

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 continue reporting for the 9th consecutive week Covid-19 associated cases. There have only been 18 children post liver transplantation and 19 with chronic liver disease, where they all but one made a full recovery with variable respiratory support in a very small number of them.

At King's College Hospital we reported only 5 children with comorbidities and another 7 with no other illness who tested positive for COVID-19 with minimal symptoms.

[https://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642\(20\)30167-X.pdf](https://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642(20)30167-X.pdf)

Three months after the UK entered a lockdown and despite the large number of adult patients affected with the virus in the three UK Paediatric Liver Centres there has still only been a very small number of patients who tested positive for COVID-19 and all made a speedy and full recovery. A number of paediatric liver transplants has also been done in this period with excellent outcome (NHSBT).

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 3rd July 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 2 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 where the patients can unshield provided they maintain stringent social distancing guidelines.

Families can 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 only and not compulsory and as such families can make their own decisions in respect to unshielding, travelling and return to school.

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>

RCPCCH 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 (<6 months from LT) or on liver/small bowel/multivisceral transplant waiting list
3. Liver disease with other significant co morbidities (immunodeficiency, post other organ transplantation, respiratory conditions) for which they have also been advised to continue shielding by the respective subspecialty.
4. Active or frequently relapsing autoimmune liver disease where they are had a recent (<3 months) 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. Chronic but stable liver disease (on routine follow up appointments)
2. Portal vein thrombosis/portal cavernoma
3. More than 6 months post liver transplant with stable immunosuppression levels
4. Autoimmune liver disease more than 3 months on maintenance treatment