# Evidence Search Service Results of your search request

## Is there a link between Covid-19 causing Miller Fisher Syndrome?

**ID of request:** 22733  
**Date of request:** 16th April, 2020  
**Date of completion:** 16th April, 2020

If you would like to request any articles or any further help, please contact:  Barbara Peirce at [Barbara.peirce@poole.nhs.uk](mailto:Barbara.peirce@poole.nhs.uk)

Please acknowledge this work in any resulting paper or presentation as: Evidence search: Is there a link between Covid-19 causing Miller Fisher Syndrome?. Barbara Peirce. (16th April, 2020). POOLE, UK: East Dorset Library and Knowledge Service.

**Sources searched**  
Google Scholar (6)  
MEDLINE (0)

**Date range used** (5 years, 10 years): 2020   
**Limits used** (gender, article/study type, etc.): None   
**Search terms and notes** (full search strategy for database searches below):

A search was carried out on the healthcare databases and Google Scholar. No cases of Covid 19 and Miller Fisher Syndrome could be found. The search was broadend to incorporate Guillain-Barré syndrome and neuromuscular diseases. The results of this are attached.

For more information about the resources please go to: <https://dorsetnhs.libguides.com>.

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### [B. Search History](#SearchHistory)

## A. Original Research

1. **Are we facing a crashing wave of neuropsychiatric sequelae of COVID-19? Neuropsychiatric symptoms and potential immunologic mechanisms**  
   Author links open overlay panelEmily A.TroyeraJordan N.KohnaSuziHong Brain, Behavior, and Immunity 2020;13 April:1.

The coronavirus disease 19 (COVID-19) pandemic is a significant psychological stressor in addition to its tremendous impact on every facet of individuals’ lives and organizations in virtually all social and economic sectors worldwide. Fear of illness and uncertainty about the future precipitate anxiety- and stress-related disorders, and several groups have rightfully called for the creation and dissemination of robust mental health screening and treatment programs for the general public and front-line healthcare workers. However, in addition to pandemic-associated psychological distress, the direct effects of the virus itself (several acute respiratory syndrome coronavirus; SARS-CoV-2), and the subsequent host immunologic response, on the human central nervous system (CNS) and related outcomes are unknown. We discuss currently available evidence of COVID-19 related neuropsychiatric sequelae while drawing parallels to past viral pandemic-related outcomes. Past pandemics have demonstrated that diverse types of neuropsychiatric symptoms, such as encephalopathy, mood changes, psychosis, neuromuscular dysfunction, or demyelinating processes, may accompany acute viral infection, or may follow infection by weeks, months, or longer in recovered patients. The potential mechanisms are also discussed, including viral and immunological underpinnings. Therefore, prospective neuropsychiatric monitoring of individuals exposed to SARS-CoV-2 at various points in the life course, as well as their neuroimmune status, are needed to fully understand the long-term impact of COVID-19, and to establish a framework for integrating psychoneuroimmunology into epidemiologic studies of pandemics.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=25b6a533ed3d2f7d36a5dcde6642c927)

1. **COVID-19 and neuromuscular disorders**  
   Amanda C. Guidon Neurology 2020;13 April:1.

The coronavirus-19 (COVID-19) pandemic has potential to disproportionately and severely affect patients with neuromuscular (NM) disorders. In a short period of time, it has already caused reorganization of neuromuscular clinical care delivery and education, which will likely have lasting impact on the field. This paper reviews 1) potential NM complications of COVID-19, 2) assessment and mitigation of COVID-19-related risk for patients with pre-existing NM disease, 3) guidance for management of immunosuppressive and immunomodulatory therapies, 4) practical guidance regarding NM care delivery, telemedicine and education, and 5) impact on neuromuscular research. We outline key unanswered clinical questions and highlight the need for team-based and inter-specialty collaboration. Primary goals of clinical research during this time are to develop evidence-based best practices and to minimize morbi

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=2e664ea2b62fd11e5cf07870c6a8cde7)

1. **Guillain-Barré syndrome associated with SARS-CoV-2 infection: causality or coincidence?**  
   Hua Zhao et al The Lancet Neurology 2020;1 Apr:1.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), originating from Wuhan, is spreading around the world and the outbreak continues to escalate. Patients with coronavirus disease 2019 (COVID-19) typically present with fever and respiratory illness.1 However, little information is available on the neurological manifestations of COVID-19. Here, we report the first case of COVID-19 initially presenting with acute Guillain-Barré syndrome.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=140aa8dde08220aaa93610d8d78ac542)

1. **Looking ahead: The risk of neurologic complications due to COVID-19**  
   Carlos A. Pérez Neurology 2020;9 April:1.

The rapid spread of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has become a public health emergency of international concern. The outbreak was characterized as a pandemic by the World Health Organization (WHO) in March 2020.1 The most characteristic symptom of patients with COVID-19 is respiratory distress. Some patients may also show neurologic signs and symptoms ranging from headache, nausea, vomiting, and confusion to anosmia, ageusia, encephalitis, and stroke. Coronaviruses are known pathogens with neuroinvasive potential. There is increasing evidence that coronavirus infections are not always confined to the respiratory tract. Central nervous system involvement can occur in susceptible individuals and may contribute overall morbidity and mortality in the acute setting. Additionally, post-infectious, immune-mediated complications in the convalescent period are possible. Awareness and recognition of neurologic manifestations is essential to guide therapeutic decision-making as the current outbreak continues to unfold. Received April 7, 2020.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=338e7754b526ef8c9c2170b47ba737e4)

1. **Nervous system involvement after infection with COVID-19 and other coronaviruses**  
   Yeshun Wu et al Brain, Behavior, and Immunity 2020;30 March:1.

Viral infections have detrimental impacts on neurological functions, and even to cause severe neurological damage. Very recently, coronaviruses (CoV), especially severe acute respiratory syndrome CoV 2 (SARS-CoV-2), exhibit neurotropic properties and may also cause neurological diseases. It is reported that CoV can be found in the brain or cerebrospinal fluid. The pathobiology of these neuroinvasive viruses is still incompletely known, and it is therefore important to explore the impact of CoV infections on the nervous system. Here, we review the research into neurological complications in CoV infections and the possible mechanisms of damage to the nervous system.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=6d9c5df9f546be410e41469763beb3f3)

1. **NEUROLOGICAL COMPONENT IN CORONAVIRUSES INDUCED DISEASE: SYSTEMATIC REVIEW OF SARS‐CoV, MERS‐CoV, AND SARS‐CoV‐ 2**  
   Jonathan Zegarra-Valdivia et al OSF Preprints 2020;:13 April.

BACKGROUND: The COVID-19 was declared like the pandemic of the 21st century and has caused more than 45 thousand deaths worldwide. The abrupt onset of SARS-CoV-2 demonstrated the potential infection, morbidity, and lethality of zoonotic viruses and the human-to-human transmission. The fever, cough, and fatigue are the most common symptoms of the disease and include too, acute respiratory distress syndrome, shock, acute cardiac injury, and acute renal injury between others signs in severe illness. Considered the previous work with human coronavirus and other zoonotic infections, the neuroinvasive propensity has been demonstrated as a common feature of coronaviruses, especially between SARS-CoV and MERS-CoV

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=1773f67f6b243a1e70b07cf1b7f58082)

### Opening Internet Links

The links to internet sites in this document are 'live' and can be opened by holding down the CTRL key on your keyboard while clicking on the web address with your mouse

### Full text papers

Links are given to full text resources where available. For some of the papers, you will need an **NHS OpenAthens Account**. If you do not have an account you can [register online](https://openathens.nice.org.uk/).

You can then access the papers by simply entering your username and password. If you do not have easy access to the internet to gain access, please let us know and we can download the papers for you.

### Guidance on searching within online documents

Links are provided to the full text of each document. Relevant extracts have been copied and pasted into these results. Rather than browse through lengthy documents, you can search for specific words as follows:

**Portable Document Format / pdf / Adobe**  
Click on the Search button (illustrated with binoculars). This will open up a search window. Type in the term you need to find and links to all of the references to that term within the document will be displayed in the window. You can jump to each reference by clicking it.

**Word documents**  
Select Edit from the menu, the Find and type in your term in the search box which is presented. The search function will locate the first use of the term in the document. By pressing 'next' you will jump to further references.

## B. Search History

|  | **Source** | **Criteria** | **Results** |
| --- | --- | --- | --- |
| 1. | Medline | "CORONAVIRUS INFECTIONS"/ | 5102 |
| 2. | Medline | "MILLER FISHER SYNDROME"/ | 603 |
| 3. | Medline | (1 AND 2) | 0 |
| 4. | Medline | "GUILLAIN-BARRE SYNDROME"/ | 4504 |
| 5. | Medline | (1 AND 4) | 0 |
| 6. | Medline | DIPLOPIA/ | 5206 |
| 7. | Medline | (1 AND 6) | 0 |
| 8. | Medline | STRABISMUS/ | 13100 |
| 9. | Medline | (1 AND 8) | 0 |
| 10. | Medline | (tingl\*).ti,ab | 2419 |
| 11. | Medline | (1 AND 10) | 0 |
| 12. | EMBASE | CORONAVIRINAE/ | 1631 |
| 13. | EMBASE | ("miller fisher").ti,ab | 1170 |
| 14. | EMBASE | (12 AND 13) | 0 |
| 15. | EMBASE | "GUILLAIN BARRE SYNDROME"/ | 14375 |
| 16. | EMBASE | (12 AND 15) | 1 |
| 17. | EMBASE | DIPLOPIA/ | 22387 |
| 18. | EMBASE | (12 AND 17) | 1 |
| 19. | EMBASE | STRABISMUS/ | 15154 |
| 20. | EMBASE | (12 AND 19) | 0 |
| 21. | EMBASE | (tingl\*).ti,ab | 4695 |
| 22. | EMBASE | (12 AND 21) | 0 |
| 23. | EMBASE | "NEUROMUSCULAR DISEASE"/ | 16014 |
| 24. | EMBASE | (12 AND 23) | 0 |
| 25. | Medline | "NEUROMUSCULAR DISEASES"/ | 10112 |

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