



Updated COVID-19 guidance for children with kidney disease on dialysis, and immunosuppression (including kidney transplants)

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This guidance has been revised based on updated information and changes in national advice. More information can be found in our infographic, FAQ section and evidence section on our website.

This guidance continues to be based on information on COVID-19 cases from kidney units across the UK. Reassuringly, very few UK children with kidney disease have been admitted to hospital with COVID-19. Most infected children have been mildly affected only. There is no evidence that medicines affecting the immune system increase the risk of catching COVID-19 in children and young people with kidney disease. Children and young people with additional health problems such as severe neurological disorders and Down syndrome may be at increased risk and you should discuss this with your kidney team if this is relevant to you.

We will continue to follow the situation closely. Advice may change as doctors and scientists gather more evidence, and we will share all important new information with you.

Guidance produced after consultations with paediatric nephrology colleagues and kidney units. Thank you to all contributors

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The majority of children and young people (CYP) with kidney disease are not at an increased risk of COVID-19 compared to others their age.

There are times when children and young people with kidney disease are at increased risk of infections because of their treatment. We would recommend precautions at these times to protect from a number of infections including COVID-19.

- With recent kidney **transplants** – for at least 6 weeks immediately after transplant
- **On high level of medication that suppress (reduce) the immune system (immunosuppression), for active disease often called induction treatment:** those who are currently receiving or completed treatment within 4 weeks of:
 - High dose steroids AND other very powerful immunosuppression e.g. cyclophosphamide, rituximab.
- **Your kidney team determines with you that your child is at increased risk of infection.**

Guidance to reduce risk of contracting COVID-19

- CYP in this group are **at risk of all types of infections** and complications, not only COVID-19. Families should be kept informed on how to seek urgent healthcare advice should they become unwell. It is important to be **up to date with all immunisations including COVID and annual inactive influenza** when it is offered.
- CYP should take sensible precautions to reduce the risk of all infections including COVID-19. This would include wearing a mask when mixing with others, avoiding crowded places, particularly indoors, ensuring good hand hygiene, maintaining a good distance from other people and minimizing the number of people you mix with. It is important that CYP have time outside and exercise.⁹ When going outside you should go to quieter places where you can stay 2m away from other people.
- We would recommend not going to school or nursery for the 4-6 week period after a kidney transplant or immunosuppression treatment as above. In some situations for example if a CYP has additional health problems or the local incidence of infection is high then it may be sensible to extend this period for up to 3 months. Your local kidney team will advise you if this is the case.



- Parents/carers and young people within the household or that you mix with regularly should also wear a mask when mixing with others, avoid crowded places, particularly indoors, ensuring good hand hygiene, maintaining a good distance from other people and minimizing the number of people you mix. Household members may also wish to discuss with their employer about putting suitable arrangements in place to minimise risk including working from home if possible.

Children and young people waiting for a kidney transplant¹⁰

- Special protective measures and COVID-19 testing are required in the 2 weeks leading up to a planned **living donor transplant** to minimise the chance of infection. Your kidney unit will advise you of exact details.
- Unless they have other risk factors, CYP on the **waiting list for a deceased kidney** transplant are not at higher risk of catching COVID-19 or having a serious illness with the infection. However, your kidney unit will decide with you, if additional measures are required before activation on the waiting list.

Vaccination^{11,12,13,19,20}

- The Pfizer vaccination has been tested and shown to be safe and effective in children 12 years and older.
- A lower dose of the Pfizer vaccination has been tested and shown to be safe and effective in children 5 to 11 years of age.
- We would recommend that if you or your child are offered the vaccination that you are vaccinated.
- We would recommend primary vaccination as per guidance from the JCVI and Chief Medical Officers. A primary vaccination course is that recommended to develop antibodies to protect against infection. The recommended doses for different groups are shown in the table below.
- There is evidence that, in immunosuppressed individuals, the response to vaccination, particularly one dose, is reduced and therefore prioritising this group for additional doses of the vaccine allows them to have improved protection.
- The JCVI recommends a booster vaccine 6 months after the primary course for those that may not maintain a good vaccine response because of their health condition or their treatment. Those who are recommended to have a booster vaccine are shown in the table below.
- The Green Book Chapter 14a <https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a> has more information on what treatments suppress (reduce) the immune system (immunosuppression).



Primary Vaccination		Booster
Two Doses 12 weeks apart	All children and young people 12 – 17 years of age (see below for adjustment based on individual circumstances)	Recommended 3 months after completion of primary vaccination in those 16 years of age or older.
Two doses 8 weeks apart	<ol style="list-style-type: none"> 1. If 12 years of age or older and lives with someone who is immunosuppressed. 2. If 12 years of age or older with CKD stage 3, or greater including those on dialysis. 3. If 12 years of age or older and about to be given immunosuppressive treatment and don't meet criteria for 3 doses. Doses can be given 4 weeks apart if needed. 4. If 5 to 11 years of age with CKD Stage 3-5D, or who are on immunosuppressive treatments. This would include those who have had a kidney transplant and those with conditions like nephrotic syndrome, glomerulonephritis or vasculitis where CYP are taking treatments that reduce the immune system. 	Recommended 3 months after completion of primary vaccination in those 12 years of age or older.
Three doses	If 12 years of age or older and have kidney disease and are immunosuppressed at the time of the first two doses. This would include those who have had a kidney transplant and those with conditions like nephrotic syndrome, glomerulonephritis or vasculitis where CYP are taking treatments that reduce the immune system.	Recommended 3 months after completion of primary vaccination in those 12 years of age or older.

Treatment for COVID¹⁸

We have reassuring data specific to children and young people with kidney disease that the risk of becoming unwell with Covid-19 infection remains low in this group.^{14,15,16} We would recommend letting your local kidney team know if your child has a positive COVID test as they may be eligible for early treatment and especially if you are concerned they are unwell.

Most children and young people with kidney disease can be managed at home and do not need any specific treatment. There are some treatments that can be considered in children and young people in higher risk groups that can be given early that may reduce the severity of the illness.

Most treatment in hospital is supportive treatment for example fluids, oxygen and medication to reduced temperatures.

There are an increasing number of medications that are being used to treat COVID. Some are recommended only in adults, some are recommended and have been tested in adults and children and some have been recommended for use in certain circumstances in children and adults but have only been tested in adults. We would recommend that these treatments are considered and an individual assessment of the risks and benefit in each child and young person made by their specialist team before the medication is administered.

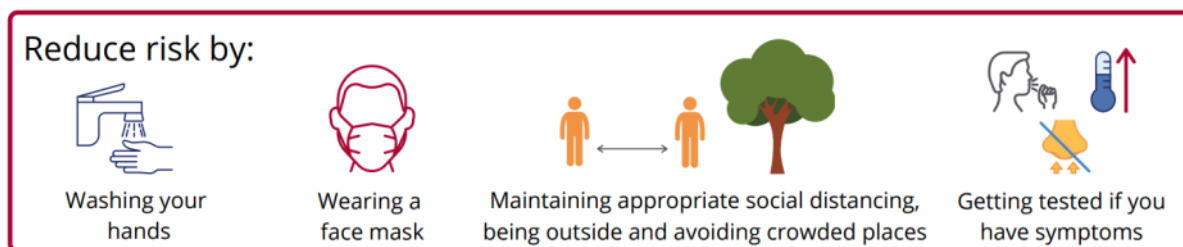
The Royal College of Paediatrics and Child Health have up to date information on treatments for COVID on their website.

[COVID-19 - guidance for management of children admitted to hospital and for treatment of non-hospitalised children at risk of severe disease | RCPCH](#)

More information

What can we all do to minimise catching or spreading COVID-19?

- Follow the government advice for the region you are in.



- You can reduce the risk of catching COVID-19 by following this simple guide [What are the risks of catching COVID-19 from various activities?](#)
- It is important for you and your child to have your COVID vaccines and booster vaccines as per the JCVI advice above.
- It is also important to be up to date with other immunisations including the annual inactivated influenza vaccine.

Why are you saying that children and young people with a stable renal transplant or nephrotic syndrome are at low risk of becoming unwell as a result of Covid-19 infection but are recommending they are vaccinated?^{11,12, 13}

- The JCVI decision on vaccination in children and young people is based on data of risks in adults and children identifying who is likely to get the most benefit from the vaccine. They recommend vaccination in CYP who have health conditions or medication that reduce their immune system. This includes CYP who have had a renal transplant or who have nephrotic syndrome requiring treatment with medication that reduces the immune system.
- Since healthy CYP are substantially less likely than adults to become seriously unwell as a result of Covid-19 infection, the benefits of vaccination from a health perspective are smaller than in adults, but still present. The Chief Medical Officers reviewed the relevant data and concluded that the overall benefit when taking into account the impact of coronavirus infection on children, including missing school and isolation, was clearly in favour of vaccinating all children and young people 12 years of age and older.



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Where can I get government advice?

The four different UK nations have slightly different COVID-19 healthcare and schooling advice. Advice for clinically extremely vulnerable patients (previously shielded group) is available here:

[England](#)

[Scotland](#)

[Wales](#)

[Northern Ireland](#)



References

1. ONS (2020). [Latest numbers of people with COVID-19](#)
2. GOV.UK (2020). [Coronavirus \(COVID-19\) in the UK](#)
3. GOV.UK (2020). [National COVID-19 surveillance reports](#)
4. RCPCH (2020). [COVID-19 - service evaluation and audit on the care needs of children admitted to hospital \(England\)](#)
5. Plumb L, Benoy-Deeney F, Casula A, et al. [COVID-19 in children with chronic kidney disease: findings from the UK renal registry. Archives of Disease in Childhood Published Online First: 24 July 2020. doi: 10.1136/archdischild-2020-319903](#)
6. Marlais M, Wlodkowski T, Vivarelli M. [The severity of COVID-19 in children on immunosuppressive medication. Lancet Child Adolesc Health. 2020 doi: 10.1016/S2352-4642\(20\)30145-0.](#)
7. Marlais M, et al. COVID-19 in children treated with immunosuppressive medication for kidney disease. Arch Dis Child 2020;0:1–4. [doi:10.1136/archdischild-2020-320616](#)
8. Mastrangelo et al, Impact of COVID-19 Pandemic in Children with CKD or Immunosuppression. CJASN December 2020, CJN.13120820; DOI: <https://doi.org/10.2215/CJN.13120820>
9. RCPCH (2020) [COVID-19 summaries on key findings on children and young people's views.](#)
10. NICE (2020). [COVID 19 rapid guideline: renal transplantation \[NG178\]](#)
11. Joint Committee on Vaccination and Immunisation; <https://www.gov.uk/search/all?keywords=JCVI>
12. Green Book Chapter 14a <https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a>
13. RCPCH (2021) <https://www.rcpch.ac.uk/resources/covid-19-vaccination-children-young-people>
14. C Smith et al. Deaths in Children and Young People in England following SARS-CoV-2 infection during the first pandemic year: a national study using linked mandatory child death reporting data <https://www.medrxiv.org/content/10.1101/2021.07.07.21259779v1>
15. R Harwood et al. Which children and young people are at higher risk of severe disease and death after SARS-CoV-2 infection: a systematic review and individual patient meta-analysis <https://www.medrxiv.org/content/10.1101/2021.06.30.21259763v1>
16. J Ward et al. Risk factors for intensive care admission and death amongst children and young people admitted to hospital with COVID-19 and PIMS-TS in England during the first pandemic year <https://www.medrxiv.org/content/10.1101/2021.07.01.21259785v1>
17. COVID-19 vaccination programme Information for healthcare practitioners https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1042558/COVID-19-vaccine-information-for-healthcare-practitioners-21Dec21.pdf
18. COVID-19 - guidance for management of children admitted to hospital and for treatment of non-hospitalised children at risk of severe disease [COVID-19 - guidance for management of children admitted to hospital and for treatment of non-hospitalised children at risk of severe disease | RCPCH](#)
19. Pfizer vaccine approval in 5 to 11 year olds. [UK regulator approves use of Pfizer/BioNTech vaccine in 5 to 11-year olds - GOV.UK \(www.gov.uk\)](#)
20. JCVI statement on COVID-19 vaccination of children and young people: 22 December 2021 [JCVI statement on COVID-19 vaccination of children and young people: 22 December 2021 - GOV.UK \(www.gov.uk\)](#)