

## 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 represents an update to our original Canadian Thoracic Society (CTS) Position Statement (July 30, 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 (underlined in green in the manuscript): November 30, 2020**

##### **Summary**

- We recommend that all individuals with underlying lung disease follow the Public Health Agency of Canada's (PHAC)'s recommendation to reduce the risk of spreading or becoming infected with the SARS-CoV-2 virus. (underlined in green in manuscript)

##### **Background**

- The use of facial coverings 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, as has been suggested with other viruses.

##### **References**

- Additional and revised references underlined in red in the references section.

#### **Summary**

- We support the Public Health Agency of Canada's (PHAC) recommendation of wearing a non-medical face mask in the community for periods of time when it is not possible to consistently maintain a 2-metre physical distance from others.
- We recommend that all individuals with underlying lung disease follow PHAC's recommendation to reduce the risk of spreading or becoming infected with the SARS-CoV-2 virus.
- If individuals cannot tolerate wearing this added protection, we recommend that they avoid or minimize circumstances in which physical distancing is not possible.
- There is **NO** evidence that wearing a face mask will exacerbate (cause a 'flare up' of) an underlying lung condition.

- We recommend that anyone who uses a face mask familiarize themselves with how to properly put on and take off this equipment.
- It is important that if one is wearing a mask, it should be comfortable and not require frequent adjustment to avoid contaminating the wearer's hands.
- 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 frequent hand washing or use of alcohol-based hand sanitizers, and physical distancing.
- 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**

As Canada begins to relax the measures instituted to limit the spread of the SARS-CoV-2 virus, recommendations by PHAC and local public health authorities are simultaneously evolving to assist in this process.

PHAC has recommended the use of non-medical/facial coverings in the community when physical distancing from others is not possible.<sup>2</sup> This recommendation includes individuals with any underlying lung disease. This new recommendation is primarily designed to help reduce the asymptomatic or pre-symptomatic spread of the virus. Asymptomatic and pre-symptomatic spread of the SARS-CoV-2 virus has been previously reported,<sup>3-6</sup> and is believed to be an important mode of viral transmission. As we transition into a more interactive and open society, the risk of asymptomatic spread increases. The use of facial coverings 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, as has been suggested with other viruses.<sup>7-10</sup> We recommend that people also refer to their local health authorities' suggestions on wearing masks as this may vary depending on local community transmission rates.

It is important to highlight that the recommendation is for the use of non-medical/facial coverings, as medical grade masks should be conserved for use in acute care settings where there is the highest risk of potential transmission. It is also important to remind the public that although there is evidence that medical grade surgical face masks reduce viral spread,<sup>11</sup> non-medical/facial coverings may not confer the same level of protection.<sup>12</sup> However, face masks are more effective when combined with careful hand hygiene.<sup>13,14</sup> Hence, whether a face mask is used or not, all citizens should continue to practice proper hand hygiene in the form of frequent hand washing or use of alcohol-based hand sanitizers, and following public health recommendations regarding physical distancing.

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. We ask that you refer to PHAC's website<sup>15</sup> for instructions on this and links to a tutorial video and resources available on the CTS website (<https://cts-sct.ca/covid-19>). These steps are crucial in order to reduce one's 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>16</sup> Masks also do not appear to significantly change oxygen concentrations or carbon dioxide levels, even in patients with significant lung function impairment.<sup>16</sup> Nonetheless, wearing a mask may cause dyspnea in patients with underlying lung disease, particularly if severe.<sup>16</sup> In such situations, we recommend that individuals remove the face mask, and if symptoms do not immediately settle, they should follow their existing strategy for relief of acute 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 in order 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 circumstances where physical distancing is not possible.

We will continue to update these recommendations as scientific evidence and government policy evolve.<sup>17,18</sup> Health care 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.

## **References**

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