

LETTER

Seasonal flu and COVID-19 recommendations for children, adolescents and young adults with diabetes

COVID-19 is still a health problem and it is expected to grow in the coming weeks, especially after the school opens in mid-September.¹ Seasonal flu usually appears in mid-October/November and has symptoms overlapping with COVID-19. For these reasons the Italian Society for Pediatric Endocrinology and Diabetes formulated the following recommendations.

1. Type 1, type 2 and monogenic diabetes in children, adolescents and young adults do not have a higher risk of morbidity and mortality due to COVID-19 and/or seasonal flu. However, the glycemic imbalance due to disease itself suggests taking all possible preventive measure to minimize contagion.^{2,3}
2. Seasonal flu (influenza) vaccination is recommended in all children, adolescents and young adults, aged 6 months to 18 years (25years), regardless of their health status, if they have type 1, type 2 or monogenic diabetes.⁴
3. In the meantime we are waiting for an effective and safe vaccine against SARS/CoV/2, it is recommended to maintain active safeguards measures, such as spacing, face mask and adequate hygiene and sanitation.
4. If you have a fever $>37,5^{\circ}\text{C}$ ($99,5^{\circ}\text{F}$) for 2 or more days, nasopharyngeal swab is recommended.
5. If COVID-19 negative and otherwise advised by your pediatrician/family doctor or diabetes team, use only paracetamol or antipyretics.
6. If COVID-19 positive, oral dexamethasone may be useful in pediatric patients with respiratory disease only for those requiring mechanical ventilation. The use of dexamethasone is generally not recommended for pediatric patients who require only low levels of oxygen support (i.e., nasal cannula only).⁵ In that case, tight glycemic control is highly recommended.
7. Tight glycemic control is recommended and, in any case, do not interrupt insulin administration via subcutaneous insulin infusion or multiple daily injections.
8. Continuous glucose monitoring, real time or intermittently scanning is recommended whenever possible.
9. If in hyperglycemia, especially if ketonemia >3 mg/dl (or ketonuria), and no measures work to keep blood

glucose in range (change of the infusion set, correction boluses, etc.) consult the emergency room.

10. In case of overwhelming vomiting, call the emergency room.

These recommendations are based on the authors' personal experience and a review of the scant literature on the subject. The goal is to distinguish the symptoms (fever, cough, and sore throat) due either to seasonal flu or COVID-19. From our experience, both seasonal flu and COVID-19 in children and in adolescents with diabetes, usually heal quite quickly, being completely asymptomatic or with mild to moderate symptoms, requiring only rest, hydration and anti-pyretic drugs (paracetamol and/or ibuprofen).

In conclusion, not all fever and cough, especially in pediatrics, will be COVID-19, and the only effective mean to distinguish between the two diseases will be nasopharyngeal swab.

Andrea E. Scaramuzza¹ 

Ivana Rabbone² 

Claudio Maffei³ 

Riccardo Schiaffini⁴ 

on behalf of the Diabetes Study Group of the Italian Society for Pediatric Endocrinology, Diabetes

¹*Division of Pediatrics, ASST Cremona, "Ospedale Maggiore di Cremona", Italy*

²*Division of Pediatrics, Department of Health Sciences, University of Piemonte Orientale, Novara, Italy*

³*Pediatric Diabetes and Metabolic Disorders Unit, Regional Center for Pediatric Diabetes, University City Hospital of Verona, Verona, Italy*

⁴*Diabetes Unit, Bambino Gesù Children's Hospital, Rome, Italy*

Correspondence

Andrea E. Scaramuzza, Clinica Pediatrica, ASST Cremona, Ospedale Maggiore, Viale Concordia 1, 26100 Cremona, Italy.

E-mails: andrea.scaramuzza@asst-cremona.it; a.scaramuzza@gmail.com

ORCID

Andrea E. Scaramuzza  <https://orcid.org/0000-0002-1518-8515>

Ivana Rabbone  <https://orcid.org/0000-0003-4173-146X>

Claudio Maffei  <https://orcid.org/0000-0002-3563-4404>

Riccardo Schiaffini  <https://orcid.org/0000-0002-9527-2353>

REFERENCES

1. Shane AL, Sato AI, Kao C, et al. A pediatric infectious disease perspective of SARS-CoV-2 and COVID-19 in children. *J Pediatric Infect Dis Soc.* 2020 Aug 25:piaa099. <https://doi.org/10.1093/jpids/piaa099>.
2. d'Annunzio G, Maffei C, Cherubini V, et al. Caring for children and adolescents with type 1 diabetes mellitus: Italian society for pediatric and adolescent diabetes (ISPED) Statements during COVID-19

pandemia. *Diabetes Res Clin Pract.* 2020 Aug;19:108372. <https://doi.org/10.1016/j.diabres.2020.108372>

3. Elbarbary NS, Dos Santos TJ, de Beaufort C, Agwu JC, Calliari LE, Scaramuzza AE. COVID-19 outbreak and pediatric diabetes: Perceptions of health care professionals worldwide. *Pediatr Diabetes.* 2020 Jul 20:10.1111/pedi.13084. <https://doi.org/10.1111/pedi.13084>.
4. <https://www.cdc.gov/flu/prevent/index.html> (accessed August 28, 2020).
5. Bhattacharyya R, Iyer P, Phua GC, Lee JH. The interplay between coagulation and inflammation pathways in COVID-19-associated respiratory failure: a narrative review. *Pulm Ther.* 2020 Aug 25. <https://doi.org/10.1007/s41030-020-00126-5>

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

Supplementary Material