Requirement for safety monitoring for approved multiple sclerosis therapies: an overview.

During the last two decades, treatment options for patients with multiple sclerosis (MS) have broadened tremendously. All agents that are currently approved for clinical use have potential side effects, and a careful risk-benefit evaluation is part of a decision algorithm to identify the optimal treatment choice for an individual patient. Whereas glatiramer acetate and interferon beta preparations have been used in MS for decades and have a proven safety record, more recently approved drugs appear to be more effective, but potential risks might be more severe. The potential complications of some novel therapies might not even have been identified to their full extent. This review is aimed at the clinical neurologist in that it offers insights into potential adverse events of each of the approved MS therapeutics: interferon beta, glatiramer acetate, mitoxantrone, natalizumab, fingolimod and teriflunomide, as well as recently approved therapeutics such as dimethyl fumarate and alemtuzumab. It also provides recommendations for monitoring the different drugs during therapy in order to avoid common side effects.