

## Updated recommendations for use of face masks by the public

### *Canadian Thoracic Society recommendations regarding the use of face masks by the public during the SARS-CoV-2 (COVID-19) pandemic*

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This article represents an update to our original Canadian Thoracic Society (CTS) Position Statement published in July 30, 2020 and the addendum posted on the CTS website in November 2020, considering recent evidence that use of face masks may confer some protection from contracting the SARS-CoV-2 virus, in addition to protection from spreading the virus.<sup>1</sup> Revisions are outlined in **red font** in the statement.

#### **Summary**

- We support the Public Health Agency of Canada's (PHAC) recommendation of wearing a [face mask in the community](#) for periods of time **when one has exposure to other individuals, particularly in an indoor space.**<sup>2</sup> Consult [PHAC's website](#) for more information on the recommendations on the types and uses of face masks approved for use in Canada.
- We remind everyone that wearing a face mask alone will not prevent the spread of COVID-19 and that use of face masks should complement other recommended public health measures, including **vaccination,**<sup>3</sup> frequent hand washing or use of alcohol-based hand sanitizers, and physical distancing.
- We recommend that all individuals with underlying lung disease follow PHAC's recommendation **for vaccination against COVID-19 combined with other public health measures including the use of well-fitted medical or non-medical masks** to reduce the risk of spreading or becoming infected with the SARS-CoV-2 virus.<sup>2,3</sup> Consult [PHAC's website](#) on how to make your mask fit properly.
- If individuals cannot tolerate wearing this added protection, we recommend that they avoid or minimize circumstances in which **they are in an enclosed indoor space with other individuals, particularly if some of those individuals are not fully vaccinated.**
- There is **NO** evidence that wearing a face mask will exacerbate (cause a 'flare up' of) **or aggravate** an underlying lung condition.<sup>4</sup>
- We recommend that anyone who uses a face mask familiarize themselves with how to properly put on and take off this equipment.<sup>2</sup>

- It is important that if one is wearing a face mask, it should be comfortable and not require frequent adjustment to avoid contaminating the wearer’s hands. In addition, proper care for your mask is important to maintain its effectiveness. Please refer to the [PHAC website](#) on the proper use and care of your mask.
- The COVID-19 pandemic is a rapidly evolving situation and recommendations may change as the science informs us. We recommend to routinely visit our COVID-19 website for updates at <https://cts-sct.ca/covid-19>.

## **Background**

The development of effective COVID-19 vaccines has been instrumental in improving outcomes related to this disease, including reduced mortality and disease severity.<sup>5-9</sup> However, vaccine uptake is variable<sup>10</sup> and vaccination does not fully remove the possibility for asymptomatic transmission, including to vulnerable populations.<sup>11-13</sup> At this time in the pandemic, public health measures, which include the recommendation of wearing face masks, to decrease virus transmission will remain in place as vaccination programs continue and as new variants of uncertain significance continue to emerge.

Even with a high rate of vaccination, as we transition into a more interactive and open society, the risk of spread, particularly asymptomatic spread, still exists. The use of face masks could reduce the risk of viral transmission, and may also protect the wearer of the face mask from becoming infected with the SARS-CoV-2 virus.<sup>14,15</sup> We recommend that people also refer to their local health authorities’ suggestions on wearing face masks, as this may vary depending on local community transmission rates.

It is important to highlight that this recommendation is for the use of **medical or non-medical/**facial coverings, and either may confer a comparable level of protection.<sup>16</sup> **Face masks are more effective when modified for tighter facial fit,<sup>16,17</sup> and should always be combined with careful hand hygiene.<sup>18,19</sup>** Whether a face mask is used or not, everyone should continue to practice proper hand hygiene in the form of frequent hand washing or use of alcohol-based hand sanitizers, and follow public health recommendations regarding physical distancing **and caution when entering indoor congregate settings.**

Anyone who chooses to use a face mask should use one that is comfortable and does not require frequent adjustments. Also, one must familiarize themselves with the proper process of putting on (“donning”) and taking off (“doffing”) the mask. Refer to PHAC’s website<sup>20</sup> for instructions on this and links to a tutorial video and resources available on the CTS website (<https://cts-sct.ca/covid-19/use-of-face-masks-by-the-public/>). These steps are crucial to reduce the risk of accidental contamination leading to virus exposure.

A mask does add a slight resistance to airflow (this varies between a commercially produced mask, a mask made at home, or a simple cloth covering), but studies in healthy individuals suggest that **no significant increase in respiratory effort is required** and masks do not alter ventilation, breathing frequency, or tidal volume, even with light-to-moderate intensity exercise.<sup>4</sup> Masks also do not appear to significantly change oxygen concentrations or carbon dioxide levels, even in patients with significant lung function impairment.<sup>4</sup> Nonetheless, wearing a mask may cause dyspnea in patients with underlying lung disease, particularly if severe.<sup>4</sup> In such situations, we recommend that individuals remove the face mask, and if symptoms do not immediately settle, they should follow their existing strategies for relief of acute respiratory symptoms. These symptoms should be self-limited and respond to immediate interventions. **There is no evidence that wearing a mask/facial covering will lead to prolonged**

**symptoms or a flare up (“exacerbation”) of an underlying lung condition.** If an individual experiences challenges with wearing a mask, we recommend that they speak with their health care provider to develop strategies to be able to use this added form of protection. However, if wearing a face mask is not possible despite best efforts, **we recommend that individuals instead avoid or minimize exposure to indoor congregate settings.**<sup>21,22</sup>

Recently, PHAC has communicated that “SARS-CoV-2, the virus that causes COVID-19, spreads from an infected person to others through respiratory droplets **and aerosols** when an infected person coughs, sneezes, sings, shouts, or talks”. This represents a change in position by PHAC regarding the routes of viral transmission. **The impact of acknowledging aerosol transmission on recommendations for public health measures remains in evolution.** We will continue to update these recommendations as scientific evidence and government policy evolve.<sup>23,24</sup> Healthcare professionals are advised to periodically visit the CTS website (<https://cts-sct.ca/covid-19>) for additional resources as well as further updates on COVID-19 and lung diseases.

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