

Current state of knowledge on the topic of Covid-19 / Vitamin D based on published scientific and clinical studies

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More than 300,000 people have already fallen victim to the SARS-CoV-2 virus worldwide.

Since there are currently no effective drugs and no vaccination against Covid-19 disease, it seems that we can only choose between two options:

- Either a further partial lockdown with a physical distance to other people, including hygiene and protection measures, with the known economic and social consequences.
- Or the acceptance of thousands more deaths, especially among our older fellow citizens.

Scientific and clinical studies suggesting an alternative treatment option are apparently ignored.

One of these promising approaches is the treatment with vitamin D. The available studies on Covid-19 patients suggest that a large proportion of deaths could possibly be prevented and severe courses could be reduced to milder ones.

On the basis of the available publications, the following procedure appears to be reasonable, which - if carried out correctly - does not have any critical side effects.

- **Konsequente Schnellanhebung des Vitamin D-Spiegels bei allen Covid-19-Patienten to values greater than 30 ng/ml**
- **Preventive vitamin D supplementation of our population with a timely focus on doctors, nursing staff and risk patients**

The scientific basis (link to the bibliography below):

- According to publications by RKI^[11], BfR^[12] and DGE^[13], many Germans suffer from an inadequate vitamin D supply all year round, according to WHO criteria even from a deficiency. Especially in winter we are far away from optimal vitamin D levels (40-50ng/ml) due to our modern lifestyle. This is especially true for our elderly fellow citizens and many patients with pre-existing conditions.
- Vitamin D deficiency with blood concentrations below 20 ng/ml leads to a de-regulation of the renin/angiotensin system. As a result, the virus is able to attack the lung cells and cause atypical pneumonia (ARDS). As a further consequence, a so-called cytokine storm - an overreaction of the immune system - can be triggered, which can eventually lead to death. Sufficiently high vitamin D concentrations in the blood (greater than 30 ng/ml or better 40 ng/ml) can inhibit or even completely prevent this deadly chain of events. ^[6, 7, 8]
- Vitamin D stimulates the production of the body's own viral defensive substances, so-called "defensins" and "cathelicidins". In the case of Covid-19, these substances ensure that the spike proteins on the virus surface are blocked, thereby significantly reducing the efficiency of the docking process to our body cells via the ACE2 receptors. ^[9, 10]

This can also be confirmed in practice with clinical studies:(link to the literature list below)

- Aktuelle Studien zeigen, dass die Sterblichkeit von Covid-19 Patienten direkt von ihrem vitamin D level. In patients with vitamin D levels below 20 ng/ml, the mortality in intensive care units is a factor of 10 higher than in patients with vitamin D levels above 30 ng/ml! ^[1, 2, 3]

- In Covid-19 patients already hospitalized, the administration of high doses of vitamin D reduces the duration of treatment in intensive care units by half. In patients already ventilated for pneumonia, the death rate is also reduced by half. ^[4]

The available new studies from Indonesia, the Philippines, India, Iran and the USA, which clearly show that vitamin D deficiency can be a very decisive factor in the known fatal complications of Covid-19 infection, are only hesitantly taken note of in this country.

Even if you look at these results critically: we are currently in a state of absolute emergency. **We should make every effort to end it as soon as possible and explore every possible way to do so.**

This way would be easy and does not cause high costs. It would be sufficient to measure the vitamin D level in Covid-19 infected persons, hospital staff and risk patients and, if necessary, to raise it to healthy levels well above 35 ng/ml. In any case no comparison to the enormous costs of the lockdown.

This could possibly save us another lockdown and many more Covid-19 fatalities.

We therefore request that the facts of the case be examined and the necessary steps taken as soon as possible.



Lorenz Borsche

Heidelberg

Short CV: <https://t1p.de/LBcv>



Dr. Bernd Glauner

Biochemist, Tübingen

<https://t1p.de/BGCV>

The signatories Lorenz Borsche and Dr. Bernd Glauner declare in lieu of oath that they have no conflict of interest in connection with the present "Open Letter", neither with regard to economic interests and political affinities, nor with regard to family, friendly or other ties or interests.

Current literature list for the experts:

https://borsche.de/res/LitList_C19_Mortality_EN.pdf

Short link: <https://t1p.de/wi62m>



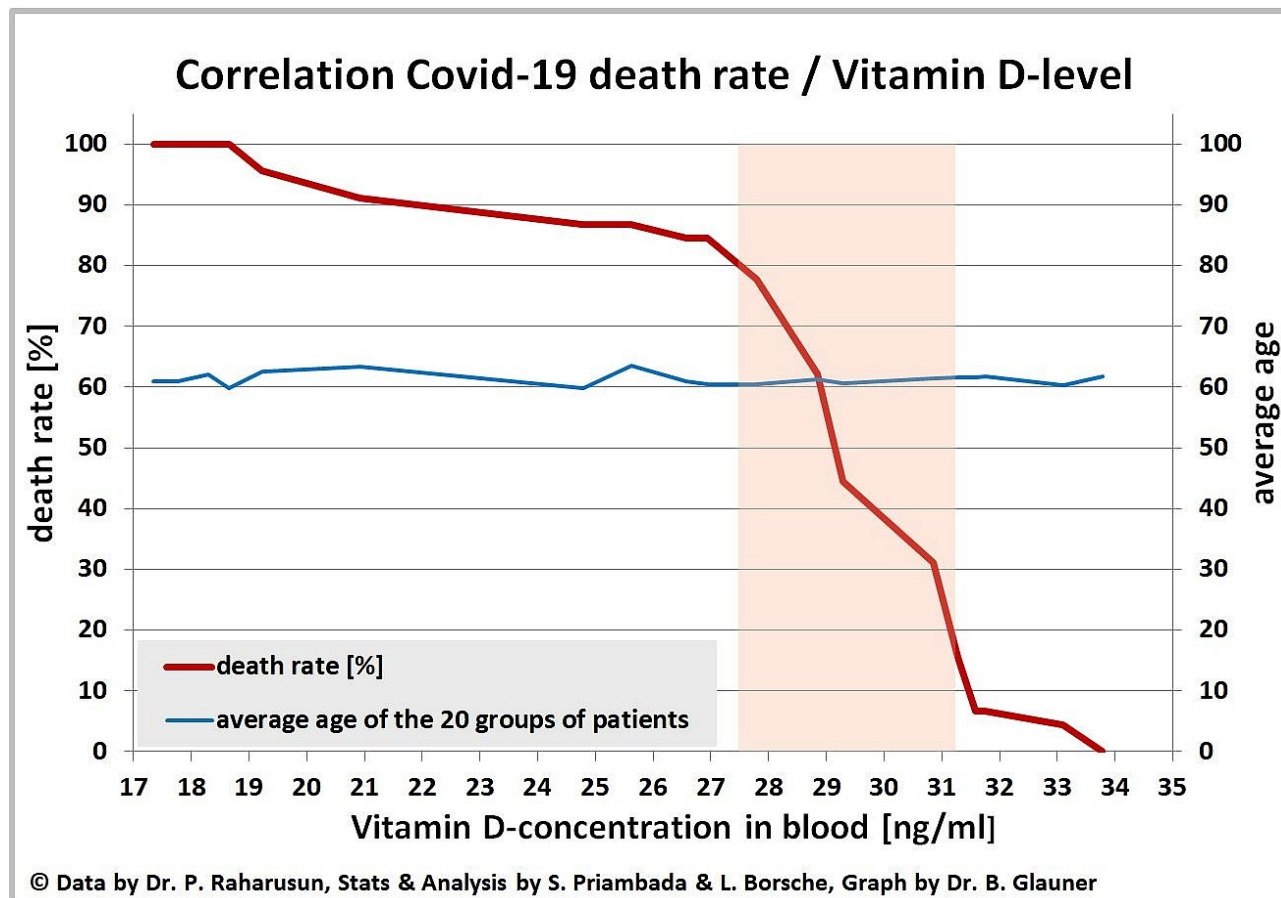
Further explanations in general terms:

https://borsche.de/res/Vitamn_D_Essentials_EN.pdf

Short link: <https://t1p.de/c4ish>



Current State of Knowledge on Covid-19 / Vitamin D Attachment Diagram



The results of the clinical study of the working group of Dr. Prabowo Raharusun show the dependence of the death rate in hospitalized Covid-19 infected patients in relation to the measured vitamin D concentration in the blood. The data are based on a study of 780 patients and were statistically corrected for age and sex.

There is a very sharp drop in the death rate in the range of blood levels between 27 and 32 ng/ml vitamin D (marked area). At vitamin D levels above 32 ng/ml, the death rate determined in this study is a factor of 10 lower than at vitamin D levels below 27 ng/ml.

In order to make the evaluation transparent and easy to interpret even for non-scientists, Sadiah Priambada, the statistician in the team, prepared the data in such a way that comparison groups with vitamin D level groups of <20, 20-30 and 30+ ng/ml can be assessed on the basis of approximately the same age average and the same number of cases. This more easily readable evaluation leads to practically exactly the same results as the original data as a whole (see <https://t1p.de/c4ish>)

The diagram shown is based on a statistically correct data reduction in 20 groups. More detailed explanations can be found here: https://borsche.de/res/Indo_1_en.pdf