

## Mask use during Athletic Participation

The following is a collection of articles that have been summarized to pull key messages.

- There is overwhelming evidence that inhalation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) represents a major transmission route for coronavirus disease 2019 (COVID-19).<sup>1</sup>
- Current evidence for the effectiveness of mask use at reducing transmission of COVID-19 is strong.<sup>2</sup>
- The World Health Organization has advised against mask use while exercising, stating: *FACT: People should NOT wear masks when exercising, as masks may reduce the ability to breathe comfortably. Sweat can make the mask become wet more quickly which makes it difficult to breathe and promotes the growth of microorganisms. The important preventive measure during exercise is to maintain physical distance of at least one meter from others.*<sup>3</sup>
- Mandatory mask use during sport participation has not been encouraged by any Canadian health authority or by the Sport Medicine Advisory Committee of Canada at present time.<sup>4</sup>
- There are a multitude of papers assessing impacts of mask wearing with mixed results:
  - Exercising with facemasks might increase pathophysiological risks of underlying chronic disease, especially cardiovascular and metabolic risks.<sup>5</sup>
  - Wearing of cloth or disposable surgical face masks was found to have no effect on vigorous exercise performance in healthy individuals.<sup>6</sup>
  - Ventilation, cardiopulmonary exercise capacity and comfort are reduced by surgical masks and highly impaired by FFP2/N95 face masks in healthy individuals while exercising.<sup>7</sup> While another study questions the methodology used to make such claims.<sup>8</sup>
  - In healthy subjects, aerobic exercise with either a surgical mask or N95 respirator is safe and feasible. Although it may be associated with some discomfort, masking has only minor effects on physiological parameters during exercise. Subjects with obstructive lung diseases such as asthma or COPD and heart diseases should undergo meticulous evaluation before attempting physical activity with a mask.<sup>9</sup>
- There is some evidence that questions the effectiveness of mask use at mitigating risk in sport:
  - One study suggests that masks may only be effective at low to moderate levels of exercise.<sup>10</sup>
  - Another highlights for a mask to optimize the reduction in transmission risk there are several key considerations to make including mask type and coinciding hand sanitation procedures.<sup>11</sup>

## References:

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