1. Pediatrics. 2024 Mar 1;153(3):e2023062570. doi: 10.1542/peds.2023-062570.

Rao S(1), Gross RS(2)(3), Mohandas S(4)(5), Stein CR(6), Case A(7), Dreyer B(5), Pajor NM(8), Bunnell HT(9), Warburton D(5), Berg E(10), Overdevest JB(10), Gorelik M(10), Milner J(10), Saxena S(10), Jhaveri R(11), Wood JC(5), Rhee KE(12), Letts R(3), Maughan C(3), Guthe N(3), Castro-Baucom L(3), Stockwell MS(10)(13).

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The coronavirus disease 2019 (COVID-19) pandemic has caused significant medical, social, and economic impacts globally, both in the short and long term. Although most individuals recover within a few days or weeks from an acute infection, some experience longer lasting effects. Data regarding the postacute sequelae of

severe acute respiratory syndrome coronavirus 2 infection (PASC) in children, or long COVID, are only just emerging in the literature. These symptoms and conditions may reflect persistent symptoms from acute infection (eg, cough, headaches, fatigue, and loss of taste and smell), new symptoms like dizziness, or exacerbation of underlying conditions. Children may develop conditions de novo, including postural orthostatic tachycardia syndrome, myalgic encephalomyelitis/chronic fatigue syndrome, autoimmune conditions and multisystem inflammatory syndrome in children. This state-of-the-art narrative review provides a summary of our current knowledge about PASC in children, including prevalence, epidemiology, risk factors, clinical characteristics, underlying mechanisms, and functional outcomes, as well as a conceptual framework for PASC based on the current National Institutes of Health definition. We highlight the pediatric components of the National Institutes of Health-funded Researching COVID to Enhance Recovery Initiative, which seeks to characterize the natural history, mechanisms, and long-term health effects of PASC in children and young adults to inform future treatment and prevention efforts. These initiatives include electronic health record cohorts, which offer rapid assessments at scale with geographical and demographic diversity, as well as longitudinal prospective observational cohorts, to estimate disease burden, illness trajectory, pathobiology, and clinical manifestations and outcomes.

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