



« The Covid-19 "syndemia" : at the edge of biology and society »

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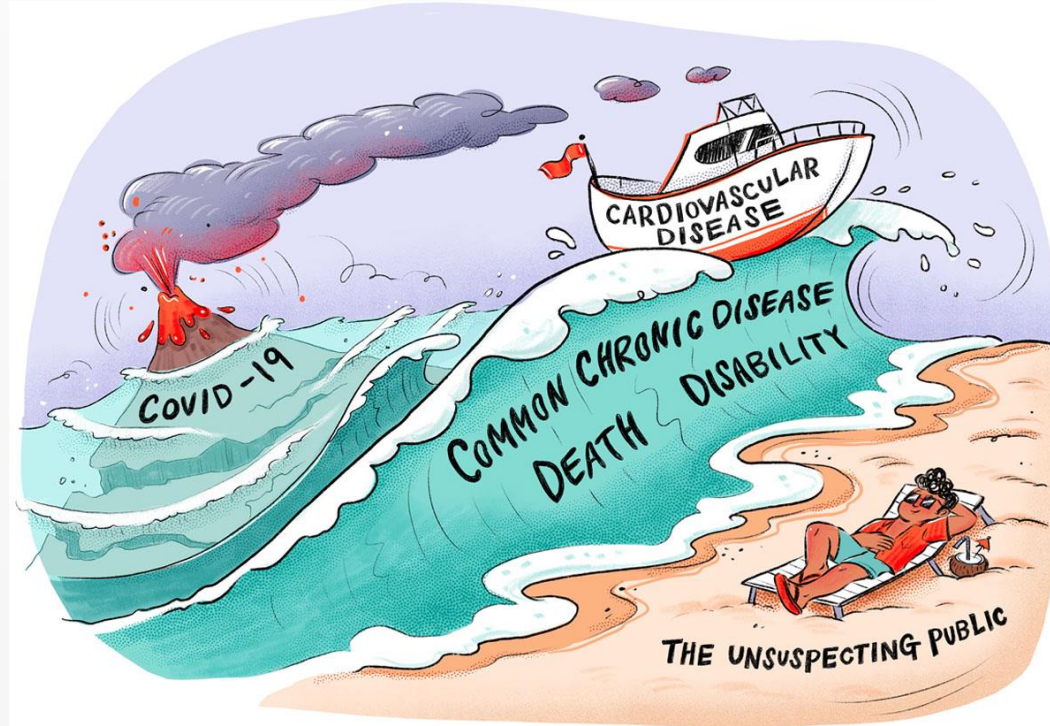
Could Covid-19 be more than a pandemic ?

« **Syndemics** are characterized by **biological and social interactions** ...that increase a person's susceptibility to harm or worsen their health outcomes. »

«Two categories of diseases are interacting within specific populations

- ◆ **1. infection** : severe acute respiratory SARS-CoV-2 syndrome
- ◆ **2. an array of non-communicable diseases (NCDs)** »
- ◆ or common chronic diseases (CCD), considered as co-morbidities.





Avoiding the Coming Tsunami of Common, Chronic Disease

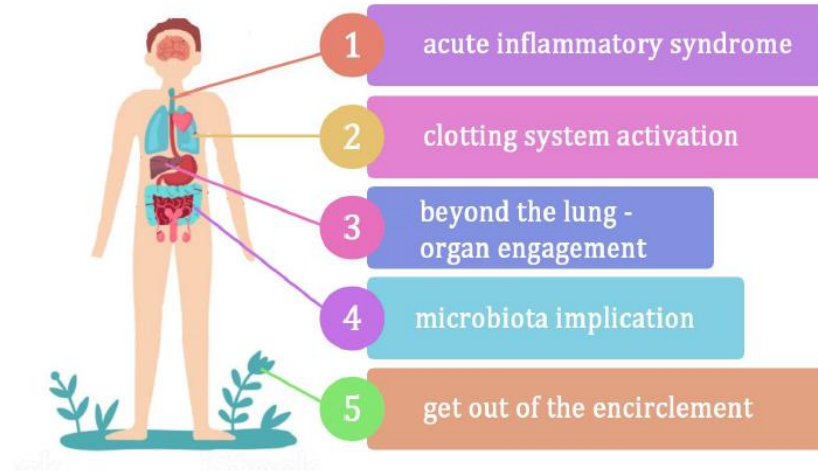
What the Lessons of the COVID-19 Pandemic Can Teach Us

Robert M. Califf

Originally published 6 Apr 2021
<https://doi.org/10.1161/CIRCULATIONAHA.121.053461> |
 Circulation. 2021;143:1831–1834

« Addressing Covid means addressing chronic diseases, ...clustering within social groups according to ***patterns of socio-economic inequality***, deeply embedded in our societies. »

IMCAS Would stress make susceptible to Covid-19 ?



◆ In SARS-CoV-2 infection the main cause of death, has been considered to be an **over reaction of the immune system** : « **cytokine storm** » associated to DIVC

◆ “ *The real morbidity and mortality of this disease is probably driven by **this out-of-proportion inflammatory response** to the virus...* » (Jamie Garfield, Temple University Hospital, NYC).

WHEN ROUTES OF STRESS CROSS THOSE OF IMMUNE RESPONSE

How to get out of the encirclement ?

- ◆ Is SARS-CoV-2 infection taking advantage of underlying **stress** ?
- ◆ In case of chronic stress, when symptoms of Covid-19 start to appear, we probably are **already** experiencing an enhanced « pro-inflammatory cytokine status » characteristic of chronic disease...

Immune-Stress Vicious Cycle



Covid, stress & collagen

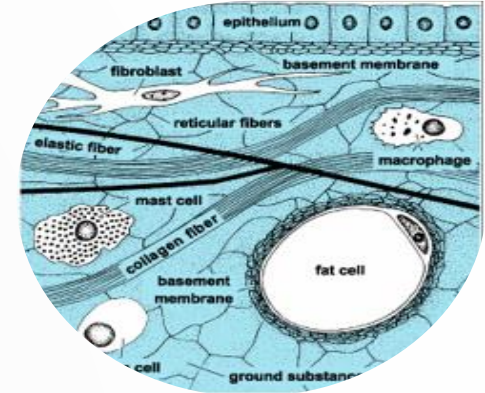


ORIGINAL RESEARCH ARTICLE

Front. Psychol., 25 September 2020 | <https://doi.org/10.3389/fpsyg.2020.566886>

Wearing Face Masks Strongly Confuses Counterparts in Reading Emotions

 Claus-Christian Carbon^{1,2*}



Upon infection, immune over reaction could be linked to underlying stress due to health-measures (lock-down, **mask-wearing**, remote work...)

Limited social contact, crucial for health, adds a supplementary layer of stress.

Collagen fibers are empty pipes, which **convey fluids** contributing to the transport of cerebrospinal fluid (CSF).

Particularly sensitive to stress, if neglected, can induce **hypoxia, edema, tension**, accelerated premature aging of the skin.

The positive effects of *vagus* activation : **lifestyle** to manage inflammation ?

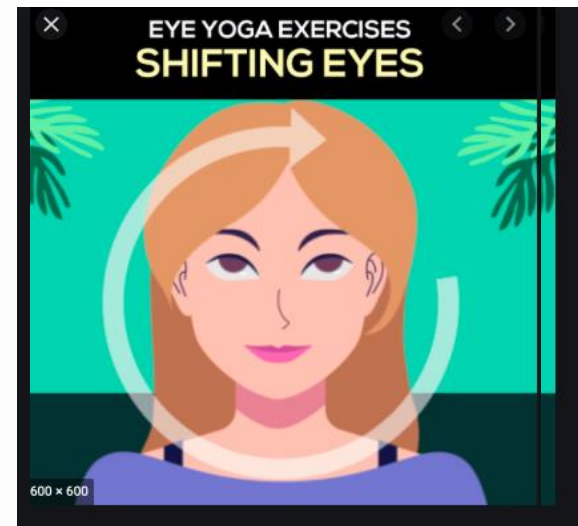




Mindfulness induces vagal activation indeed allowing to **escape** from the immune « cytokine storm »



Promotion of self-esteem strategies by high concentration activities provide major shielding against different endogenous / exogenous **sources of stress**



Eye yoga exercises will **reconnect you with the whole body** and lower the tension in the neck. Complete with gentle breathing, with or without footing,

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Thank you for your attention