

## Commonly used Drugs with their Doses in Pediatric Hepatology

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In a busy day to day OPD/practice of a pediatric gastroenterologist/pediatric hepatologist, keeping a list of the common drugs with their doses will be handy for easy reference. Below section describes the drugs with their doses for the commonly encountered diseases in our practice.

We would like to highlight that most of the conditions discussed below like Wilson's disease, Autoimmune hepatitis etc. needs specialized care and should be managed by specialists in the subject.

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Disease/ Symptom	Medications	Dose
1) Neonatal cholestasis	Vitamin supplements, Calcium, Medium chain triglycerides (MCT), Ursodeoxy cholic acid (UDCA)	<ul style="list-style-type: none"> <li>Vitamin K dose: 5 mg weekly</li> <li>Vitamin D dose: 1000 IU/day</li> <li>Vitamin E dose: 100–200 IU/day</li> <li>Vitamin A dose: 5000–25000 IU/day</li> <li>Water soluble vitamins dose: Twice RDA</li> <li>MCT dose: 20% of total calorie intake as MCT</li> <li>Calcium dose: 50–75 mg/kg/day</li> <li>UDCA dose: 15–20 mg/kg/day</li> </ul>
2) Cholangitis prophylaxis	Antibiotics	<ul style="list-style-type: none"> <li>Septan for prophylaxis (Trimethoprim dose): 4 mg/kg/days BD</li> <li>Cefixime: dose for prophylaxis is not well studied, therapeutic dose-8 mg/kg/day BD</li> </ul>
3) Pruritus	<ul style="list-style-type: none"> <li>UDCA</li> <li>Rifampicin</li> <li>Cholestyramine</li> </ul>	<ul style="list-style-type: none"> <li>UDCA dose: 15–20 mg/kg/days BD</li> <li>Rifampicin dose: 10 mg/kg/days BD (studies used upto 20 mg/kg/day)</li> <li>Cholestyramine dose: 240 mg/kg/ day (along with food as TDS; max 8 gm/day)</li> </ul>
4) Bile acid synthetic defect	-Bile acids (Cholic acid)	<ul style="list-style-type: none"> <li>Cholic acid dose: 7–15 mg/kg/day</li> </ul>
5) Budd-chiari syndrome	<ul style="list-style-type: none"> <li>Warfarin</li> </ul>	<ul style="list-style-type: none"> <li>Warfarin dose: At outset as 0.2 mg/kg/day OD (then to titrate based on the INR; dose is adjusted by cumulative weekly dose)</li> </ul>
6) Autoimmune hepatitis	<ul style="list-style-type: none"> <li>Steroids</li> <li>Azathioprine</li> <li>MMF</li> <li>Cyclosporine</li> <li>Tacrolimus</li> </ul>	<ul style="list-style-type: none"> <li>Prednisolone dose: 1–2 mg/kg/day (at onset) OD</li> <li>Azathioprine dose: 1–2 mg/kg/day OD</li> <li>MMF dose: 20 to 40 mg/kg/day BD. Upper limit of MMF dose: 1500 mg/day in pediatric studies; 3 g/day in adult studies</li> <li>Cyclosporine dose: 3–8 mg/kg/day BD</li> <li>Tacrolimus dose: 0.05–0.1 mg/kg/day BD</li> </ul>
7) Wilson's disease	Chelating agents, Zinc	<ul style="list-style-type: none"> <li>D-penicillamine dose: 10–20 mg/kg/day (max 1500 mg/day, 1 hour before or two hours after meal)</li> <li>Trientine dose: 20 mg/kg/day (max 1500 mg/day, 1 hour before or three hours after meal)</li> </ul>

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		<ul style="list-style-type: none"> <li>Zinc dose: Age &gt;16 years and body weight &gt;50 kg: 150 mg/day TDS Age 6–16 years and body weight &lt;50 kg: 75 mg/day TDS and &lt;6 years of age dose: 50 mg/day BD (2 hours after meal; has to be widely spaced out from D-penicillamine and trientine to avoid interference)</li> </ul>
8) Hepatitis B	Antivirals, Peg-Interferon (as indicated)	<ul style="list-style-type: none"> <li>Entecavir dose (&gt; 2 yrs): 0.015 mg/kg/day (max 0.5 mg) OD</li> <li>Tenofovir (disoproxilfumarate, TDF) dose: &gt;12 yr 300 mg OD</li> <li>Tenofovir (alafenamide, TAF) dose: &gt;12 yr 25 mg OD</li> <li>Lamivudine dose: &gt;3 yr 3 mg/kg (max 100 mg) OD/BD</li> <li>Peg-IFN dose: &gt;3 yr 180 mcg/1.73 m<sup>2</sup> once a week</li> </ul>
9) Hepatitis C	Antivirals (Directly acting antivirals)	<ul style="list-style-type: none"> <li>Drug combinations (EASL-irrespective of genotype) <ul style="list-style-type: none"> <li>1) Sofosbuvir-Velpatasvir (&gt;3 yr) Dose:&gt;12 yr: 400/100 mg; between 3–11 yrs with&lt;17 kg: 150/37.5 mg and &gt;17kg: 200/50 mg OD for 12 weeks</li> <li>2) Glecaprevir-pibrentasvir (&gt;3 yr) 12–19 kg: 150/60 mg 20–29 kg: 200/80 mg 30–44 kg: 250/100 mg OD for 12 weeks</li> </ul> </li> <li>(AASLD-for genotype1, 4, 5, 6) <ul style="list-style-type: none"> <li>1) Sofosbuvir-Ledipasvir (&gt;3 yr) for 12 weeks Dose: &lt;17kg: 150/33.75 mg 17–34 kg: 200/45 mg &gt;35 kg: 400/90 mg</li> </ul> </li> <li>(AASLD–pan genotype) <ul style="list-style-type: none"> <li>1) Glecaprevir-pibrentasvir (&gt;12 yr) Dose = 300/120 mg, for 8 weeks</li> </ul> </li> </ul>
10) Variceal bleed	-Ocreotide -Beta blocker	<ul style="list-style-type: none"> <li>Ocreotide during acute bleed dose: Loading with 1 mcg/kg followed by 1–5 mcg/kg/hr</li> <li>Propranolol dose: 0.5–3 mg/kg/day (usual range 1–2 mg/kg/day; upto 8 mg/kg/day max)</li> <li>Carvedilol dose: 0.05–0.3 mg/kg/day BD, adult doses used in most studies: 6.25 mg/day to 12.5 mg/day</li> </ul>
11) Ascites	-Diuretics (Furosemide, Aldactone)	<ul style="list-style-type: none"> <li>Spironolactone dose: 2–6 mg/kg/day (max 400 mg/day)</li> <li>Furosemide-spironolactone combination (1:2.5 ratio)</li> <li>Furosemide dose: 1–4 mg/kg/day (max 160 mg/day)</li> <li>Albumin infusions dose: 1 gm/kg over 6–8 hours</li> </ul>
12) SBP prophylaxis	-Antibiotics	<ul style="list-style-type: none"> <li>Norfloxacin dose: 5–7.5 mg/kg/day OD</li> </ul>

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