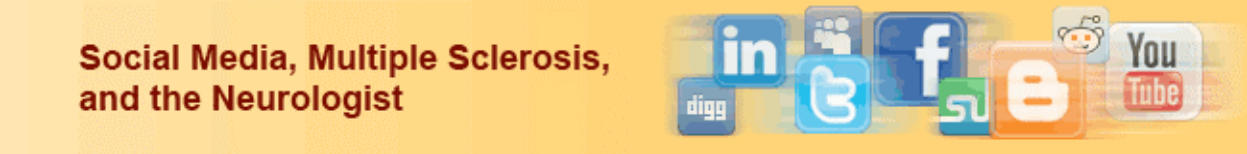
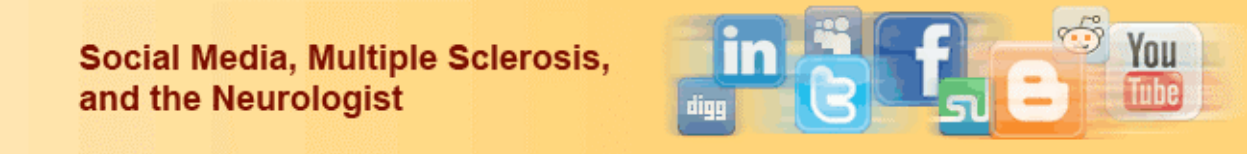


Social Media, Physicians, and Patients with Multiple Sclerosis: A Guide for the Perplexed
Andrew N. Wilner, MD, FACP, FAAN

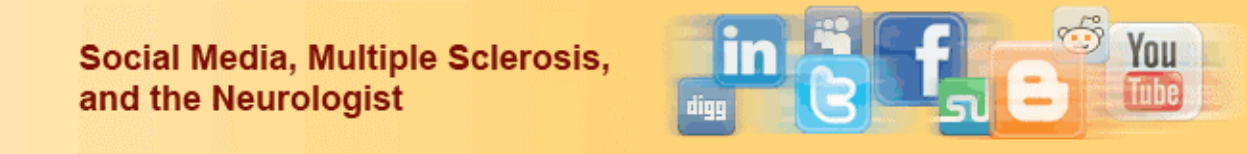
The use of social media, Internet technology to facilitate interaction with others, has been growing in recent years. As a result, patients with multiple sclerosis and their physicians are increasingly using social media to educate themselves and to share information. Social media platforms include Facebook, Twitter, LinkedIn, and Sermo, as well as blogs and websites from individual patients and physicians. In contrast to the previous model of one-way, physician-controlled health information sharing, social media allows an interactive exchange of information between patients and physicians and also between patients. Physicians, in general, have been slow to adopt social media due to the amount of time involved as well as issues such as privacy, liability, and image. Nevertheless, it was reported in 2009 that the use of social media by physicians had grown by 50% in the previous year. In this changing landscape, guidance is needed for how to apply these new technologies to multiple sclerosis and other areas of medicine. Although social media has advantages, such as reaching a wider audience, low cost, instantaneous communication, and easy updating, there are also risks involved in terms of misinformation and maintaining patient privacy. According to guidelines set forth by the American Medical Association, new technologies should not be used to replace interpersonal contact between patients and physicians. Physicians should not use social media to practice medicine and should maintain proper physician/patient boundaries in social media-based interactions. An overview of social media, with examples focusing on multiple sclerosis, is presented. In addition, the benefits and risks of social media for physicians and their patients are discussed.



Using Current Treatments to Optimize Patient Outcomes

Jack N. Ratchford, MD

Clinicians currently have a number of options for the treatment of patients with multiple sclerosis. FDA-approved disease-modifying treatments include interferon beta-1a and -1b, glatiramer acetate, natalizumab, mitoxantrone, and fingolimod. Clinical trials have been helpful in comparing treatment options and also in investigating the use of existing treatments in different settings or in novel treatment strategies. Recent head-to-head clinical trials have shown similar efficacy between glatiramer acetate and different forms of interferon beta. Fingolimod, the first oral disease-modifying treatment for multiple sclerosis, was found to be superior to intramuscular interferon beta-1a in terms of relapse rate and MRI results in a trial that included both treatment-naive and treatment-experienced patients with relapsing-remitting multiple sclerosis. However, fingolimod was associated with two deaths related to disseminated varicella zoster and herpes simplex virus encephalitis, and was also associated with bradycardia following administration of the first dose. These adverse events should be taken into account when deciding whether to use fingolimod as first-line treatment. The use of disease-modifying therapies in patients with clinically isolated syndrome resulted in lower rates of multiple sclerosis diagnoses in several clinical trials. For patients who experience breakthrough disease on first-line drugs, options include switching to a different injectable medication, switching to natalizumab or fingolimod, adding or substituting an off-label treatment, or having the patient enter a clinical trial. Recognizing patient demographic and clinical factors associated with bad prognoses may help clinicians individualize care and take a more aggressive approach when needed. One new treatment strategy being investigated for multiple sclerosis is the use of induction therapy with mitoxantrone or cytotoxic drugs followed by maintenance therapy with an immunomodulatory treatment. As multiple sclerosis patients are increasingly using social media to share information, clinicians need to be aware of the various resources available for both patients and clinicians.



Future Directions in MS Therapy: Are Neurologists Becoming Immunologists Online?

Augusto A. Miravalle, MD

Current and experimental treatments for multiple sclerosis encompass several different types of therapies: immunosuppressive therapies, which cause generalized immune suppression; immunomodulatory therapies, which do not cause generalized immune suppression but instead shift the immune response from a proinflammatory (Th1) response to a more beneficial anti-inflammatory (Th2) response; and protective/repair therapies, which support neural regeneration and inhibit neural degeneration. First-line treatments for multiple sclerosis are generally monotherapies. Combination therapy with existing drugs may allow greater benefit while minimizing adverse effects. Although second-line options for multiple sclerosis are limited, a number of new drugs are in clinical development. It will be necessary to determine the appropriate candidates for emerging therapies and whether emerging therapies will be used as part of combination therapy. The immune system is the site of action for the approved treatments natalizumab and fingolimod and for a number of therapies being investigated as multiple sclerosis treatments. Therapies currently in phase III trials include cladribine, teriflunomide, daclizumab, rituximab, alemtuzumab, laquinimod, and dimethyl fumarate (BG00012). In most of the trials currently under way, these therapies are being investigated in patients with relapsing-remitting multiple sclerosis. In addition, cladribine and teriflunomide are being investigated in patients with clinically isolated syndrome, while rituximab is being investigated in patients with primary-progressive multiple sclerosis and in patients with secondary-progressive multiple sclerosis. The mechanism of action, clinical efficacy, safety, and pharmacokinetics of each of these therapeutic agents will be discussed. In addition, the growing role of social media in the interactions among patients and between patients and physicians will be addressed.