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## Editorial

### Active transport to school as a preventive policy in the COVID-19 pandemic

El desplazamiento activo a la escuela como política preventiva en la pandemia COVID-19

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## Key Points

- The Coronavirus disease 2019 (COVID-19) pandemic has restricted the physical activity of people of all ages worldwide, especially in young people.
- Create healthy measures to control COVID-19 spreading, such as promoting active transport as cycling and walking, may represent a public health opportunity.
- The promotion of active transport to/from school has not been sufficiently promoted during COVID-19 times.
- Active school transport is a clear promising strategy for young people to contribute to minimizing COVID-19 consequences because it can easily respect physical distancing, occurs outdoors, promotes healthy behaviors, increases environmental engagement, and decreases pollution through reduced automobile use.

Currently, coronavirus disease 2019 (COVID-19) is a serious global public health problem and was declared a pandemic by the World Health Organization (WHO) on 11 March 2020. Recent data from Johns Hopkins University reported about 162 million confirmed cases and 3.3 million deaths worldwide (15<sup>th</sup> May 2021). The modes of transmission of COVID-19 are direct inhalation of infected expired droplets and direct contact with surfaces and fomites soiled by infected respiratory secretions<sup>1</sup>. Clinical symptoms are similar to other acute respiratory viral infections and include fever, cough, sore throat, breathlessness, fatigue, and malaise. According to current data, children appear to have less severe COVID-19-related symptoms, lower frequency of infection, and reduced spread<sup>2</sup>.

Intense research efforts focus on identifying effective therapies and vaccines; however, in the meantime, to contain spreading and prevent overburdening healthcare systems, the most effective declared strategy is contact tracing, and physical isolation measures<sup>3</sup>. Data derived from COVID-19-related confinement indicated that physical distancing and self-isolation strongly adversely impacted peoples' lives, affecting particular eating behaviors<sup>4</sup>, daily physical activity (PA)<sup>5-7</sup>, and psychosocial health<sup>8</sup>.

PA in young people is essential for healthy growth and development; physical benefits include improved musculoskeletal and cardiovascular health and healthy body weight, whereas psychological benefits include managing anxiety and building self-esteem, which are important for children's psychosocial development<sup>9</sup>. The WHO recommends that children and adolescents aged 5-17 years should engage in an average of 60 minutes of moderate-to-vigorous intensity PA a day (i.e., an average of 420 min/week) to reduce the major risk factors for non-communicable diseases<sup>10</sup>. Unfortunately, in the pre-pandemic period, only 2 out of 10 youth worldwide accumulate the recommended daily PA<sup>11</sup>. The COVID-19

pandemic has restricted PA in people of all ages around the world<sup>12</sup>, due to policy measures established to control the COVID-19 spread (e.g., “stay-at-home” recommendations/orders, lockdowns, avoid mass gatherings). Worryingly, the decrease in PA has been very marked in young people, who are playing less outside than before the COVID-19 outbreak<sup>6,13</sup>. A natural experimental longitudinal study<sup>14</sup> among children and adolescents (6–17 years) conducted in five schools of Shanghai (China) found that the median time spent in PA decreased drastically, from an average of 540 min/week (before the pandemic) to 105 min/week (during the pandemic). In addition, during the pandemic, the prevalence of physically inactive students increased from 21.3% to 65.6%<sup>14</sup>.

Recent reports suggest that measures to control the spread of COVID-19, including “stay-at-home” recommendations, respecting physical distancing, and embracing the outdoors, might in fact, represent new public health opportunities in other ways, such as an increase in commuting by cycling and walking instead of motorized transportation<sup>15</sup>. Indeed, Greenpeace, in their ‘*Manifesto for a Green Recovery*’ post-COVID, called on politicians and policymakers to ‘fundamentally redesign urban transport to prioritize walking and cycling, improving public health, and delivering clean air’<sup>16</sup>.

Consistent evidence shows that children and adolescents who engage in active modes of transport to/from school (AST) are more physically active than those who travel by motorized vehicles<sup>17</sup>. Cycling to and from school can also increase cardiovascular fitness and is associated with a better cardiometabolic health profile<sup>17</sup>. Furthermore, the active transport behaviors reduce pollution, which may attenuate exacerbation of respiratory diseases, and promote a healthy respiratory system. Currently, active transportations seem to be promising healthy behaviour strategies for young people to reduce COVID-19 transmission and consequences. AST allows children and youth to a) respect physical distancing recommendations while avoiding more crowded places such as public transportation, b) embrace the outdoors avoiding indoor modes of transportation, and c) young people can perform it on their own without adult supervision (i.e., independent mobility) avoiding unnecessary exposures.

A recent review demonstrated the ineffectiveness of school closures as a COVID-19 containment strategy<sup>18</sup>, and consequently, a global decision was made to allow children back to school, where the WHO provided considerations for school-related public health measures in the context of COVID-19<sup>19</sup>. However, actions were focused on public and private transportation measures, and there were no specific recommendations for AST promotion, which is the most healthy and sustainable mode of transportation.

Promoting AST should be a priority COVID-19 containment strategy focusing on school policies (e.g., avoid crowded school entrances associated with bus arrivals, reduce the proximity of private vehicles and provide safe bike parking) and urban city policies (an expansion in outdoor green spaces, bike lanes, pedestrian-centric streets and improvements in the urban environment around the school). The promotion of AST should be embraced as a call to action to encourage the implementation of strategies to incentivize these behaviors (respecting local public health COVID-19 guidelines) to; 1) prevent non-communicable diseases promoted through the physical inactivity of young people now and in the post-COVID period; and 2) prevent further spread of the virus among the population to reduce the COVID-19 mortality. **Figure 1** presents a summary of AST benefits as well as school and city policies in the in the COVID-19 pandemic.

## Conclusion

AST is a responsible and sustainable transport strategy respecting physical distancing, embracing the outdoors, promoting healthy behaviors, increasing environmental engagement while decreasing pollution. It should be promoted to prevent COVID-19 spreading in the population and collaterally contribute to physical health. Detailed surveillance will be needed to confirm the safety and benefits of this approach.



**Figure 1.** AST benefits, school and city policies in the in the COVID-19 pandemic.

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### **Author Contributions:**

EV-G, YB-R jointly conceived of the idea. PC critically reviewed the manuscript and all authors contributed to editing and refining the final draft. All authors read and approved the final manuscript.

### **Declaration of conflict of interest**

The authors declare no conflict of interest.



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