

COVID-19 COMMUNITIES OF PRACTICE IN REHABILITATION: 2ND EDITION

Jewish Rehabilitation Hospital-Feil-Oberfeld Research Centre



Clinical support: Best practice guidelines, sharing of scholarly articles and resources

As an extension to our Talking Research/Parlons recherche lunchtime seminars, the JRH Feil-Oberfeld Research Centre of the CISSS Laval is proud to offer this bulletin which includes:

- Practical guidelines adapted to COVID-19
- COVID-19 scholarly articles
- Resources to support all during these challenging times

*Look for our periodic bulletin for updates,
Feil-Oberfeld JRH Research Centre*

**YOU ARE THE
CHAMPIONS IN OUR
RALLY TOGETHER,
JRH FAMILY DURING
THESE
CHALLENGING
TIMES**

“YOU ARE THE CHAMPIONS
(NEW LOCKDOWN VERSION)”
BY QUEEN & ADAM LAMBERT.
<https://youtu.be/7LcLqIHZNkY?t=1>



Scholarly articles, Best Practice & Resources

Scholarly Article Review of “Neuropathogenesis and Neurologic Manifestations of the Coronavirus in the age of Coronavirus Disease 2019: A review” (by Adeel S. Zubair, MD1; Lindsay S. McAlpine, MD1; Tova Gardin, MD, MPP1; et al.)

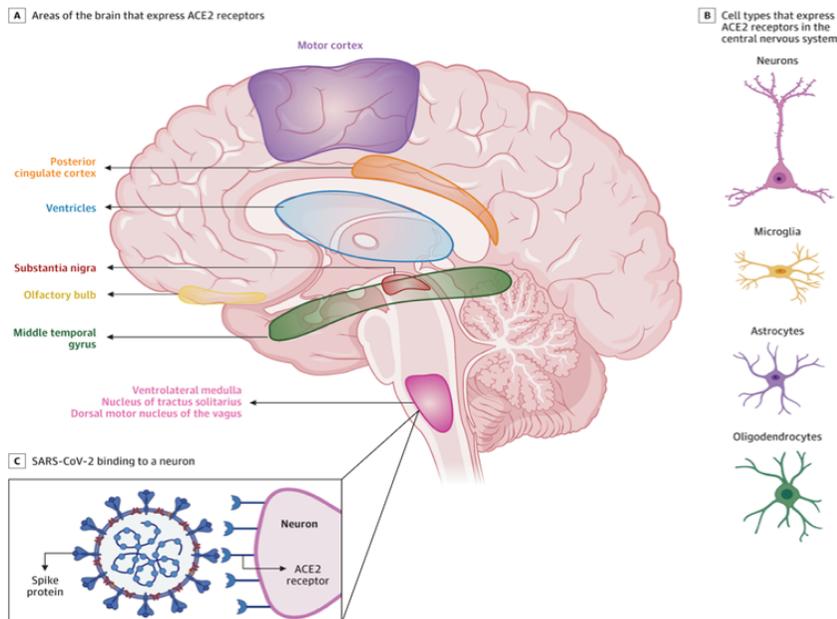
Accessible online at <https://jamanetwork.com/journals/jamaneurology/fullarticle/2766766>

The article gives various theories hypothesizing the cause of these neurological conditions in COVID-19 patients, and their incidence.

How COVID-19 enters the nervous system:

- The COVID-19 virus has a spike protein on the viral surface.
- This spike protein binds to the ACE2 receptor found mammal host cells (figure 1C).
- Once it is in the host cell it hijacks the host cell machinery and the COVID-19 virus multiplies by replicating itself.
- The amount of ACE2 receptors in different tissues determines the risk that area is to be affected by COVID-19. The following is a list of areas with many ACE2 receptors (figure 1A)
 - airway epithelia (olfactory bulb)
 - kidney cells, small intestine, lung parenchyma, vascular endothelia-substantia nigra
 - ventricles-middle temporal gyrus
 - posterior cingulate cortex
 - motor cortex
 - sympathetic brain pathways.
- Once the virus has entered the peripheral nerve terminal it spreads via retrograde travel along the nerve gaining access to the CNS
- Another entry to the CNS may be via the blood brain barrier with leukocyte migration or binding to the vascular endothelial cells.

FIGURE 1. ANGIOTENSIN-CONVERTING ENZYME 2 (ACE2) EXPRESSION IN THE BRAIN



Neurologic Manifestations:

- Research on neurological manifestation of COVID-19 is sparse. Yet a study in France noted neurologic symptoms in 49/50 patients (Helms et al, 2020: Reference 60)
- The most common neurological manifestations with COVID-19
 - headaches
 - anosmia (loss of the sense of smell)
 - ageusia (loss of sense of taste)
- Other less common neurologic findings are
 - stroke
 - impairment of consciousness,
 - coma
 - seizure
 - encephalopathy
 - Guillain-Barre and peripheral nerve disorders

Article review by Elizabeth Dannenbaum, MSc, pht

RECOMMENDED COVID-19 SCHOLARLY ARTICLES

Shared already with the JRH COVID-19 Team by Loredana Campo, pht, Interim Clinical Research Coordinator:

- [Considerations for Postacute Rehabilitation for Survivors of COVID-19 - PubMed](#): accessible at pubmed.ncbi.nlm.nih.gov
- [The War on COVID-19 Pandemic: Role of Rehabilitation Professionals and Hospitals](#). Lew HL, Oh-Park M, Cifu DX. *Am J Phys Med Rehabil*. 2020 May 4. doi: 10.1097/PHM.0000000000001460. Online ahead of print. PMID: 32371624
- [Features, Evaluation and Treatment Coronavirus \(COVID-19\)](#). Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Di Napoli R. 2020 Apr 6. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. PMID: 32150360 Free Books & Documents. Review.
- Thomas P, Baldwin C, Bissett B, Boden I, Gosselink R, Granger CL, Hodgson C, Jones AY, Kho ME, Moses R, Ntoumenopoulos G, Parry SM, Patman S, van der Lee L. Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. *J Physiother*. 2020 Mar 30; doi: 10.1016/j.jphys.2020.03.011. - [DOI - PMC - PubMed](#)
- World Health Organization. 2020. [2020-05-05]. Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected <https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf>.
- Madjid M, Safavi-Naeini P, Solomon SD, Vardeny O. Potential effects of coronaviruses on the cardiovascular system. *JAMA Cardiol*. 2020 Mar 27; doi: 10.1001/jamacardio.2020.1286. - DOI - PubMed

COVID-19 BEST PRACTICE RESOURCES:

COVID-19 Resilience Support Toolkit (for Health Care Workers)

Developed by Hamilton Health Sciences (affiliate of McMaster University). This is a resource website filled with helpful resilience-developing strategies resources to work during this COVID-19 pandemic. It builds on the notion that Health Care Workers (HCW) are already resilient and resourceful, do challenging work but that during times of crisis, our resilience is tested. It points out that although it is normal to worry about ourselves and our loved ones, the pandemic also brings forth a surge of patients that will challenge our capacity to provide care. "This is the time when we most need to be resilient, but because of the disruption to our routines, our workflow and our social connections, our resilience may already feel depleted. But through practice and intention, our resilience can grow, even through times of crisis." This Resilience Support Toolkit is meant to help us all strengthen our resilience by working resilience-building practices into our daily routines and workflow, using the framework of PAUSE, RESET, NOURISH or PRN. These practices are based on solid neuroscience and the idea of "neuroplasticity", that our brains are constantly changing based on how we think and what we choose to focus on. These tools help to calm our nervous system and enhance our focus and well-being. By invoking the PRN approach several times daily, we develop our ability to "steady ourselves, replenish and stay connected with our team." This can be used as an adjunct to other strategies you already use to deal with stress and can be done alone or with other colleagues.

Accessible at: <https://www.hamiltonhealthsciences.ca/covid19/staff-physician/hhs-resources/resilience-support-toolkit/>

SUPPORTING CLINICIANS DURING THE COVID-19 PANDEMIC

C Dewey, S Hingle, E Goelz, M Linzer - 2020 - acpjournals.org

“The COVID-19 pandemic has upended clinicians' sense of order and control, creating the potential for stress in the short term and burnout over the long term. This commentary offers suggestions to encourage a culture that will sustain the clinician workforce during the pandemic.”

Accessible at: <https://www.acpjournals.org/doi/full/10.7326/M20-1033>

OTHER USEFUL BEST PRACTICE RESOURCES:

- McGill University COVID-19 Research Developments: <https://www.mcgill.ca/research/articles>
- Global Research for Coronavirus disease: <https://www.who.int: articles are divided by subheading> ex. Infection Control, Public Health, etc.
- COVID-19 PubMed Search Alert: <https://www.edc.gov.library/research>

PSYCHOSOCIAL HELP:

1) **For Health Care Staff: Service téléphonique de soutien : 450 975-4150**, poste 4350 de 9h à 21h, 7 jours sur 7 Service anonyme et confidentiel, donné par des professionnels en intervention psychosociale du CISSS de Laval

2) **CRIR : New! Veille informationnelle psychosociale and COVID-19 Question|Answer:** consult the internet page of the direction de l'enseignement universitaire et de la recherche du CCSMTL (<http://ccsmtl-biblio.ca/>; psychosocial help offered for varied patient populations)

*Your input to the Research Bulletin is welcome: Contact Loredana Campo, Interim Clinical Research Coordinator or Elizabeth Dannenbaum, Researcher via email.

For those who have used Telerehabilitation for clinical treatment, we encourage you to send us your feedback. We also invite you to share your input to the Research Bulletin by sending an e-mail to Loredana Campo, Interim Clinical Research Coordinator at : lcampo_hjr@ssss.gouv.qc.ca or Elizabeth Dannenbaum, Researcher at: Edannenbaum_hjr@ssss.gouv.qc.ca.

“Stronger together”

