Edition)**, by Dr. Tom Kovesi, Pediatric Respirologist at the Children's Hospital of Eastern Ontario. To order a free copy, call the Ontario Lung Association at 1-888-344-5864 or visit: [www.on.lung.ca](http://www.on.lung.ca).
- **Asthma Patient Bill of Rights (National Asthma Patient Alliance):**  
[www.asthma.ca/napa/bill\\_of\\_rights.php](http://www.asthma.ca/napa/bill_of_rights.php)
- **Asthma Society of Canada**  
Tel: 1-866-787-4050  
Email: [info@asthma.ca](mailto:info@asthma.ca)  
[www.asthma.ca](http://www.asthma.ca) and [www.asthma.ca/copd/about](http://www.asthma.ca/copd/about)
- **Breathe Easy: A Guide to Being Healthy and Active with Asthma:**  
[www.asthma.ca/pdfs/ExerciseGuideEN.pdf](http://www.asthma.ca/pdfs/ExerciseGuideEN.pdf)
- **Canadian Network for Respiratory Care:** [www.cnrchome.net](http://www.cnrchome.net)
- **Certified Allergy and Asthma Friendly Products™:**  
[www.asthmaandallergyfriendly.ca](http://www.asthmaandallergyfriendly.ca)
- **COPD Canada:** [www.copdcanada.ca](http://www.copdcanada.ca)
- **COPD International:** [www.copd-international.com](http://www.copd-international.com)

- **Environmental Health Association of Ontario**  
Tel: 613-860-2342  
Email: [helpline@ehaontario.ca](mailto:helpline@ehaontario.ca)  
[www.ehaontario.ca](http://www.ehaontario.ca)
- **The Lung Association**  
**(Ottawa, Renfrew County, Cornwall Community Office)**  
2319 St. Laurent Boulevard, Suite 500 (at Thurston Drive),  
Ottawa, Ontario  
Tel: 613-230-4200  
[www.lung.ca](http://www.lung.ca) and [www.on.lung.ca](http://www.on.lung.ca)  
*\*Serves Renfrew, Ottawa, Lanark, Prescott, Russell, Stormont, Dundas, and Glengarry Counties.*
- **National Lung Health Framework:** [www.lunghealthframework.ca](http://www.lunghealthframework.ca)
- **Ontario Lung Health Action Plan:** [www.on.lung.ca/action-plan](http://www.on.lung.ca/action-plan)
- **Ontario Lung Health Alliance:** [www.breathersunited.com](http://www.breathersunited.com)
- **Ottawa Anaphylaxis Support Group**  
Tel: 819-778-2562  
Email: [karen@ottawaasg.com](mailto:karen@ottawaasg.com)  
[www.ottawaasg.com](http://www.ottawaasg.com)
- **Severe Asthma: The Canadian Patient Journey – A Study of the Personal, Social, Medical and Economic Burden of Severe Asthma in Canada:** [www.asthma.ca/pdfs/SAstudy.pdf](http://www.asthma.ca/pdfs/SAstudy.pdf)

## Asthma Resources for Kids and Adolescents:

- **Asthma Society of Canada:**  
[www.asthmakids.ca](http://www.asthmakids.ca) and [www.airsquare.ca](http://www.airsquare.ca)
- **Children's Hospital of Eastern Ontario – Asthma Overview:**  
[www.cheo.on.ca/en/asthmaoverview](http://www.cheo.on.ca/en/asthmaoverview) and [www.cheo.on.ca/En/asthma1](http://www.cheo.on.ca/En/asthma1)
- **The Lung Association:** [www.kidsasthma.ca](http://www.kidsasthma.ca) and [www.lungsareforlife.ca](http://www.lungsareforlife.ca)

## Asthma in Schools:

- **Air Quality School Guidelines:** [www.hc-sc.gc.ca/ewh-semt/pubs/air/tools\\_school-outils\\_ecoles/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/air/tools_school-outils_ecoles/index-eng.php)
- **Creating Asthma Friendly Environments (Schools and Daycares):** [www.asthmainschools.com](http://www.asthmainschools.com)
- **Healthy Schools, Healthy Communities – Asthma Education:** [www.ophea.net/programs-services/additional-resources/asthma-education](http://www.ophea.net/programs-services/additional-resources/asthma-education)

## Asthma in the Workplace:

- **Canadian Centre for Occupational Health and Safety:** [www.ccohs.ca/oshanswers/chemicals/iaq\\_intro.html](http://www.ccohs.ca/oshanswers/chemicals/iaq_intro.html)
- **The Lung Association – Work-Related Asthma:** [www.on.lung.ca/work-related-asthma](http://www.on.lung.ca/work-related-asthma)
- **Occupational Health Clinics for Ontario Workers:** [www.ohcow.on.ca](http://www.ohcow.on.ca)
- **Workplace Safety and Insurance Board**  
Tel: 1-800-387-0750 or TTY: 1-800-387-0050  
[www.wsib.on.ca](http://www.wsib.on.ca)

## Indoor and Outdoor Air Quality Resources:

- **Air Quality Health Index:** [www.weather.gc.ca/airquality/pages/index\\_e.html](http://www.weather.gc.ca/airquality/pages/index_e.html)
- **Canada Mortgage and Housing Corporation:** [www.cmhc-schl.gc.ca](http://www.cmhc-schl.gc.ca)
- **Daily Air Quality and Pollen Reports:** [www.theweathernetwork.com](http://www.theweathernetwork.com)
- **Daily Air Quality Reports (Ontario Ministry of the Environment):** [www.airqualityontario.com](http://www.airqualityontario.com)
- **Health Canada Indoor Air Quality:** [www.hc-sc.gc.ca/ewh-semt/air/in/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/air/in/index-eng.php)
- **Health Canada Outdoor Air Quality:** [www.hc-sc.gc.ca/ewh-semt/air/out-ext/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/air/out-ext/index-eng.php)
- **The Lung Association:** [www.yourhealthyhome.ca](http://www.yourhealthyhome.ca)

## Smoke-Free Resources:

- **Non-Smokers' Rights Association**  
Tel: 613-230-4211  
Email: [ottawa@nsra-adnf.ca](mailto:ottawa@nsra-adnf.ca)  
[www.nsra-adnf.ca](http://www.nsra-adnf.ca)
- **Ottawa Council on Smoking or Health**  
Tel: 613-322-7981  
Email: [info@smokefreeottawa.com](mailto:info@smokefreeottawa.com)  
[www.smokefreeottawa.com](http://www.smokefreeottawa.com)  
*\*Advocates for smoke-free public places, workplaces, and housing; smoking cessation; and prevention of youth smoking.*
- **Physicians for a Smoke-Free Canada**  
Tel: 613-600-5794  
Email: [psc@smoke-free.ca](mailto:psc@smoke-free.ca)  
[www.smoke-free.ca](http://www.smoke-free.ca)
- **Smoke-Free Homes:** [www.on.lung.ca/Page.aspx?pid=459](http://www.on.lung.ca/Page.aspx?pid=459)
- **Smoke-Free Housing Ontario**  
[www.smokefreehousingon.ca](http://www.smokefreehousingon.ca)  
*\*Provides resources for tenants and landlords on smoke-free policies. Also maintains a list of smoke-free rental housing and community/non-profit housing: [www.smokefreehousingon.ca/sfho/directory.html](http://www.smokefreehousingon.ca/sfho/directory.html).*
- **Smoke-Free Ontario:** [www.mhp.gov.on.ca/en/smoke-free](http://www.mhp.gov.on.ca/en/smoke-free)

## Other Helpful Resources:

- **Accessible Parking Permits (Ontario Ministry of Transportation)**  
Tel: 1-800-267-8097 or TTY: 1-800-268-7095  
[www.ontario.ca/Accessible%20parking%20permit](http://www.ontario.ca/Accessible%20parking%20permit)  
*\*Lung patients may qualify for a parking permit. Your doctor must fill out an application form.*
- **Canadian MedicAlert Foundation**  
Tel: 1-800-668-1507  
[www.medicalert.ca](http://www.medicalert.ca)
- **College of Massage Therapists of Ontario**  
Tel: 1-800-465-1933  
[www.cmto.com](http://www.cmto.com)

- **Dietitians of Canada**  
Email: [contactus@dietitians.ca](mailto:contactus@dietitians.ca)  
[www.dietitians.ca](http://www.dietitians.ca)
- **Emergency Preparedness for People with Disabilities/Special Needs**  
[www.emergencymanagementontario.ca/english/beprepared/diversegroups/PeoplewithDisabilities/PeoplewithDisabilities.html](http://www.emergencymanagementontario.ca/english/beprepared/diversegroups/PeoplewithDisabilities/PeoplewithDisabilities.html)  
and  
[www.emergencymanagementontario.ca/english/beprepared/beprepared.html](http://www.emergencymanagementontario.ca/english/beprepared/beprepared.html)
- **Meals on Wheels**  
Tel: 613-233-2424  
[www.mealsonwheels-ottawa.org](http://www.mealsonwheels-ottawa.org)
- **Ontario Physiotherapy Association**  
Tel: 1-800-672-9668  
Email: [physiomail@opa.on.ca](mailto:physiomail@opa.on.ca)  
[www.opa.on.ca](http://www.opa.on.ca)
- **Osteoporosis Canada (Ottawa Chapter)**  
Tel: 1-800-463-6842  
Email: [ottawa@osteoporosis.ca](mailto:ottawa@osteoporosis.ca)  
[www.osteoporosis.ca](http://www.osteoporosis.ca)
- **Osteoporosis Clinic (The Ottawa Hospital, Riverside Campus)**  
1967 Riverside Drive, 6<sup>th</sup> Floor, Ottawa, Ontario  
Tel: 613-738-8400 ext. 88270  
[www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS/Programs/ShirleyEGreenbergWomensHealthCentre/Clinics/OsteoporosisClinic](http://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS/Programs/ShirleyEGreenbergWomensHealthCentre/Clinics/OsteoporosisClinic)  
*\*Requires a referral from a physician.*
- **Para Transpo**  
Tel: 613-244-1289 or TTY: 613-244-4833  
[www.octranspo1.com/riding-with-oc-transpo/para\\_transpo](http://www.octranspo1.com/riding-with-oc-transpo/para_transpo)
- **Telehealth Ontario**  
Tel: 1-866-797-0000 or TTY: 1-866-797-0007  
[www.health.gov.on.ca/en/public/programs/telehealth](http://www.health.gov.on.ca/en/public/programs/telehealth)  
*\*Registered nurses provide free, confidential health advice 24 hours a day, 7 days a week.*
- **The Resource Centre at The Ottawa Hospital Rehabilitation Centre**  
505 Smyth Road, Room 1110, Ottawa, Ontario  
Tel: 613-737-7350 ext. 75689  
[www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS/Departments/RehabilitationCentre/AboutTheRehabilitationCentre/OurFacilities](http://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS/Departments/RehabilitationCentre/AboutTheRehabilitationCentre/OurFacilities)  
*\*Provides information and resources to people with disabilities, their families, and the community at large.*

# CHAPTER 12

## Financial Assistance for Lung Patients

Asthma and COPD patients may need financial assistance to help pay for their medications, housing, and other living expenses.

The government of Ontario offers the following assistance programs:

- **Assistive Devices Program**

You can be assessed for funding assistance if you need a walker for all activity inside and outside your home.

Tel: 1-800-268-6021 or TDD/TTY: 1-800-387-5559

Email: [adp@ontario.ca](mailto:adp@ontario.ca)

[www.health.gov.on.ca/en/public/programs/adp/publications/oxygen.aspx](http://www.health.gov.on.ca/en/public/programs/adp/publications/oxygen.aspx)

- **Medscheck**

All Ontarians who take three or more medications to treat a chronic health condition are eligible for a free 30 minute consultation with a pharmacist. Individuals living in long-term care homes can request a consultation with the on-site pharmacist. Pharmacists will travel to an individual's home if they live far away from a community pharmacy; if they are too ill to travel to a pharmacy; or if they receive home care. Individuals can request an additional Medscheck before and after a hospital stay.

Tel: 1-866-255-6701 or TTY 1-800-387-5599

[www.health.gov.on.ca/en/public/programs/drugs/medscheck](http://www.health.gov.on.ca/en/public/programs/drugs/medscheck)

- **Ontario Disability Support Program (ODSP)**

Provides financial and employment assistance for individuals with a physical or mental disability that is expected to last for one year or longer and that limits their ability to work and care for themselves. ODSP offices are located in Cornwall, Hawkesbury, Ottawa, Pembroke, and Renfrew.

Tel: 1-888-789-4199 or TTY: 1-800-387-5559

[www.mcass.gov.on.ca/en/mcass/programs/social/odsp](http://www.mcass.gov.on.ca/en/mcass/programs/social/odsp)

- **Ontario Works**

Provides temporary employment and financial assistance (e.g., food, housing). Ontario Works offices are located in Cornwall, Dundas County, Glengarry County, Pembroke, Renfrew, Killaloe, Arnprior, Ottawa, L'Original, Rockland, Lanark County, and Carleton Place.

Tel: 1-888-789-4199 or TTY: 1-800-387-5559

[www.mcass.gov.on.ca/en/mcass/programs/social/ow/index.aspx](http://www.mcass.gov.on.ca/en/mcass/programs/social/ow/index.aspx)

- **Seniors Co-Payment Program (Ontario Drug Benefit Program)**

For low-income seniors aged 65 and over who have a valid Ontario Health Card.

Tel: 1-888-405-0405 or TTY 1-800-387-5559

Email: [seniors@ontariodrugbenefit.ca](mailto:seniors@ontariodrugbenefit.ca)

[www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp\\_after65.aspx](http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp_after65.aspx)

- **Trillium Drug Program (Ontario Drug Benefit Program)**

For individuals who have a valid Ontario health card, low income, and high prescription costs. Call to find out if you qualify. Ask your pharmacist if Trillium covers your medications.

Tel: 1-800-575-5386 or TTY 1-800-387-5559

Email: [trillium@ontariodrugbenefit.ca](mailto:trillium@ontariodrugbenefit.ca)

[www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp\\_trillium.aspx](http://www.health.gov.on.ca/en/public/programs/drugs/programs/odb/opdp_trillium.aspx)

### Tip ↘

The **Ontario Drug Benefit Program** may cover allergen extracts and epinephrine medications. Ask your pharmacist or health care provider if you qualify. For details: [www.health.gov.on.ca/en/public/forms/odb\\_fm.aspx](http://www.health.gov.on.ca/en/public/forms/odb_fm.aspx).



The government of Canada also offers various financial assistance programs:

### Employment Insurance Benefits:

- **Employment Insurance Sickness Benefits:** You may qualify for 15 weeks of sickness benefits if you cannot work due to an illness. Your health care provider must sign a medical certificate.
- **Employment Insurance Compassionate Care Benefits:** You may qualify for six weeks of benefits if you must be absent from work to care for a gravely ill family member who is at risk of dying within 26 weeks.
- **Employment Insurance Benefits for Self-Employed People:** You may be eligible for sickness and compassionate care benefits.

For more information on Employment Insurance benefits:

Tel: 1-800-622-6232 or TTY: 1-800-926-9105

[www.servicecanada.gc.ca/eng/sc/ei/index.shtml](http://www.servicecanada.gc.ca/eng/sc/ei/index.shtml)

### Canada Pension Plan Benefits:

- **Canada Pension Plan Disability Benefit:**  
For individuals under 65 years of age who have a severe and prolonged disability or a terminal medical condition and who have contributed to the CPP.  
Tel: 1-800-277-9914 or TTY: 1-800-255-4786  
[www.servicecanada.gc.ca/eng/services/pensions/cpp/disability/benefit](http://www.servicecanada.gc.ca/eng/services/pensions/cpp/disability/benefit)
- **Canada Pension Plan Vocational Rehabilitation:**  
Individuals receiving a CPP Disability benefit may be eligible for vocational counselling, financial support for training, and job-search services.  
Tel: 1-800-277-9914 or TTY: 1-800-255-4786  
[www.servicecanada.gc.ca/eng/services/pensions/cpp/disability/voc-rehab.shtml](http://www.servicecanada.gc.ca/eng/services/pensions/cpp/disability/voc-rehab.shtml)
- **Benefits After a Death:**  
Individuals may be eligible for benefits if their parent, spouse, or common-law partner dies.  
Tel: 1-800-277-9914 or TTY: 1-800-255-4786  
[www.servicecanada.gc.ca/eng/services/pensions/after-death.shtml](http://www.servicecanada.gc.ca/eng/services/pensions/after-death.shtml)

### Other Government of Canada programs:

- **Canada Revenue Agency Tax Information:**  
For information on the Disability Tax Credit, the Registered Disability Savings Plan, claiming medical expenses, and other tax-related issues.  
Tel: 1-800-267-6999 or TTY: 1-800-665-0354  
[www.cra-arc.gc.ca/tx/ndvdl/sgmnts/dsblts/menu-eng.html](http://www.cra-arc.gc.ca/tx/ndvdl/sgmnts/dsblts/menu-eng.html)
- **Old Age Security:**  
For individuals 65 years of age and older who meet the Canadian legal status and residence requirements. Individuals must apply for this benefit.  
Tel: 1-800-277-9914 or TTY: 1-800-255-4786  
[www.servicecanada.gc.ca/eng/services/pensions/oas/pension/index.shtml](http://www.servicecanada.gc.ca/eng/services/pensions/oas/pension/index.shtml)

#### Tip ↘

*Have your lungs been affected by an occupational hazard? Call the **Workplace Safety and Insurance Board** at 1-800-387-0750 or TTY: 1-800-387-0050, or visit: [www.wsib.on.ca](http://www.wsib.on.ca).*

# CHAPTER 13

## Non-Urgent Transportation Service in the Champlain Region

The Champlain LHIN and its partners coordinate a **non-urgent transportation** service for individuals who need a drive to and from appointments (e.g., medical, dental, physiotherapy, and respiratory rehabilitation), grocery shopping, and community programs.

This service helps individuals to maintain their independence, to stay in their home safely for as long as possible, and to stay active in their community.

Call the **Transportation Coordinator** in your area:

- **Renfrew County:**  
Tel: 613-732-9993 ext. 3233
- **Urban Ottawa:**  
Tel: 613-236-0428 ext. 2355
- **Rural Ottawa:**  
Tel: 613-741-6025 ext. 360
- **Eastern Counties:**  
Tel: 613-537-8644



Watch this video about the Non-Urgent Transportation Service:  
[www.youtube.com/watch?v=5\\_v\\_m8Mi76Y](https://www.youtube.com/watch?v=5_v_m8Mi76Y)

# CHAPTER 14

## Home Care for Patients with Chronic Lung Disease

Patients with severe lung disease may need support at home. The **Champlain Community Care Access Centre (CCAC)** coordinates home and community care services for individuals living in the Champlain region who are recovering from an illness or an injury, or who are living with a chronic disease or a disability. These services can help you to remain at home, to avoid being hospitalized, or to return home more quickly after a hospital stay.

Anyone can make a referral to the CCAC: a health care provider, family member, friend, or you can refer yourself. Once you are referred, the CCAC will assess your needs and decide if you need help with:

- Nursing care
- Personal support (e.g., bathing, getting dressed, housekeeping)
- Physiotherapy
- Nutritional counselling
- Medical supplies and equipment
- Referrals to health and social services in your community (e.g., meal delivery, homemaking, transportation).

The CCAC may provide these services and/or connect you to services in the community to help you stay in your own home safely for as long as possible.

If you can no longer manage at home because of your lung disease, the Champlain CCAC can provide information on retirement homes, supportive housing, convalescent care, rehabilitation facilities, and long-term care homes. The Champlain CCAC has information on locations, cost, and admission criteria. If you need 24-hour nursing care, the Champlain CCAC will coordinate your admission to a long-term care home.

For more information:

**Champlain Community Care  
Access Centre (CCAC)**

4200 Labelle Street, Suite 100

Ottawa, ON K1J 1J8

Tel: 310-2222 or 1-800-538-0520

[www.champlainccac.ca](http://www.champlainccac.ca)

**Tip** ↘

*Are you a caregiver? Call the Champlain CCAC at 310-2222 to see if you are eligible for short-term respite care for your loved one.*

**Additional Resources:**

- For information on **retirement homes** in the Champlain region, call the Retirement Homes Regulatory Authority at 1-855-275-7472, email: [info@rhra.ca](mailto:info@rhra.ca), or visit: [www.rhra.ca/en/register](http://www.rhra.ca/en/register).
- Take video tours of **long-term care homes** in the Champlain region: [www.champlainhealthline.ca/libraryContent.aspx?id=20454](http://www.champlainhealthline.ca/libraryContent.aspx?id=20454).

# CHAPTER 15

## Hospice Palliative Care Services in the Champlain Region

### What is Hospice Palliative Care?

The goal of hospice palliative care (formerly known as palliative care) is to relieve suffering and to improve the quality of living and dying. Hospice palliative care providers look after patients', families', and caregivers' physical, psychological, social, and spiritual needs during a chronic or life-threatening illness and throughout bereavement.

Patients with lung disease may not feel comfortable planning ahead for hospice palliative care and talking to their family, caregivers, or health care providers. It's normal to feel frightened, overwhelmed, isolated, depressed, and angry. It's challenging enough to learn how to survive every day with a disabling illness, let alone to plan ahead for the end stages of lung disease.

Hospice palliative care can help to improve your quality of life at any stage of your lung disease. It involves:

- Talking about end-of-life.
- Planning in advance for the medical care you will need in the later stages of lung disease.
- Managing your symptoms.
- Psychological and spiritual counselling.

### What is Advance Care Planning?

Advance care planning is an important part of managing chronic lung disease. Take the time to think about and to let others know you what medical care you would like to receive if you become incapable of consenting to or refusing medical treatment. You may have many questions, such as:

- How will I manage symptoms such as severe shortness of breath and pain?
- Who will take care of me?

- Will I live at home, in a hospital, or a hospice during the last stages of my illness?
- How can my family and caregivers access help and support?
- Do I want to be resuscitated?

Your primary care physician, nurse, respirologist, and registered respiratory therapist/certified respiratory educator can help you to make these decisions. Discuss your wishes, your health care decisions, and your legal decisions with your family and your health care team in the early stages of your lung disease to make sure that you receive the care you want.

### Hospice Palliative Care Services in the Champlain Region

The **Champlain Hospice Palliative Care Program** coordinates hospice palliative care services in the Champlain region and works with health service providers to offer hospice palliative care in various settings:

- In your home
- In day programs
- In a residential hospice
- In a long-term care home
- In some retirement homes
- In a hospital.

### Who Provides Hospice Palliative Care?

A team of people provide hospice palliative care, including:

- Your respirologist
- Your registered respiratory therapist
- Your primary care physician or nurse
- Palliative care doctors and nurses
- Community Care Access Centre (CCAC) case managers
- Social workers
- Pharmacists
- Spiritual advisors
- Personal support workers
- Hospice palliative care volunteers.

For information on advance care planning and on hospice palliative care programs and services in Renfrew County, North Lanark/North Grenville, Ottawa, and Eastern Counties, contact:

#### **Champlain Hospice Palliative Care Program**

69 Primrose Avenue  
Annex C  
St-Vincent Hospital  
Ottawa, ON K1R 6M1  
Tel: 613-683-3779  
Email: [info@champlainpalliative.ca](mailto:info@champlainpalliative.ca)  
[www.champlainpalliative.ca](http://www.champlainpalliative.ca)

#### **Tips** ↘

- *Your primary care physician or nurse can access help 24 hours a day, 7 days a week, from the **Regional Palliative Consultation Team**. Watch this video to learn more about this team of palliative care doctors and nurses: [www.healthcareathome.ca/champlain/en/care/Pages/hospice-palliative-care-nurse-practitioners.aspx](http://www.healthcareathome.ca/champlain/en/care/Pages/hospice-palliative-care-nurse-practitioners.aspx).*
- *If you don't have a primary care physician talk to any member of your health care team, your CCAC case manager, or call the **Health Care Connect Program** at 1-800-445-1822, or visit: [www.health.gov.on.ca/en/ms/healthcareconnect/public](http://www.health.gov.on.ca/en/ms/healthcareconnect/public).*
- *For a list of all health service providers in the Champlain region, visit: [www.champlainhin.on.ca/AboutUs/GetConnectedwithCare.aspx](http://www.champlainhin.on.ca/AboutUs/GetConnectedwithCare.aspx).*
- *The Canadian Hospice Palliative Care Association offers tools to help you plan ahead for your health and personal care preferences: [www.advancecareplanning.ca/making-your-plan.aspx](http://www.advancecareplanning.ca/making-your-plan.aspx).*

For more information on advance care planning, palliative care, and bereavement:

- **Advance Care Planning in Canada**  
Tel: 613-241-3663 ext. 231  
[www.advancecareplanning.ca](http://www.advancecareplanning.ca)
- **Bereaved Families of Ontario**  
Tel: 613-567-4278  
Email: [office@bfo-ottawa.org](mailto:office@bfo-ottawa.org)  
[www.bfo-ottawa.org](http://www.bfo-ottawa.org)
- **Canadian Hospice Palliative Care Association**  
Tel: 613-241-3663 or 1-800-668-2785  
Email: [info@chpca.net](mailto:info@chpca.net)  
[www.chpca.net](http://www.chpca.net)
- **Canadian Medical Association:  
End-Of-Life Care: A National Dialogue**  
[www.cma.ca/advocacy/end-of-life-care](http://www.cma.ca/advocacy/end-of-life-care)
- **Canadian Virtual Hospice**  
Email: [info@virtualhospice.ca](mailto:info@virtualhospice.ca)  
[www.virtualhospice.ca](http://www.virtualhospice.ca)
- **College of Physicians and Surgeons of Ontario**  
[www.endoflife.cpsso.on.ca](http://www.endoflife.cpsso.on.ca)
- **Hospice Palliative Care Ontario**  
Tel: 1-800-349-3111  
Email: [info@hpco.ca](mailto:info@hpco.ca)  
[www.hpco.ca](http://www.hpco.ca)
- **Quality End-of-Life Care Coalition of Canada**  
Tel: 613-241-3663 or 1-800-668-2785 ext. 229  
[www.qelccc.ca](http://www.qelccc.ca)

## Federal and Provincial Government Services

The federal and provincial governments can answer questions about:

- Advance care planning;
- Estate planning, wills, and power of attorney;
- Health care services, programs, and benefits;
- Legal, financial, and tax matters; and
- Pensions and benefits.

For more information, contact:

- **Government of Canada**  
Tel: 1-800-O-Canada (1-800-622-6232) or TTY: 1-800-926-9105  
[www.canada.ca](http://www.canada.ca)
- **Government of Ontario**  
Tel: 1-800-267-8097 or TTY: 416-325-3408  
[www.ontario.ca](http://www.ontario.ca)
- **Information for Seniors – Federal, Provincial and Territorial Resources**  
Tel: 1-800-622-6232 or TTY: 1-800-926-9105  
[www.seniors.gc.ca](http://www.seniors.gc.ca)
- **Ontario Seniors' Secretariat**  
Tel: 1-888-910-1999 or TTY: 1-800-387-5559  
Email: [infoseniors@ontario.ca](mailto:infoseniors@ontario.ca)  
[www.seniors.gov.on.ca](http://www.seniors.gov.on.ca)

### Tips ↘

- **A Guide to Programs and Services for Seniors in Ontario:**  
[www.seniors.gov.on.ca/en/seniorsguide](http://www.seniors.gov.on.ca/en/seniorsguide)
- **A Guide to Advance Care Planning:**  
[www.seniors.gov.on.ca/en/advancedcare](http://www.seniors.gov.on.ca/en/advancedcare)

To order these guides, call 1-888-910-1999 or TTY 1-800-387-5559.



### Next Steps for the Champlain Lung Health Network

In 2012, the Champlain Lung Health Network updated its *Action Plan: Goals, Objectives and Strategies* to improve lung health in the Champlain region.

The Champlain Lung Health Network ranked its goals as follows:

1. Increase the early diagnosis of lung disease by increasing **spirometry testing** and the use of **peak flow meters**.
2. Empower patients with lung disease to know their **triggers, medications, and treatment plans**.
3. Improve **knowledge of and the management of lung disease** among primary health care providers and other regulated health care professionals.
4. Reduce the number of **emergency room visits** and **hospitalizations** among lung patients.
5. Improve **patients' access to medications and spacer devices**, and improve **patients' knowledge about the use of medications**.
6. Improve patient access to **respiratory rehabilitation**.
7. Address **human resource challenges** in respiratory care.
8. Improve access to **respiratory care closer to home**.
9. Improve awareness of and access to **alternative treatments and therapies** for individuals with lung disease and comorbidities.
10. Support **tobacco control** initiatives.

Currently, the Champlain Lung Health Network is helping patients to increase their knowledge of lung disease, medications, and treatment plans; and helping patients to have better control of their lung disease in order to reduce emergency room visits and hospitalizations.

The Champlain Lung Health Network invites lung patients to participate and to share their knowledge and experience.

For more information about the Champlain Lung Health Network, please contact the Champlain LHIN at 613-747-6784 or 1-866-902-5446.

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