# Interactions with PBC Agents



**Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.**

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Anaesthetics & Muscle Relaxants** | | |
| Bupivacaine | ◆ | ◆ |
| Cisatracurium | ◆ | ◆ |
| Isoflurane | ◆ | ◆ |
| Ketamine | ◆ | ◆ |
| Nitrous oxide | ◆ | ◆ |
| Propofol | ◆ | ◆ |
| Thiopental | ◆ | ◆ |
| Tizanidine | ■ | △ |
| **Analgesics** | | |
| Aceclofenac | ◆ | ◆ |
| Alfentanil | ◆ | ◆ |
| Aspirin | ◆ | ◆ |
| Buprenorphine | ◆ | ◆ |
| Celecoxib | ◆ | ◆ |
| Codeine | ◆ | △ |
| Dexketoprofen | ◆ | ◆ |
| Dextropropoxyphene | ◆ | △ |
| Diamorphine | ◆ | △ |
| Diclofenac | ◆ | ◆ |
| Diflunisal | ◆ | ◆ |
| Dihydrocodeine | ◆ | △ |
| Etoricoxib | △ | ◆ |
| Fentanyl | ◆ | ◆ |
| Flurbiprofen | ◆ | ◆ |
| Hydrocodone | ◆ | △ |
| Hydromorphone | ◆ | △ |
| Ibuprofen | ◆ | ◆ |
| Indometacin | △ | ◆ |
| Ketoprofen | ◆ | ◆ |
| Mefenamic acid | ◆ | ◆ |
| Meloxicam | △ | ◆ |
| Metamizole (Dipyrone) | ◆ | ◆ |
| Methadone | ■ | △ |
| Morphine | ◆ | ◆ |
| Naproxen | ◆ | ◆ |
| Oxycodone | ◆ | △ |
| Paracetamol | ◆ | ◆ |
| Pethidine (Meperidine) | ◆ | △ |
| Piroxicam | ◆ | ◆ |
| Tapentadol | ◆ | △ |
| Tramadol | ◆ | △ |
| **Anthelmintics** | | |
| Albendazole | ◆ | ◆ |
| Ivermectin | ◆ | ◆ |
| Oxamniquine | ◆ | ◆ |
| Praziquantel | △ | ◆ |
| Pyrantel | ◆ | ◆ |
| **Antiarrhythmics** | | |
| Amiodarone | △ | △ |
| Bepridil | ◆ | △ |
| Digoxin | ◆ | ◆ |
| Disopyramide | ◆ | ◆ |
| Dofetilide | ◆ | △ |
| Dronedarone | △ | △ |
| Flecainide | ◆ | △ |
| Lidocaine (Lignocaine) | ◆ | ◆ |
| Mexiletine | ■ | △ |
| Propafenone | ■ | △ |
| Quinidine | ◆ | △ |
| Vernakalant | ◆ | ◆ |
| **Antibacterials** | | |
| Amikacin | ◆ | ◆ |
| Amoxicillin | ◆ | ◆ |
| Ampicillin | ◆ | ◆ |
| Azithromycin | ◆ | ◆ |
| Aztreonam | ◆ | ◆ |
| Bedaquiline | ◆ | ◆ |
| Benzylpenicillin | ◆ | ◆ |
| Capreomycin | ◆ | ◆ |
| Cefaclor | ◆ | ◆ |
| Cefadroxil | ◆ | ◆ |
| Cefalexin | ◆ | ◆ |
| Cefazolin | ◆ | ◆ |
| Cefixime | ◆ | ◆ |
| Cefotaxime | ◆ | ◆ |
| Cefradine | ◆ | ◆ |
| Ceftaroline | ◆ | ◆ |
| Ceftazidime | ◆ | ◆ |
| Ceftriaxone | ◆ | ◆ |
| Cefuroxime | ◆ | ◆ |
| Chloramphenicol | ◆ | ◆ |
| Ciprofloxacin | ◆ | ■ |
| Clarithromycin | ◆ | ◆ |
| Clavulanic acid | ◆ | ◆ |
| Clindamycin | ◆ | △ |
| Cloxacillin | ◆ | ◆ |

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Antibacterials (continued)** | | |
| Dapsone | ◆ | ■ |
| Delamanid | ◆ | ◆ |
| Ertapenem | ◆ | ◆ |
| Erythromycin | ■ | ◆ |
| Ethambutol | ◆ | ◆ |
| Flucloxacillin | ◆ | ◆ |
| Gentamicin | ◆ | ◆ |
| Imipenem | ◆ | ◆ |
| Isoniazid | △ | ◆ |
| Levofloxacin | ◆ | ◆ |
| Linezolid | ◆ | △ |
| Lymecycline | ◆ | ◆ |
| Meropenem | ◆ | ◆ |
| Methenamine | ◆ | ◆ |
| Metronidazole | ◆ | ◆ |
| Moxifloxacin | ◆ | ◆ |
| Nitrofurantoin | ◆ | ◆ |
| Norfloxacin | ◆ | ◆ |
| Ofloxacin | ◆ | ◆ |
| Penicillin V | ◆ | ◆ |
| Piperacillin | ◆ | ◆ |
| Pivmecillinam | ◆ | ◆ |
| Pyrazinamide | ◆ | ◆ |
| Rifabutin | △ | △ |
| Rifampicin | △ | △ |
| Rifapentine | ■ | △ |
| Rifaximin | △ | ◆ |
| Spectinomycin | ◆ | ◆ |
| Streptomycin | ◆ | ◆ |
| Sulfadiazine | ◆ | ◆ |
| Tazobactam | ◆ | ◆ |
| Telithromycin | ■ | ◆ |
| Temocillin | ◆ | ◆ |
| Tetracyclines | ◆ | ◆ |
| Ticarcillin | ◆ | ◆ |
| Trimethoprim/Sulfamethoxazole | ◆ | ◆ |
| Troleandomycin | ◆ | ◆ |
| Vancomycin | ◆ | ◆ |
| **Anticoagulant, Antiplatelet & Fibrinolytic** | | |
| Acenocoumarol | △ | △ |
| Anagrelide | △ | △ |
| Apixaban | ◆ | △ |
| Clopidogrel | △ | ◆ |
| Dabigatran | ◆ | △ |
| Dalteparin | ◆ | ◆ |
| Danaparoid | ◆ | ◆ |
| Dipyridamole | ■ | ◆ |
| Edoxaban | ◆ | △ |
| Eltrombopag | ◆ | ◆ |
| Enoxaparin | ◆ | ◆ |
| Fluindione | △ | △ |
| Fondaparinux | ◆ | ◆ |
| Heparin | ◆ | ◆ |
| Phenprocoumon | ◆ | △ |
| Prasugrel | ◆ | ◆ |
| Rivaroxaban | ◆ | △ |
| Streptokinase | ◆ | ◆ |
| Ticagrelor | ◆ | ◆ |
| Ticlopidine | ◆ | ◆ |
| Tinzaparin | ◆ | ◆ |
| Warfarin | ■ | △ |
| **Anticonvulsants** | | |
| Carbamazepine | ◆ | △ |
| Clonazepam | ◆ | ◆ |
| Eslicarbazepine | ◆ | ◆ |
| Ethosuximide | ◆ | ◆ |
| Gabapentin | ◆ | ◆ |
| Lacosamide | ◆ | ◆ |
| Lamotrigine | ◆ | ◆ |
| Levetiracetam | ◆ | ◆ |
| Oxcarbazepine | ◆ | ◆ |
| Perampanel | ◆ | ◆ |
| Phenobarbital | ◆ | △ |
| Phenytoin | ◆ | △ |
| Pregabalin | ◆ | ◆ |
| Primidone | ◆ | ◆ |
| Retigabine | ◆ | ◆ |
| Rufinamide | ◆ | ◆ |
| Sultiame | ◆ | ◆ |
| Tiagabine | ◆ | ◆ |
| Topiramate | ◆ | ◆ |
| Valproate (Divalproex) | ◆ | ◆ |
| Vigabatrin | ◆ | ◆ |
| Zonisamide | ◆ | ◆ |

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Antidepressants** | | |
| Agomelatine | △ | ◆ |
| Amitriptyline | ◆ | △ |
| Bupropion | ◆ | ◆ |
| Citalopram | ◆ | ◆ |
| Clomipramine | ◆ | △ |
| Desipramine | ◆ | △ |
| Desvenlafaxine | ◆ | ◆ |
| Dosulepin | ◆ | △ |
| Doxepin | ◆ | △ |
| Duloxetine | ◆ | ◆ |
| Escitalopram | ◆ | ◆ |
| Fluoxetine | ◆ | ◆ |
| Fluvoxamine | ◆ | ◆ |
| Imipramine | ◆ | △ |
| Lithium | ◆ | ◆ |
| Maprotiline | ◆ | △ |
| Mianserin | ◆ | ◆ |
| Milnacipran | ◆ | ◆ |
| Mirtazapine | ◆ | △ |
| Moclobemide | ◆ | ◆ |
| Nefazodone | ■ | ◆ |
| Nortriptyline | ◆ | △ |
| Paroxetine | ◆ | ◆ |
| Sertraline | ◆ | ◆ |
| Tianeptine | ◆ | ◆ |
| Trazodone | ◆ | ◆ |
| Trimipramine | ◆ | △ |
| Venlafaxine | ◆ | ◆ |
| Vortioxetine | ◆ | ◆ |
| **Antidiabetics** | | |
| Acarbose | ◆ | ◆ |
| Albiglutide | ◆ | ◆ |
| Alogliptin | ◆ | ◆ |
| Canagliflozin | ◆ | ◆ |
| Dapagliflozin | ◆ | ◆ |
| Dulaglutide | ◆ | ◆ |
| Empagliflozin | ◆ | ◆ |
| Exenatide | ◆ | ◆ |
| Glibenclamide (Glyburide) | ■ | △ |
| Gliclazide | ◆ | ◆ |
| Glimepiride | ■ | △ |
| Glipizide | ◆ | △ |
| Insulin | ◆ | ◆ |
| Linagliptin | ◆ | ◆ |
| Liraglutide | ◆ | ◆ |
| Lixisenatide | ◆ | ◆ |
| Metformin | ◆ | ◆ |
| Nateglinide | ◆ | ◆ |
| Pioglitazone | △ | ◆ |
| Repaglinide | △ | ◆ |
| Rosiglitazone | ■ | ◆ |
| Saxagliptin | ◆ | ◆ |
| Sitagliptin | ◆ | ◆ |
| Tolbutamide | ◆ | △ |
| Vildagliptin | ◆ | ◆ |
| **Antifungals** | | |
| Amphotericin B | ◆ | ◆ |
| Anidulafungin | ◆ | ◆ |
| Caspofungin | ◆ | ◆ |
| Fluconazole | ◆ | ◆ |
| Flucytosine | ◆ | ◆ |
| Griseofulvin | ◆ | ◆ |
| Isavuconazole | ◆ | ◆ |
| Itraconazole | ■ | △ |
| Ketoconazole | ■ | △ |
| Miconazole | ◆ | ◆ |
| Nystatin | ◆ | ◆ |
| Posaconazole | ■ | △ |
| Terbinafine | ◆ | ◆ |
| Voriconazole | ◆ | △ |



### *Key to symbols*

| | |
|---|---|
| ● | These drugs should not be coadministered |
| ■ | Potential clinically significant interaction that is likely to require additional monitoring, alteration of drug dosage or timing of administration |
| △ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required |
| ◆ | No clinically significant interaction expected |

### *Notes*

- Further information is available at www.hep-druginteractions.org
- Predicted interactions are based on known metabolic pathways and routes of clearance.
- Caution is required in patients with hepatic impairment as this may also increase drug levels and require dose modification.
- Where advice differs between countries, the charts reflect the more cautious option.

# Interactions with PBC Agents



**Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.**

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Antihistamines** | | |
| Astemizole | △ | △ |
| Bilastine | ◆ | ◆ |
| Cetirizine | ◆ | ◆ |
| Chlorphenamine | ◆ | △ |
| Desloratadine | ◆ | ◆ |
| Diphenhydramine | ◆ | ◆ |
| Doxylamine | ◆ | ◆ |
| Ebastine | ◆ | ◆ |
| Fexofenadine | ◆ | ◆ |
| Hydroxyzine | ■ | ◆ |
| Levocetirizine | ◆ | ◆ |
| Loratadine | ■ | ◆ |
| Promethazine | ◆ | ◆ |
| Terfenadine | ◆ | △ |
| **Antimigraine Agents** | | |
| Almotriptan | ◆ | ◆ |
| Dihydroergotamine | ◆ | ◆ |
| Eletriptan | ◆ | ◆ |
| Ergotamine | ◆ | △ |
| Frovatriptan | ◆ | ◆ |
| Methylergonovine | ◆ | △ |
| Naratriptan | ◆ | ◆ |
| Pizotifen | ◆ | ◆ |
| Rizatriptan | ◆ | ◆ |
| Sumatriptan | ◆ | ◆ |
| Zolmitriptan | ■ | ◆ |
| **Antiprotozoals** | | |
| Amodiaquine | ◆ | △ |
| Artemether | ◆ | ◆ |
| Artemisinin | ◆ | ◆ |
| Artesunate | ◆ | ◆ |
| Atovaquone | ◆ | △ |
| Chloroquine | ◆ | △ |
| Dihydroartemisinin | ◆ | ◆ |
| Doxycycline | ◆ | ◆ |
| Halofantrine | ◆ | △ |
| Hydroxychloroquine | ◆ | ◆ |
| Lumefantrine | ◆ | ◆ |
| Mefloquine | ◆ | ◆ |
| Pentamidine | ◆ | ◆ |
| Primaquine | △ | ◆ |
| Proguanil | ◆ | ◆ |
| Pyrimethamine | ◆ | △ |
| Quinine | ◆ | △ |
| Sodium stibogluconate | ◆ | ◆ |
| Sulfadoxine | ◆ | ◆ |
| **Antipsychotics/Neuroleptics** | | |
| Amisulpride | ◆ | ◆ |
| Aripiprazole | ◆ | ◆ |
| Asenapine | △ | ◆ |
| Chlorpromazine | ◆ | ◆ |
| Chlorprothixene | ◆ | △ |
| Clozapine | ■ | ◆ |
| Flupentixol | ◆ | △ |
| Fluphenazine | △ | ◆ |
| Haloperidol | ◆ | △ |
| Iloperidone | △ | △ |
| Levomepromazine | ◆ | ◆ |
| Olanzapine | ■ | ◆ |
| Paliperidone | ◆ | △ |
| Perazine | ◆ | ◆ |
| Periciazine | ◆ | ◆ |
| Perphenazine | ◆ | ◆ |
| Pimozide | ◆ | △ |
| Pipotiazine | ◆ | ◆ |
| Prochlorperazine | ◆ | ◆ |
| Quetiapine | ◆ | ◆ |
| Risperidone | ◆ | △ |
| Sulpiride | ◆ | ◆ |
| Thioridazine | ◆ | △ |
| Tiapride | ◆ | ◆ |
| Trifluoperazine | ◆ | ◆ |
| Ziprasidone | ◆ | ◆ |
| Zuclopentixol | ◆ | △ |



| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Antivirals** | | |
| Aciclovir | ◆ | ◆ |
| Amantadine | ◆ | ◆ |
| Brivudine | ◆ | ◆ |
| Cidofovir | ◆ | ◆ |
| Foscarnet | ◆ | ◆ |
| Oseltamivir | ◆ | ◆ |
| Rimantadine | ◆ | ◆ |
| Valaciclovir | ◆ | ◆ |
| Zanamivir | ◆ | ◆ |
| **Anxiolytics/Hypnotics/Sedatives** | | |
| Alprazolam | ◆ | ◆ |
| Amobarbital | ◆ | △ |
| Bromazepam | ◆ | ◆ |
| Bromperidol | ◆ | ◆ |
| Buspirone | ◆ | ◆ |
| Clobazam | ◆ | ◆ |
| Clorazepate | ◆ | ◆ |
| Clotiapine | ◆ | ◆ |
| Diazepam | ◆ | ◆ |
| Estazolam | ◆ | ◆ |
| Flurazepam | ◆ | ◆ |
| Lorazepam | ◆ | ◆ |
| Lormetazepam | ◆ | ◆ |
| Midazolam (oral) | △ | ◆ |
| Midazolam (parenteral) | △ | ◆ |
| Oxazepam | ◆ | ◆ |
| Quazepam | ◆ | ◆ |
| Temazepam | ◆ | ◆ |
| Triazolam | ◆ | ◆ |
| Zaleplon | ◆ | ◆ |
| Zolpidem | ◆ | ◆ |
| Zopiclone | ◆ | ◆ |
| **Beta Blockers** | | |
| Atenolol | ◆ | ◆ |
| Bisoprolol | ◆ | ◆ |
| Carvedilol | ◆ | △ |
| Celiprolol | ◆ | △ |
| Labetalol | ◆ | △ |
| Metoprolol | ◆ | ◆ |
| Nebivolol | ◆ | △ |
| Oxprenolol | ◆ | ◆ |
| Pindolol | ◆ | ◆ |
| Propranolol | ◆ | △ |
| Sotalol | ◆ | ◆ |
| Timolol | ◆ | △ |
| **Bisphosphonates** | | |
| Alendronic acid | ◆ | ◆ |
| Clodronate | ◆ | ◆ |
| Ibandronic acid | ◆ | ◆ |
| Pamidronate | ◆ | ◆ |
| Risedronate | ◆ | ◆ |
| **Bronchodilators** | | |
| Formoterol | ◆ | ◆ |
| Indacaterol | ◆ | ◆ |
| Ipratropium bromide | ◆ | ◆ |
| Montelukast | ◆ | ◆ |
| Omalizumab | ◆ | ◆ |
| Salbutamol | ◆ | ◆ |
| Salmeterol | ◆ | ◆ |
| Theophylline | ■ | ◆ |
| Tiotropium | ◆ | ◆ |
| **Calcium Channel Blockers** | | |
| Amlodipine | ◆ | △ |
| Diltiazem | ◆ | △ |
| Felodipine | △ | △ |
| Nicardipine | ■ | △ |
| Nifedipine | △ | △ |
| Nisoldipine | △ | △ |
| Nitrendipine | △ | ■ |
| Verapamil | ◆ | △ |



| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Cancer Therapies** | | |
| Abiraterone | ◆ | ◆ |
| Acalabrutinib | ◆ | △ |
| Anastrozole | ◆ | ◆ |
| Avelumab | ◆ | ◆ |
| Axitinib | ◆ | ◆ |
| Bevacizumab | ◆ | ◆ |
| Blinatumomab | ◆ | ◆ |
| Bortezomib | ◆ | ◆ |
| Bosutinib | ◆ | ◆ |
| Brentuximab vedotin | ◆ | ◆ |
| Capecitabine | ◆ | ◆ |
| Carboplatin | ◆ | ◆ |
| Cetuximab | ◆ | ◆ |
| Chlorambucil | ◆ | △ |
| Cisplatin | ◆ | ◆ |
| Daratumumab | ◆ | ◆ |
| Dasatinib | ■ | ◆ |
| Doxorubicin | ◆ | ◆ |
| Erlotinib | ◆ | △ |
| Estramustine | ◆ | △ |
| Etoposide | ◆ | ◆ |
| Everolimus | ■ | △ |
| Exemestane | △ | ◆ |
| Fludarabine | ◆ | ◆ |
| Gefitinib | ■ | ◆ |
| Gemcitabine | ◆ | ◆ |
| Idarubicin | ◆ | △ |
| Imatinib | △ | ◆ |
| Ipilimumab | ◆ | ◆ |
| Irinotecan | ◆ | ◆ |
| Ixazomib | ◆ | ◆ |
| Lapatinib | ■ | ◆ |
| Letrozole | ◆ | ◆ |
| Mercaptopurine | ◆ | ◆ |
| Methotrexate | ◆ | ◆ |
| Mitoxantrone | ◆ | ◆ |
| Nilotinib | ◆ | ◆ |
| Niraparib | ◆ | ◆ |
| Nivolumab | ◆ | ◆ |
| Obinutuzumab | ◆ | ◆ |
| Ofatumumab | ◆ | ◆ |
| Olaratumab | ◆ | ◆ |
| Oxaliplatin | ◆ | ◆ |
| Paclitaxel | △ | ◆ |
| Panitumumab | ◆ | ◆ |
| Pembrolizumab | ◆ | ◆ |
| Rituximab | ◆ | ◆ |
| Sorafenib | ◆ | ◆ |
| Sunitinib | △ | △ |
| Tamoxifen | ◆ | ◆ |
| Temsirolimus | ■ | ◆ |
| Vinblastine | ◆ | ◆ |
| Vincristine | ◆ | ◆ |
| Vinorelbine | ◆ | ◆ |
| **Contraceptives and Hormone Replacements** | | |
| Desogestrel | ◆ | ■ |
| Dienogest | ◆ | ■ |
| Drospirenone | ■ | ■ |
| Estradiol | ◆ | ■ |
| Ethinylestradiol | ■ | ■ |
| Etonogestrel (implant) | ◆ | ■ |
| Etonogestrel (vaginal ring) | ◆ | ■ |
| Levonorgestrel (COC) | ■ | ■ |
| Levonorgestrel (Emergency Contraception) | ◆ | ◆ |
| Levonorgestrel (HRT) | ◆ | ■ |
| Levonorgestrel (implant) | ◆ | ■ |
| Levonorgestrel (IUD) | ◆ | ◆ |
| Levonorgestrel (POP) | ◆ | ■ |
| Medroxyprogesterone (depot) | ■ | ■ |
| Medroxyprogesterone (oral) | ■ | ■ |
| Norethisterone (norethindrone) | △ | ■ |



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| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Erectile Dysfunction Agents** | | |
| Sildenafil | ◆ | ◆ |
| Tadalafil | ◆ | ◆ |
| Vardenafil | ◆ | ◆ |
| **Gastrointestinal Agents** | | |
| Aluminium hydroxide | ◆ | ■ |
| Alverine citrate | ◆ | ◆ |
| Antacids | ◆ | ■ |
| Aprepitant | ◆ | ◆ |
| Bisacodyl | ◆ | ◆ |
| Cimetidine | ◆ | ◆ |
| Cisapride | △ | △ |
| Cyclizine | ◆ | ◆ |
| Dantron | ◆ | ◆ |
| Domperidone | ◆ | ◆ |
| Droperidol | ◆ | ◆ |
| Esomeprazole | ◆ | ◆ |
| Famotidine | ◆ | ◆ |
| Granisetron | ◆ | ◆ |
| Hyoscine | ◆ | ◆ |
| Ispaghula husk | ◆ | ◆ |
| Lactulose | ◆ | ◆ |
| Lansoprazole | ◆ | ◆ |
| Linaclotide | ◆ | ◆ |
| Loperamide | ◆ | ◆ |
| Lubiprostone | ◆ | ◆ |
| Macrogol | ◆ | ◆ |
| Mebeverine | ◆ | ◆ |
| Mesalazine | ◆ | ◆ |
| Methylcellulose | ◆ | ◆ |
| Metoclopramide | ◆ | ◆ |
| Naloxegol | ◆ | ◆ |
| Omeprazole | ◆ | ◆ |
| Ondansetron | ◆ | ◆ |
| Pantoprazole | ◆ | ◆ |
| Prucalopride | ◆ | ◆ |
| Rabeprazole | △ | ◆ |
| Ranitidine | ◆ | ◆ |
| Senna | ◆ | ◆ |
| Simeticone | ◆ | ◆ |
| Sulfasalazine | ◆ | ◆ |
| Trimebutine | ◆ | ◆ |
| **Hepatitis Drugs** | | |
| Adefovir | △ | ◆ |
| Daclatasvir | ◆ | ◆ |
| Elbasvir/Grazoprevir | ◆ | ◆ |
| Glecaprevir/Pibrentasvir | ◆ | ◆ |
| Entecavir | ◆ | ◆ |
| Lamivudine | ◆ | ◆ |
| Ledipasvir/Sofosbuvir | ◆ | ◆ |
| OBV/PTV/r | ◆ | ◆ |
| OBV/PTV/r + Dasabuvir | ◆ | ◆ |
| Peginterferon alfa-2a | ◆ | ◆ |
| Peginterferon alfa-2b | ◆ | ◆ |
| Ribavirin | ◆ | ◆ |
| Simeprevir | ◆ | ◆ |
| Sofosbuvir (SOF) | ◆ | ◆ |
| SOF/Velpatasvir | ◆ | ◆ |
| SOF/Velpatasvir/Voxilaprevir | ◆ | ◆ |
| Telbivudine | ◆ | ◆ |
| Tenofovir alafenamide (TAF) | ◆ | ◆ |
| Tenofovir-DF | ◆ | ◆ |

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Herbals/Supplements/Vitamins** | | |
| Aloe vera | ◆ | ◆ |
| Ascorbic acid (Vitamin C) | ◆ | ◆ |
| Black cohosh (A. racemosa) | ◆ | ◆ |
| Cat's claw (U. tomentosa) | ◆ | ◆ |
| Colecalciferol (Vitamin D3) | ◆ | ◆ |
| Cyanocobalamin (B12) | ◆ | ◆ |
| Diosmin | ◆ | ◆ |
| Echinacea | ◆ | ◆ |
| Eucalyptus globulus | ◆ | ◆ |
| Folic acid | ◆ | ◆ |
| Garlic | ◆ | ◆ |
| Ginger (Z. officinale) | ◆ | ◆ |
| Ginkgo biloba | ◆ | ◆ |
| Ginseng | ◆ | ◆ |
| Goldenseal (H. canadensis) | ◆ | ◆ |
| Grape seed extract | ◆ | ◆ |
| Grapefruit juice | ◆ | ◆ |
| Green tea (C. sinensis) | ◆ | ◆ |
| Inula racemosa | ◆ | ◆ |
| Iodine | ◆ | ◆ |
| Iron supplements | ◆ | ◆ |
| Kava kava (P. methysticum) | ◆ | ◆ |
| Milk thistle | ■ | ◆ |
| Retinol (Vitamin A) | ◆ | ◆ |
| Riboflavin (Vitamin B2) | ◆ | ◆ |
| Serenoa repens | ◆ | ◆ |
| St John's wort | ◆ | ◆ |
| Thiamine (Vitamin B1) | ◆ | ◆ |
| Turmeric (curcumin) | ◆ | ◆ |
| Valerian | ◆ | ◆ |
| Vitamin E | ◆ | ◆ |
| **HIV Drugs** | | |
| ***Entry/Integrase Inhibitors*** | | |
| Bictegravir/FTC/TAF | ◆ | ◆ |
| Dolutegravir | ◆ | ◆ |
| Dolutegravir/rilpivirine | ◆ | ◆ |
| Elvitegravir/cobi /FTC/TAF | ◆ | ◆ |
| Elvitegravir/cobi/FTC/TDF | ◆ | ◆ |
| Ibalizumab-uiyk | ◆ | ◆ |
| Maraviroc | ◆ | ◆ |
| Raltegravir | ◆ | ◆ |
| ***NNRTIs*** | | |
| Doravirine | ◆ | ◆ |
| Doravirine/3TC/TDF | ◆ | ◆ |
| Efavirenz | ◆ | △ |
| Etravirine | ◆ | ◆ |
| Nevirapine | ◆ | △ |
| Rilpivirine | ◆ | ◆ |
| Rilpivirine/dolutegravir | ◆ | ◆ |
| Rilpivirine/FTC/TAF | ◆ | ◆ |
| ***NRTIs*** | | |
| Abacavir | ◆ | ◆ |
| Didanosine | ◆ | ◆ |
| Emtricitabine (FTC) | ◆ | ◆ |
| Emtricitabine + TAF | ◆ | ◆ |
| Emtricitabine + TDF | ◆ | ◆ |
| Lamivudine | ◆ | ◆ |
| Stavudine | ◆ | ◆ |
| Tenofovir-DF | ◆ | ◆ |
| Zidovudine | ◆ | ◆ |
| ***Protease Inhibitors*** | | |
| Atazanavir alone | ■ | ◆ |
| Atazanavir/cobicistat | ■ | ◆ |
| Atazanavir + ritonavir | ■ | ◆ |
| Darunavir/cobicistat | ◆ | ◆ |
| Darunavir/cobi/FTC/TAF | ◆ | ◆ |
| Darunavir + ritonavir | ■ | ◆ |
| Fosamprenavir | ■ | ◆ |
| Indinavir | ■ | △ |
| Lopinavir | ■ | △ |
| Ritonavir | ■ | ◆ |
| Saquinavir | ■ | △ |
| Tipranavir | ■ | △ |

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Hypertension/Heart Failure Agents** | | |
| Acebutolol | ◆ | ◆ |
| Aliskiren | ◆ | ◆ |
| Ambrisentan | ◆ | ◆ |
| Amiloride | ◆ | ◆ |
| Azilsartan | ◆ | ◆ |
| Benazepril | ◆ | ◆ |
| Bendroflumethiazide | ◆ | ◆ |
| Bosentan | ■ | △ |
| Bumetanide | ◆ | ◆ |
| Candesartan | ■ | ◆ |
| Captopril | ◆ | ◆ |
| Chlorothiazide | ◆ | ◆ |
| Chlortalidone | ◆ | ◆ |
| Cilazapril | ◆ | ◆ |
| Clevidipine | ◆ | ◆ |
| Clonidine | ◆ | ◆ |
| Doxazosin | △ | ◆ |
| Enalapril | ◆ | ◆ |
| Eplerenone | ◆ | ◆ |
| Epoprostenol | ◆ | ◆ |
| Eprosartan | ◆ | ◆ |
| Fosinopril | ◆ | ◆ |
| Furosemide | ◆ | ◆ |
| Hydralazine | ◆ | ◆ |
| Hydrochlorothiazide | ◆ | ◆ |
| Iloprost | ◆ | ◆ |
| Indapamide | ◆ | ◆ |
| Irbesartan | ■ | ◆ |
| Isradipine | △ | △ |
| Ivabradine | ◆ | ◆ |
| Lacidipine | ◆ | △ |
| Lercanidipine | ◆ | △ |
| Lisinopril | ◆ | ◆ |
| Losartan | ■ | ◆ |
| Macitentan | ◆ | ◆ |
| Methyldopa | ◆ | ◆ |
| Metolazone | ◆ | ◆ |
| Moxonidine | ◆ | ◆ |
| Olmesartan | ■ | ◆ |
| Perindopril | ◆ | ◆ |
| Prazosin | ◆ | ◆ |
| Quinapril | △ | ◆ |
| Ramipril | ◆ | ◆ |
| Ranolazine | △ | △ |
| Rilmenidine | ◆ | ◆ |
| Riociguat | ◆ | ◆ |
| Selexipag | ◆ | △ |
| Sildenafil | ◆ | ◆ |
| Spironolactone | ■ | ◆ |
| Tadalafil | ◆ | ◆ |
| Telmisartan | ■ | ◆ |
| Torasemide | ◆ | ◆ |
| Trandolapril | ◆ | ◆ |
| Treprostinil | ◆ | △ |
| Valsartan | ◆ | ◆ |
| Xipamide | ◆ | ◆ |
| Zofenopril | ◆ | ◆ |



***Key to symbols***

| | |
|---|---|
| ● | These drugs should not be coadministered |
| ■ | Potential clinically significant interaction that is likely to require additional monitoring, alteration of drug dosage or timing of administration |
| △ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required |
| ◆ | No clinically significant interaction expected |

***Notes***

- Further information is available at www.hep-druginteractions.org
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- Caution is required in patients with hepatic impairment as this may also increase drug levels and require dose modification.
- Where advice differs between countries, the charts reflect the more cautious option.

# Interactions with PBC Agents



**Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.**

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Illicit/Recreational** | | |
| Amphetamine | ◆ | △ |
| Cannabis | ◆ | ◆ |
| Cocaine | ◆ | ◆ |
| Ecstasy (MDMA) | ◆ | △ |
| GHB (Gamma-hydroxybutyrate) | ◆ | ◆ |
| LSD (Lysergic acid diethylamide) | ◆ | △ |
| Mephedrone | ◆ | △ |
| Methamphetamine | ◆ | △ |
| Phencyclidine (PCP) | ◆ | △ |
| **Immunosuppressants** | | |
| Alemtuzumab | ◆ | ◆ |
| Azathioprine | ◆ | ◆ |
| Basiliximab | ◆ | ◆ |
| Brodalumab | ◆ | ◆ |
| Ciclosporin | ■ | ■ |
| Eculizumab | ◆ | ◆ |
| Etanercept | ◆ | ◆ |
| Fingolimod | ◆ | ◆ |
| Lenalidomide | ◆ | ◆ |
| Mycophenolate | △ | ◆ |
| Pirfenidone | ◆ | ◆ |
| Sirolimus | ◆ | △ |
| Tacrolimus | ■ | △ |
| **Lipid Lowering Agents** | | |
| Atorvastatin | ■ | ◆ |
| Bezafibrate | ◆ | ◆ |
| Ezetimibe | △ | ◆ |
| Fenofibrate | ■ | ◆ |
| Fish oils | ◆ | ◆ |
| Fluvastatin | △ | ◆ |
| Gemfibrozil | ◆ | ◆ |
| Lovastatin | ■ | ◆ |
| Pitavastatin | ■ | ◆ |
| Pravastatin | ◆ | ◆ |
| Rosuvastatin | ◆ | ◆ |
| Simvastatin | ■ | ◆ |
| **Oxytocics** | | |
| Ergometrine (ergonovine) | ◆ | ◆ |
| Mifepristone | ■ | ◆ |
| Misoprostol | △ | ◆ |
| **Parkinsonism Agents** | | |
| Benztropine | ◆ | ◆ |
| Carbidopa | ◆ | ◆ |
| Orphenadrine | ◆ | △ |
| Pramipexole | ◆ | △ |
| Rasagiline | ◆ | △ |
| Ropinirole | ◆ | △ |
| **PBC Agents** | | |
| Obeticholic acid | | ◆ |
| Ursodeoxycholic acid | ◆ | |
| **Steroids** | | |
| Beclometasone | ◆ | ◆ |
| Betamethasone | ◆ | ◆ |
| Budesonide | △ | ◆ |
| Ciclesonide | ◆ | ◆ |
| Clobetasol (topical) | ◆ | ◆ |
| Clobetasone (topical) | ◆ | ◆ |
| Dexamethasone | ◆ | ◆ |
| Fludrocortisone | ◆ | ◆ |
| Flunisolide | ◆ | ◆ |
| Fluticasone | ◆ | ◆ |
| Hydrocortisone (topical) | ◆ | ◆ |
| Methylprednisolone | ◆ | ◆ |
| Mometasone | ◆ | ◆ |
| Prednicarbate | ◆ | ◆ |
| Prednisone | ◆ | ◆ |
| Triamcinolone | ◆ | ◆ |
| **Urological Agents** | | |
| Alfuzosin | ◆ | ◆ |
| Desmopressin | ◆ | ◆ |
| Dutasteride | △ | ◆ |
| Finasteride | △ | ◆ |
| Mirabegron | ◆ | ◆ |
| Silodosin | ◆ | ◆ |
| Solifenacin | ◆ | ◆ |
| Tamsulosin | ◆ | ◆ |
| Tolterodine | ◆ | ◆ |

| | Obeticholic Acid | Ursodeoxycholic Acid |
|---|---|---|
| **Other Drugs** | | |
| Acamprosate | ◆ | ◆ |
| Acetazolamide | ◆ | ◆ |
| Acitretin | △ | ◆ |
| Activated charcoal | ◆ | ◆ |
| Allopurinol | ◆ | ◆ |
| Atomoxetine | ◆ | ◆ |
| Atropine | ◆ | ◆ |
| Baclofen | ◆ | ◆ |
| Benralizumab | ◆ | ◆ |
| Betahistine | ◆ | ◆ |
| Bimatoprost | ◆ | ◆ |
| Biperiden | ◆ | △ |
| Brinzolamide | ◆ | ◆ |
| Bromocriptine | ◆ | ◆ |
| Calcitonin | ◆ | ◆ |
| Calcium carbimide | ◆ | ◆ |
| Calcium resonium | ◆ | ◆ |
| Carbimazole | ◆ | ◆ |
| Carisoprodol | ◆ | △ |
| Cilostazol | ◆ | ◆ |
| Clomifene | ◆ | ◆ |
| Colchicine | ◆ | ◆ |
| Colestyramine | △ | ■ |
| Conivaptan | ◆ | ◆ |
| Cyclobenzaprine | ◆ | △ |
| Cytisine | ◆ | ◆ |
| Darbepoetin | ◆ | ◆ |
| Deferiprone | ◆ | ◆ |
| Denosumab | ◆ | ◆ |
| Dexamfetamine | ◆ | △ |
| Dextromethorphan | ◆ | ◆ |
| Disulfiram | ■ | △ |
| Donepezil | △ | ◆ |
| Dorzolamide | ◆ | ◆ |
| Dupilumab | ◆ | ◆ |
| Eliglustat | ◆ | ◆ |
| Epoetin alfa | ◆ | ◆ |
| Etelcalcetide | ◆ | ◆ |
| Febuxostat | △ | ◆ |
| Filgrastim | ◆ | ◆ |
| Flibanserin | ◆ | △ |
| Gadopentetate (gadolinium) | ◆ | ◆ |
| Glycerol phenylbutyrate | ◆ | ◆ |
| Goserelin | ◆ | ◆ |
| Isosorbide mononitrate | ◆ | ◆ |
| Isotretinoin | △ | △ |
| Lanreotide | ◆ | ◆ |
| Levothyroxine | ◆ | ◆ |
| Lofexidine | ◆ | ◆ |
| Lumacaftor/Ivacaftor | ◆ | ◆ |
| Magnesium | ◆ | ◆ |
| Melatonin | ◆ | ◆ |
| Memantine | ◆ | △ |
| Methylphenidate | ◆ | ◆ |
| Minoxidil | ◆ | ◆ |
| Modafinil | ◆ | ◆ |
| Naftidrofuryl | ◆ | ◆ |
| Nalmefene | ◆ | ◆ |
| Naloxone | ◆ | ◆ |
| Naltrexone | ◆ | ◆ |
| Neostigmine | ◆ | ◆ |
| Nicorandil | ◆ | ◆ |
| Nusinersan | ◆ | ◆ |
| Ocrelizumab | ◆ | ◆ |
| Orlistat | △ | △ |
| Penicillamine | ◆ | ◆ |
| Pentoxifylline | ◆ | ◆ |
| Phenylephrine | ◆ | ◆ |
| Pilocarpine | ◆ | ◆ |
| Piracetam | ◆ | ◆ |
| Potassium | ◆ | ◆ |
| Protamine sulphate | ◆ | ◆ |
| Pseudoephedrine | ◆ | ◆ |
| Pyridostigmine | ◆ | ◆ |
| Raloxifene | ◆ | ◆ |
| Sevelamer | ◆ | ◆ |
| Strontium ranelate | ◆ | ◆ |
| Thalidomide | ◆ | ◆ |
| Tranexamic acid | ◆ | ◆ |
| Varenicline | ◆ | ◆ |



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