

COVID-19 in patients taking disease-modifying therapy for the management of multiple sclerosis

To date (July 20, 2020), limited information regarding COVID-19 in patients with multiple sclerosis (MS) taking disease modifying therapy (DMT) has been published. The results of the Covisep registry of France (n=347) suggest that use of DMT was not associated with increased severity of COVID-19.¹ Smaller and less formal studies from the United States² (n=76) and Italy³ (n=222) reported similar findings. Although this data is reassuring, it is preliminary and requires confirmatory studies.

In the meantime, patients should **not** stop taking DMT without the consultation of their MS health-care provider.^{4,5,6,7} Abrupt discontinuation of some DMTs (natalizumab and fingolimod) may result in potentially severe rebound disease activity. While it is generally recommended to continue DMT when patients develop a mild viral infection, MS health-care providers may consider **temporarily** stopping or delaying DMT in patients with worsening symptoms of viral infection, other risk factors (e.g., older age, comorbidities) and/or those taking more immunosuppressive DMT.⁵

Initiating treatment during the COVID-19 pandemic with DMT may be reconsidered or delayed, depending on patient risk factors, MS disease activity and the immunosuppressive risk of the drug.^{5,6,7} DMTs with a higher risk of immunosuppression include immune cell-depleting therapy (alemtuzumab, cladribine, ocrelizumab, mitoxantrone, rituximab) and, to a lesser extent, immunomodulators (dimethyl fumarate, fingolimod, teriflunomide). DMTs with a lower risk of immunosuppression include interferon-beta, glatiramer and natalizumab.

The COVID-19 situation is evolving, and global data collection is ongoing. The evidence regarding the impact of COVID-19 on MS patients taking DMT will be reviewed as it becomes available and this statement will be updated accordingly.

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Updated to reflect evolving evidence:

11 June 2020 to include reference 4

20 July 2020 to include reference 1, 2, 3

References

1. Louapre C, Collongues N, Stankoff B et al. Clinical characteristics and outcomes in patients with coronavirus disease 2019 and multiple sclerosis. *JAMA Neurol* 2020 Jun 26. [Epub ahead of print].
2. Parrotta E, Kister I, Charvet L et al. COVID-19 outcomes in MS: observational study of early experience from NYU Multiple Sclerosis Comprehensive Care Center. *Neurol Neuroimmunol Neuroinflamm* 2020;7(5):e835.
3. Sormani MP, Italian Study Group on COVID-10 Infection in Multiple Sclerosis. An Italian programme for COVID-19 infection in multiple sclerosis. *Lancet Neurol* 2020;19(6):481-2.
4. Berger JR, Brandstadter R, Bar-Or A. COVID-19 and MS disease-modifying therapies. *Neurol Neuroimmunol Neuroinflamm* 2020;7(4):e761.
5. Brownlee W, Bourdette D, Broadley S et al. Treating multiple sclerosis and neuromyelitis optica spectrum disorder during the COVID-19 pandemic. *Neurology* 2020;94(22):949-52.
6. MS Society of Canada. Disease-modifying treatment (DMT) guidelines for coronavirus (COVID-19) [Internet]. Available from: <https://mssociety.ca/resources/what-you-need-to-know-about-coronavirus/disease-modifying-treatment-guidelines-for-coronavirus-covid-19>. Accessed July 15, 2020.
7. MS International Federation. The coronavirus and MS - global advice [Internet]. Available from: www.msif.org/news/2020/02/10/the-coronavirus-and-ms-what-you-need-to-know. Accessed July 15, 2020.

