

Updated shielding guidance for children with chronic liver disease and those on immunosuppression (autoimmune liver disease and liver transplantation)

In view of the continuous evidence and increasing knowledge in the COVID-19 pandemic we have undertaken an update on the advice to children and families with chronic liver disease. This advice is generated following communication with colleagues from other societies (BTS, BLT, BSG, BASL) and referencing to documents released by PHE, GOV, ERN-Rare Liver, RCPCH and NHSE.

What we know more recently for children with liver disease:

A report from the Paediatric Hepatology Gastroenterology and Transplantation Unit, Hospital Papa Giovanni XXIII Bergamo, one of the areas with the highest incidence of Covid-19 in Italy, described that amongst their patients with liver cirrhosis, transplantation, autoimmune liver disease, chemotherapy for hepatoblastoma, none developed a clinical pulmonary disease, and only three tested positive for SARS-CoVid-2. <https://rare-liver.eu/media/corona-virus-immunosuppressed-patients.pdf>

Through NASPGHAN and the Society of Paediatric Liver Transplantation an open registry for paediatricians looking after children with liver disease has been set up, where they report for the 7th consecutive week Covid-19 associated cases. There have only been 14 children post liver transplantation and 18 with chronic liver disease, where they all made a full recovery with variable respiratory support in a very small number of them.

Despite the large number of adult patients affected with the virus in the three UK Paediatric Liver Centres there has only been a very small number of patients who tested positive for COVID-19 and all made a speedy and full recovery.

This advice reflects our current interpretation of the data available and the risks associated with COVID-19 infection. It is subject to review depending on the continuously emerging evidence, advice from government agencies and advances in treatment and immunisation options for COVID-19.

In the latest BSPGHAN guidelines updated on 28th May 2020 we categorised paediatric patients with liver disease for the purpose of shielding in the following groups:

Paediatric Gastroenterology, Hepatology & Nutrition (PGHAN) indications for shielding Children and Young people

Our updated advice identifies 3 groups of children and young people (under 18 years of age) with liver disease who could adjust their day-to-day activities accordingly.

Group A lists conditions that require continued shielding. A child with a condition in **Group A** should be advised to shield.

Group B lists conditions that may require discussion with clinician to establish whether on a case by case basis they are in a vulnerable group but they do not require shielding and the family should follow social distancing rules. Siblings could return to school as long as they have been given the relevant reassurances from school. The children and families should still practice stringent social distancing rules.

Group C lists conditions where the patients can unshield provided they maintain strict social distancing guidelines

The families are encouraged to contact their respective Paediatric Liver Centre and discuss their concerns at any point should they feel their circumstances do not fit into any of the below categories. The guideline provided here is advisory and not compulsory and families will be supported in their decisions in respect to unshielding and return to school. For children not returning to school in June, more data will be available to help decide on school return in September.

The government advice about how schools should protect children is available at: <https://www.gov.uk/government/publications/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings/coronavirus-covid-19-implementing-protective-measures-in-education-and-childcare-settings#shielded-and-clinically-vulnerable-children-and-young-people>

RCPCH returning to school guide:

<https://www.rcpch.ac.uk/resources/covid-19-talking-children-families-about-returning-school-guiding-principles>

Group A

1. Decompensated liver disease (ascites, portal hypertension)
2. Receiving post-transplant immunosuppression (<3 months from LT) or on liver/small bowel/multivisceral transplant waiting list
3. Liver disease and other significant co morbidities (immunodeficiency, post other organ transplantation, respiratory conditions) or other organ involvement (renal, haematology, cardiac, GI, respiratory, diabetes mellitus etc)
4. Active or frequently relapsing autoimmune liver disease where they are likely to need increase in treatment
5. Intravenous or oral steroids $\geq 20\text{mg/day}$ prednisolone (or $>0.5\text{mg/kg}$) or equivalent per day (only while on this dose)
6. Commencement of biologic therapy plus immunomodulatory or systemic steroids with previous six weeks
7. Requirement for parenteral nutrition

Group B

1. Post liver transplant (3-12 months from LT)
2. Patients with autoimmune liver disease (<3 months from diagnosis) on maintenance immunosuppression ($<20\text{mg}$ prednisolone or $<0.5\text{mg/kg}$)

Group C

1. Chronic but stable liver disease (no ascites and/or no portal hypertension, no immunosuppression)
2. Portal vein thrombosis/portal cavernoma
3. More than 1 year post liver transplant with stable immunosuppression levels
4. Autoimmune liver disease more than 3 months on maintenance treatment

RCPCH returning to school <https://www.rcpch.ac.uk/resources/covid-19-talking-children-families-about-returning-school-guiding-principles>

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