

ESPE Patient Leaflet Information on COVID-19 and Pediatric Endocrine Diseases

Disease specific information and advice: HYPOPITUITARISM

This flyer aims to provide guidance on prevention and treatment of COVID-19 in patients with a pediatric endocrine disease. It summarizes facts about COVID-19, and what children with endocrine diseases and their parents need to know regarding their health and well-being. These recommendations are based on the latest knowledge and expert opinion. If, after reading, you still have concerns or questions, please contact your physician or healthcare provider.

What is COVID-19?

Infection by coronavirus can lead to disease COVID-19, a flu-like illness. On March 11, 2020, the World Health Organization publicly characterized COVID-19 as a pandemic. People who are confirmed to have COVID-19 have exhibited mild to severe respiratory illness with fever, coughing and shortness of breath. Additional symptoms include chills, muscle pain, sore throat, loss of taste or smell and possibly gastrointestinal symptoms like nausea, vomiting or diarrhea. Symptoms may appear 2–14 days after exposure to the virus. Risk on severe course of COVID-19 is associated with increasing age, being overweight or obese, male gender, black or minority ethnicity, high blood pressure and diabetes.

Children and COVID-19

In children, disease course of COVID-19 is generally mild. Usually no special treatment is required, other than simple supportive measures (drink enough water, use paracetamol). Few children have complaints that are so serious that hospitalization is necessary and deaths from COVID-19 in children are extremely rare. Children who have COVID-19 and have symptoms such as fever, cough etc. are thought to be able to spread the virus in a similar way to adults. Many children with COVID-19 have no symptoms and it is not known if they can spread the virus.

Are children with hypopituitarism at increased risk of coronavirus infection or severe course of COVID-19 illness?

There is no evidence that children with hypopituitarism (involving growth hormone deficiency, central hypothyroidism, diabetes insipidus, hypogonadotropic hypogonadism or any combination of these) are at increased risk of acquiring COVID-19. Similarly for these children there is no evidence that they are at any increased risk of developing severe COVID-19 illness if they do become infected with the virus.

For children who have hypopituitarism with diabetes insipidus, although there is no evidence that infection with the coronavirus is any more common or severe than in other children, COVID-19 infection can cause vomiting and diarrhea. Vomiting and/or diarrhea puts children with diabetes insipidus at high risk of dehydration and very high sodium levels in the blood. Please follow guidance from your paediatric endocrinology team in these circumstances and seek urgent medical attention.

For children who have hypopituitarism with adrenal insufficiency as part of hypopituitarism please see the separate ESPE patient leaflet on coronavirus and adrenal insufficiency. While we do know that patients with adrenal insufficiency are at higher risk from infections in general there is currently no evidence that they are at increased risk of acquiring coronavirus. If a patient with adrenal insufficiency becomes infected with the coronavirus as with other infections there is a risk of an adrenal crisis developing. You should ensure you have plenty of supplies of hydrocortisone tablets or granules and your emergency injection of hydrocortisone. If your child has signs of coronavirus infection (cough, fever, shortness of breath) you should follow the sick day guidelines you have been given from your paediatric endocrinologist about increasing hydrocortisone dose – usually this is double or triple the usual dose given three or four times daily. If your child is unable to swallow or vomits the hydrocortisone tablets or is becoming worse despite the increase in dose you should administer the emergency injection of hydrocortisone and seek urgent medical care.

What should children with hypopituitarism do to protect themselves?

For COVID-19, there is not yet a vaccine. To prevent coronavirus from spreading, there are several general recommendations. Wash your hands often with soap and water for at least 20 seconds; do not touch your eyes, nose and mouth with unwashed hands; avoid close contact with people who are sick; stay home when you are sick; and disinfect frequently touched objects and surfaces. Strict adherence to COVID-19 prevention measures, like social distancing, is necessary. Be prepared, just in case. Have your doctor's phone numbers ready, including how to reach them at night and on weekends or holidays.

Wearing of masks or face coverings: you should follow advice from local authorities in your area. The World Health Organization recommends that children over 12 should wear a mask under the same conditions as adults. For children 5 years and below the WHO recommend that they should not be required to wear masks. For children aged 6-11 years the decision on whether to wear a mask will depend on a number of factors

- Ability of the child to tolerate wearing a mask
- The rate of local transmission of COVID-19
- Adult supervision for putting on, taking off and wearing mask
- Potential impact of wearing a mask on learning and psychosocial development
- Interactions the child has with other people who are at high risk of developing serious illness, such as the elderly and those with other underlying health conditions

Do the coronavirus prevention measures differ for children with hypopituitarism compared to the general population?

The coronavirus precautions are no different for children with hypopituitarism than for healthy children. No extra precautions are needed other than the usual advice. They should go to school when permitted by the general coronavirus prevention measures. The coronavirus will be around for a long time; therefore, it is important for children to attend school regularly to allow for their education, as well as normal development and general well-being.

What is the advice on the regular monitoring of children with hypopituitarism

Regular monitoring is essential for children with hypopituitarism to check their medication doses are correct, ensure that they are not having any side effects from the medication and to monitor them for development of any further hormonal problems. Appointments with your healthcare professional should continue but you may find that in some circumstances you are offered a telephone consultation or video consultation via the internet instead of an appointment in person at the hospital or clinic. It may be helpful for your healthcare provider if you can check your child's height and weight prior to the consultation if this is to be via the telephone or internet. You should ensure you have enough medical supplies to hand. This is particularly important for children with diabetes insipidus or adrenal insufficiency as part of hypopituitarism as running out of medications for those conditions would be life-threatening.

Disclaimer: Due to the emerging nature of the COVID-19 crisis this document is not based on extensive systematic review or meta-analysis, but on literature review and expert opinion. The document should be considered as guidance only; it is not intended to determine an absolute standard of medical care. Healthcare staff need to consider individual circumstances in their management for patients.

References:

1. Swann OV, et al. Clinical characteristics of children and young people admitted to hospital with covid-19 in United Kingdom: prospective multicentre observational cohort study. *BMJ* 2020;370:m3249
2. European Centre for disease prevention and control. COVID-19 in children and the role of school settings in COVID-19 transmission. <https://www.ecdc.europa.eu/en/publications-data/children-and-school-settings-covid-19-transmission> accessed 31st August 2020.
3. World Health Organization. Advice on the use of masks for children in the community in the context of COVID-19. https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC_Masks-Children-2020.1 Accessed 31st August 2020.