

Lesser known or novel measures against COVID-19

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Examined in this document are solutions that may be lesser known or unknown in terms of its relevance to COVID-19. High level research skills were used with an inventive approach to find scholarly works related to a possible treatment idea. Please click or CTRL-CLICK to view each link.

Microbiome of the lung and gut:

The Gut bacteria and Lung Biome may play a role in the outcomes of COVID-19 in relation to the development of ARDS. Introducing good lung bacteria or preventing bad bacteria from entering the lungs via reflux or a leaky gut and crossing into the lungs may prevent serious outcomes.

<http://www.jpnm.com/index.php/jpnm/article/view/090139>

<https://www.ncbi.nlm.nih.gov/pubmed/27670109>

Increase, not decrease the ACE 2 receptors:

Increasing ACE2 receptors as oppose to decreasing them may be a possible area of study to prevent serious outcomes and provide lung protection.

https://www.researchgate.net/publication/340447702_Angiotensin_converting_enzyme_2_activation_a_novel_potential_Covid-19_therapeutic_strategy

<https://link.springer.com/article/10.1007/s12250-020-00205-6>

Ventilation induces lung damage:

Mechanical ventilation damages the lungs and proper settings may be needed to compensate. Furthermore, preventative techniques may also need to be deployed to attenuate ventilator induced lung damage. The humidity setting may need to be experimented with as the virus thrives in damp environments and lower humidity settings may be needed. Furthermore heat stress before being mechanically ventilated may be beneficial as per the following paper. Furthermore, a device with electrodes attached to the diaphragm muscle to contract the diaphragm to emulate a cough may be an option.

<https://www.ncbi.nlm.nih.gov/pubmed/11371417>

Co-infection to attenuate COVID19:

Purposeful co-infection with another virus that blocks any process of COVID19 while infected with COVID19 may be a potential treatment. For example, a virus that attaches to an ACE2 receptor with mild outcomes that may block COVID19 from attaching to the ACE2 receptor may be an option if such a virus exists.

<https://jvi.asm.org/content/92/23/e00881-18>

<https://www.sciencedirect.com/science/article/pii/S0042682215002809>

Hospital temperature and outcomes

<https://www.medrxiv.org/content/10.1101/2020.02.26.20028472v3>

Higher ratio of centenarians surviving COVID-19:

There have been numerous accounts of centenarians surviving COVID-19 and the common factor amongst these centenarians appears to be that they have lived through the 1918 influenza. It may be possible that these centenarians were exposed to the 1918 influenza and the antibodies developed may have played a role in their survival of COVID-19. Therefore a potential vaccination or treatment of COVID-19 may come from a vaccine or treatment targeting or effective against the 1918 influenza virus or any related strains such as Swine flu or H1N1. Certain H1N1 vaccinations appear to be cross reactive with the 1918 influenza, please see the following study which may have use for COVID-19.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3416326/>

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1750-2659.2010.00191.x>

<https://jvi.asm.org/content/83/11/5726.short>

<https://jvi.asm.org/content/86/3/1500.short>

<https://www.liebertpub.com/doi/abs/10.1089/vim.2007.0027>

<https://stm.sciencemag.org/content/2/24/24ra21.short>

<https://www.eurosurveillance.org/content/10.2807/ese.15.05.19478-en>

<https://www.nature.com/articles/ncomms1026>

Elderly people with antibodies from 1918 spanish flu cross reacted with 2009 h1n1, it may be possible that these antibodies may also be cross reactive with COVID19 as more elderly people are surviving relative to their health.

<https://www.eurosurveillance.org/content/10.2807/ese.15.05.19478-en>

Patients need to cough more but cant when on a ventilator:

Coughing is the most effective way to expel debris caused by COVID19 from the lungs and aids in prevention of developing lung disease. When patients are hooked up to a ventilator, the debris are not coughed up as they should leading to a buildup of debris. Sputum and debris collecting in the lower lungs needs to be expunged from the lungs via coughing. However, debris in the lower lungs are not sufficiently expelled from the lungs which leads to or causes worsening of ARDS. A ventilator which can assist the patient to cough more efficiently or via any other means is necessary to expel most of the virus related/caused debris. The frequency of coughing needs to be maximized before the patient may develop ARDS and or to prevent ARDS.

<https://patents.google.com/patent/WO2016154349A1/en>

Using quantum physics:

Quantum physics may be used to destroy the virus. By finding the resonant frequency of the virus and applying the frequency to the affected areas, the virus may be destroyed without effecting healthy cells.

https://www.researchgate.net/publication/276114134_Extending_Electromagnetic_Treatment_to_Infectious_Diseases_including_the_Ebola_Virus

<https://www.sciencedirect.com/science/article/abs/pii/S0010482510000090>

<https://nanoscalereslett.springeropen.com/articles/10.1186/s11671-016-1394-9>

<https://www.israel21c.org/can-quantum-mechanics-cure-the-flu/>

Future building structural designs that accommodate prevention:

Future High Rise buildings, Long term care homes, and Cruise ships that are newly constructed may need to take into account ways to prevent spread of a future pandemic by creating a structural design that allows less risk of transmission. This could mean elevators with UV or self cleaning functions, touchless controls in elevators, fob entry and parking, fresh air ducting, HEPA or UV filtration, a medical unit within the building or ship to care for sick individuals, Anti-microbial surface designs, walkways and pathways with less pinch points, ventilation systems that do not introduce previously breathed air unless it is filtered or new external air, several main entrances that can be reached easily without delay, ducting in elevators that continuously inject fresh air, sewage pipes that do not leak, air leak proof separations between units. This

may be a selling feature for future owners as the structure would be more spacious and will be safer in the event of a future pandemic.

<https://journals.sagepub.com/doi/full/10.1177/1420326X20910408>

Fatal heart attack and asymptomatic COVID-19:

Persons may appear to have had asymptomatic or mild COVID-19 and still have a life ending heart attack. The rate of infection as known may exclude these cases which may cause an underreporting of COVID-19 infection rates. If sars-cov-2 causes fatal heart attacks without previous symptoms, this disease is much deadlier than thought.

"the patient died of heart attack at around 6:50pm. He added that patient didn't have any symptoms of Covid-19" from the following article

<https://timesofindia.indiatimes.com/city/ludhiana/covid-19-positive-villager-dies-of-heart-attack-in-ludhiana/articleshow/75643090.cms>

Another report of a child dying from a heart attack and having asymptomatic covid:

<https://www.independent.co.uk/news/world/europe/coronavirus-children-kawasaki-disease-symptoms-scarlet-fever-heart-attack-france-a9518271.html>

Another article of a person surviving COVID-19 and testing negative and thereafter dying of a heart attack.

<https://www.outlookindia.com/newscroll/italian-covid19-patient-who-was-cured-dies/1773992>

I believe older persons are dying from heart attacks while appearing asymptomatic or having mild COVID-19. This is very worrisome.

<http://heartfailure.onlinejacc.org/content/jhf/early/2020/04/07/j.jchf.2020.04.001.full.pdf>

<https://www.hindustantimes.com/indians-abroad/covid-19-positive-indian-national-dies-of-heart-attack-in-singapore/story-mR7wXx9QVv3sEKMr1fEhwO.html>

<http://local21news.com/news/nation-world/12-year-old-girl-survives-heart-attack-possibly-linked-to-covid-19-diagnosis>

<https://onlinelibrary.wiley.com/doi/full/10.1002/jmv.25809>

<https://link.springer.com/content/pdf/10.1007/s00395-020-0791-5.pdf>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7179991/>

<https://www.nejm.org/doi/full/10.1056/NEJMc2010418>

<https://www.sciencedirect.com/science/article/pii/S0735675720302771>

<https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehaa399/5831090>

<https://jamanetwork.com/journals/jamacardiology/article-abstract/2763844>

<https://www.sciencedirect.com/science/article/pii/S1547527120304227>

<https://heartfailure.onlinejacc.org/content/jhf/early/2020/04/07/j.jchf.2020.04.001.full.pdf>

<https://link.springer.com/content/pdf/10.1007/s00395-020-0791-5.pdf>

Cancer becomes aggressive in patients who have mild or asymptomatic COVID-19:

There seems to be an increase in deaths of people succumbing to cancer. It may be possible that COVID-19 weakens the immune system's fighting capabilities to keep cancer at bay even for asymptomatic cases or mild cases.

<https://www.sciencedirect.com/science/article/pii/S1556086420301325>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7126344/>

<https://www.bmj.com/content/369/bmj.m1735>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7194544/>

Vaccines:

Potential Vaccines may include SARS/MERS vaccines that have shown to provide long term protection. Furthermore Adenovirus, H1N1 and other vaccines may be cross reactive with SARS-COV-2.

<https://www.precisionvaccinations.com/futhan-nafamostat-mesylate-fut-175-blocks-coronavirus-entering-human-cells>

<https://science.sciencemag.org/content/350/6267/1453>

<https://science.sciencemag.org/content/351/6268/77>

https://www.eurekalert.org/pub_releases/2004-03/nioa-nvp032604.php

<https://www.sciencedirect.com/science/article/pii/S0042682206002352>

<https://www.nature.com/articles/nature02463>

<https://pubmed.ncbi.nlm.nih.gov/16043204/>

<https://pubmed.ncbi.nlm.nih.gov/29246504/>

<https://pubmed.ncbi.nlm.nih.gov/15231072/>

<https://pubmed.ncbi.nlm.nih.gov/17092615/>

Anti-virals or Antibodies:

Potential treatments to ameliorate cytokines, cytokine storm, inflammation or increase immune response to attenuate COVID-19 symptoms may include the following antivirals or natural compounds:

<https://stm.sciencemag.org/content/12/541/eabb5883>

<https://pubmed.ncbi.nlm.nih.gov/22349148/>

https://www.researchgate.net/profile/Arturo_Tozzi/publication/339831084_TOWARDS_CROSS-REACTION_BETWEEN_SARS-CoV-2_AND_A_CHILDHOOD_VACCINE/links/5e67fa774585153fb3d5b834/TOWARDS-CROSS-REACTION-BETWEEN-SARS-CoV-2-AND-A-CHILDHOOD-VACCINE.pdf

<https://www.sciencedirect.com/science/article/pii/S0264410X0500037X>

<https://www.sciencedirect.com/science/article/pii/S0264410X07004550>

<https://www.ijbs.com/v16p1718.pdf>

<https://www.microbiologyresearch.org/content/journal/jgv/10.1099/vir.0.81078-0>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3352363/>

<https://www.sciencedirect.com/science/article/pii/S0168170212000500>

<https://www.ingentaconnect.com/content/ben/cmm/2009/00000009/00000009/art00005>

<https://pubmed.ncbi.nlm.nih.gov/21356245/>

https://www.researchgate.net/publication/339956446_Is_it_there_a_protective_role_for_spironolactone_to_prevent_coronavirus-induced_acute_respiratory_distress_syndrome_ARDS

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3575839

<https://pubmed.ncbi.nlm.nih.gov/16511823/>

<https://www.sciencedirect.com/science/article/pii/S0166354206001215>

<https://pubmed.ncbi.nlm.nih.gov/21752960/>

<https://pubmed.ncbi.nlm.nih.gov/15249217/>

<https://www.sciencedirect.com/science/article/pii/S2095311917616605>

<https://www.preprints.org/manuscript/202001.0358/v1>

<https://www.sciencedirect.com/science/article/pii/S0924857920300947>

<https://pubmed.ncbi.nlm.nih.gov/18824060/>

<https://www.sciencedirect.com/science/article/pii/S0264410X20305181>

Ace-2 related papers:

<https://www.biorxiv.org/content/10.1101/2020.02.01.929976v1.abstract>

<https://www.sciencedirect.com/science/article/pii/S128645791300155X>

https://www.jstage.jst.go.jp/article/circj/77/2/77_CJ-12-1544/_pdf/-char/ja

<https://link.springer.com/article/10.1007/s12250-020-00205-6>

<https://www.mdpi.com/1999-4915/12/5/491>

https://www.researchgate.net/publication/340447702_Angiotensin_converting_enzyme_2_activation_a_novel_potential_Covid-19_therapeutic_strategy

<https://www.preprints.org/manuscript/202002.0047/v1>

<https://www.preprints.org/manuscript/202002.0313/v1>

Animal Vaccines may be a treatment option or something to gain understanding from:

Animals suffer from coronaviruses and there are vaccines available for some species. It is interesting to note that dogs are able to become infected with COVID19 however they all remain asymptomatic. It may be that the vaccinations given to dogs prevent them from developing severe COVID19, however research says it does not. Furthermore, feline vaccines for coronaviruses may also be looked at and similar ones used for canines may be exempted due to the fact that felines get symptoms while possibly being vaccinated. However it may be possible the cats that have symptomatic COVID19 are not vaccinated and in this case feline vaccines for coronaviruses may need to be studied for cross reactivity also.

<https://www.standard.co.uk/news/world/pug-first-dog-coronavirus-us-north-carolina-covid19-pets-a4426721.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7138383/>

PPE:

<https://www.businesswire.com/news/home/20200408005795/en/SpiderTech-Helping-Healthcare-Workers-Experiencing-Irritation-Sores>

<https://www.fixthemask.com/>

Ozone

Ozone may be a possible treatment for COVID19, therefore, having an air purifier that has an ionizer which creates ozone as a byproduct may be a useful tool in the hospital setting. This will clean the air and may also lessen the effects of COVID19. However ozone has health consequences so a cost benefit analysis is required. Furthermore, ozone use in a ventilators supply air may be a possible treatment option.

<https://pubmed.ncbi.nlm.nih.gov/32384798/>

Heat therapy

Applying heat to the chest and throat may help loosen up mucous making it easier to expel debris from the lungs.

<https://www.ncbi.nlm.nih.gov/pubmed/11371417>

Other papers of interest that may be applied to covid or papers of interest:

<https://www.sciencedaily.com/releases/2019/07/190702112834.htm>

<https://scholarship.rice.edu/handle/1911/88078>

https://jcbjournals.ekb.eg/article_79888_804a26558b635ae0bef4b2e5ed27fd99.pdf

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151403/>

<https://www.karger.com/Article/Fulltext/485647>