



**Search conducted on:  
Requested by: doctor redeployed to COVID-19 ward**

**Literature search results**

**Please let me know if you’d like any of the listed articles in full-text**

**(If you’d like to be sent any subsequent articles that are published on this topic please contact me and I will set you up with an emailed alert).**

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| **Question** | Information on changes in the blood that are seen in COVID-19 patients - a lot are related to interleukin 6 - ferritin levels , magnesium and CRP |
| **Summary of evidence found** | Research relating to cytokine storm syndrome / cytokine release syndrome and COVID-19 was found. Likewise, research looking at IL-6 and CRP.  Where possible, articles have been limited to research overviews rather than retrospective cohort studies for specific locations. However, systematic reviews are few and far between, given the recency of much of this research.  All articles included here have full-text links.  Nothing specifically relating to magnesium was discovered during the search. |
| **Most useful information** | **Cytokine storm**   * McGonagle, D., Sharif, K., O'Regan, A. and Bridgewood, C. (2020) The Role of Cytokines including Interleukin-6 in COVID-19 induced Pneumonia and Macrophage Activation Syndrome-Like Disease. *Autoimmunity Reviews* [in press, corrected proof] <https://www.sciencedirect.com/science/article/pii/S1568997220300926?via%3Dihub> * Yang, Y. et al (2020) Exuberant elevation of IP-10, MCP-3 and IL-1ra during SARS-CoV-2 infection is associated with disease severity and fatal outcome. *MedRxiv* [pre-print] <https://www.medrxiv.org/content/10.1101/2020.03.02.20029975v1> * Ma, J., et al (2020) Potential effect of blood purification therapy in reducing cytokine storm as a late complication of critically ill COVID-19. *Clinical Immunology*, p. 214 [correspondence]   <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7118642/>   * Zhang, C. et al (2020) The cytokine release syndrome (CRS) of severe COVID-19 and Interleukin-6 receptor (IL-6R) antagonist Tocilizumab may be the key to reduce the mortality. *International Journal of Antimicrobial Agents*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7118634/> * Mehta, P. et al (2020) COVID-19: consider cytokine storm syndromes and immunosuppression. *The Lancet*, 395(10229), pp. 1033-1034 <https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30628-0/fulltext>   **IL-6, ferritin, CRP, Magnesium**   * Chen, G. et al (2020) Clinical and immunologic features in severe and moderate Coronavirus Disease 2019. *The Journal of Clinical Investigation*. [in-press preview] <https://www.jci.org/articles/view/137244> * Yuan, J. et al (2020) The correlation between viral clearance and biochemical outcomes of 94 COVID-19 infected discharged patients. *Inflammation Research*. <https://link.springer.com/article/10.1007/s00011-020-01342-0> * Ling, W. (2020) C-reactive protein levels in the early stage of COVID-19. *Médecine et Maladies Infectieuses.* [In Press, Journal Pre-proof] <https://www.sciencedirect.com/science/article/pii/S0399077X2030086X?via%3Dihub> * Liu, Y. et al (2020) Clinical and biochemical indexes from 2019-nCoV infected patients linked to viral loads and lung injury. *Science China Life Sciences*, 63, pp. 364-374. <https://link.springer.com/article/10.1007%2Fs11427-020-1643-8> |
| **This may also help** | * Lagunas-Rangel, F. A. (2020) Neutrophil-to-Lymphocyte ratio and Lymphocyte-to-C-reactive protein ratio in patients with severe coronavirus disease 2019 (COVID-19): A meta-analysis. *Journal of Medical Virology*. [Accepted article, e-pub ahead of print] <https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.25819> * Han, H. et al (2020) Prominent changes in blood coagulation of patients with SARS-CoV-2 infection. *Clinical Chemistry and Laboratory Medicine (CCLM)*. [Ahead of publication] <https://www.degruyter.com/view/journals/cclm/ahead-of-print/article-10.1515-cclm-2020-0188/article-10.1515-cclm-2020-0188.xml> * Conti, P. et al (2020) Induction of pro-inflammatory cytokines (IL-1 and IL-6) and lung inflammation by Coronavirus-19 (CoV-19 or SARS-CoV-2): anti-inflammatory strategies. *Journal of Biological Regulators and Homeostatic Agents*, 34(2) [e-pub ahead of print] <https://www.biolifesas.org/biolife/2020/03/15/induction-of-pro-inflammatory-cytokines-il-1-and-il-6-and-lung-inflammation-by-covid-19-anti-inflammatory-strategies/> |
| **Search strategy** | * PubMed * Google-mediated general internet search * EPPI Covid-19: Living map of evidence <http://eppi.ioe.ac.uk/COVID19_MAP/covid_map_v3.html> |

***Any queries on specific drug regimens or dosages should be passed to Medicines Information, Pharmacy on x3030 (CGH) or x6108 (GRH). Library & Knowledge Services will endeavour to use the best, most appropriate and most recent sources of information available to it, but can make no warranty, express or implied as to the accuracy of any of the information or advice supplied.***

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