

On-line Table: Summary recent multiple sclerosis medications

Drug	Mechanism of Action	Route of Administration	Adverse Effects
Interferon β	Inhibition of T-lymphocyte proliferation	IM/SC	Injection-site reactions, flu-like symptoms, LFT elevation, leukopenia, depression
Glatiramer acetate	Anti-inflammatory agent; exact MOA unclear	SC	Injection-site reactions, benign systemic reactions (dyspnea, palpitations)
Teriflunomide (Aubagio)	Dihydro-orotate dehydrogenase inhibitor	Oral	Teratogenic risk, hepatotoxicity, headache, diarrhea, fatigue, hair thinning, influenza, and UTIs
Dimethyl fumarate (Tecfidera)	Immunomodulatory agent; poorly understood MOA	Oral	Flushing (dose-related), gastrointestinal adverse events, rarely PML
Natalizumab (Tysabri)	Monoclonal antibody against the cell adhesion molecule $\alpha 4$ -integrin	IV infusion	Infusion reactions, PML
Fingolimod (Gilenya)	Sphingosine 1-phosphate receptor modulator	Oral	Bradycardia, macular edema, VZV infections, including encephalitis
Alemtuzumab (Lemtrada)	Anti-CD52 monoclonal antibody	IV infusion	Autoimmune thyroid disorders, ITP, neuropathies
Mitoxantrone (Novantrone)	Reduces proliferation of B- and T-cells	IV	Cardiotoxicity, leukemia

Note:—IM indicates intramuscular; SC, subcutaneous; MOA, mechanism of action; LFT, liver function tests; VZV, varicella zoster virus; ITP, immune thrombocytopenic purpura; UTIs, urinary tract infections.