

Appendix 2: Selected potential hepatotoxins*^{1,2}

Medications

- NSAIDs, including aspirin and Cox-2 inhibitors
- High-dose acetaminophen (safe to use < 2 g/d in the presence of hepatitis C or other hepatotoxins)
- Arthritic therapy: methotrexate
- Cardiovascular therapy: methyl dopa, amiodarone
- Hyperlipidemia therapy: statins, nicotinic acid, fibrates
- Diabetes therapy: acarbose, thiazolidinedione, sulfonylureas, metformin
- Anesthetics: halothane
- Antimicrobials: isoniazid, pyrazinamide, azole antifungals, sulfonamides, nitrofurantoin, erythromycin, tetracycline, amoxicillin-clavulanate, HIV antiretrovirals (protease inhibitors, nucleotide analogues, nucleoside analogues, nevirapine)
- Retinoids: tretinoin, isotretinoin
- Neuromuscular therapy: tacrine, dantrolene
- Anticonvulsants: phenytoin, valproic acid
- Psychotropics: bupropion, chlorpromazine, tricyclic antidepressants, selective serotonin reuptake inhibitors
- Hormones: tamoxifen, testosterone, oral contraceptives, anabolic steroids

Supplements

- Chaparral
- Comfrey
- Echinacea
- Germander
- Iron
- Jin bu huan
- Kalms tablets
- Kava (Health Canada issued a stop-sale order in 2002 because of its hepatotoxicity)
- Ephedra or ephedrine products (e.g., Ma huang)
- Mistletoe
- Pennyroyal oil
- Semina fruit extract
- Chronic vitamin A use (> 25 000 IU/d)

Other substances

- Alcohol
- Cocaine
- Phencyclidine (PCP)
- Ecstasy
- *Amanita phalloides* and other toxic mushrooms
- Aflatoxin
- Arsenic
- Carbon tetrachloride
- Kombucha mushroom

*Physicians should bear in mind that this is only an incomplete list of *potential* hepatotoxins, but that drugs on this list can be taken occasionally by patients with hepatitis C. In general, a pre-existing liver disease such as hepatitis C or B or autoimmune hepatitis does *not* increase the risk of an idiosyncratic drug hepatotoxic reaction. Most of the drugs on this list rarely or occasionally induce an idiosyncratic drug hepatotoxicity. Please consult ref. 1 for a comprehensive hepatotoxin list.

1. Farrell GC. Liver disease caused by drugs and toxins. In: *Sleisenger & Fordtran's Gastrointestinal and Liver Disease*. 7th ed. Amsterdam: Elsevier; 2002.
2. Riley TR III, Bhatti AM. Preventive strategies in chronic liver disease: part II. Cirrhosis. *Am Fam Physician* 2001;64:1735-40.