# Corona Viruses

**Cytokine storm and virus interference with flu vaccination**

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Dear patients and interested parties,

I would like to share my information and experiences with you again. We gain new knowledge every day and I hope that we can react better and better to the current situation.

Please feel free to share this information, each individual can then decide for himself. My first two letters of information about Corona viruses are just as important! All of them are available for download at www.ariane-zappe.de.

Remedies I have developed are implemented by SophiaViva and are available for everyone at www.sophiaviva.de. There you can also find more information about these remedies.

I deliberately give as much background information as possible, so that everyone is able to understand my thoughts, get an idea of what I am doing and act independently of me and my remedies.

I hope that this message reaches all of you in good and lasting health and that it will help us to emerge strengthened from this current situation.

With kind regards and distant hugs from Kaufbeuren,

Ariane Zappe

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Disclaimer

The contents of these pages are no healing statements. The diagnosis and therapy of diseases and other physical disorders requires treatment by doctors or alternative practitioners. The information on these pages is exclusively informative and should not be used as a substitute for medical treatment. The risk associated with an incorrect diagnosis or treatment can only be reduced by the involvement of a doctor or alternative practitioner. Especially in the case of children and pregnant women, or when breastfeeding and taking medication at the same time, ONLY act in consultation with a doctor or therapist!

None of the mentioned measures replaces the recommended behavioural measures for prophylaxis and prevention of epidemic spread!
1 Cytokine storm in severe covid-19 disease

What happens in the severe courses of Covid-19 respiratory disease? One word is often used: cytokine storm.

Cytokines are messenger substances from proteins, which are mainly released by immune cells. They can heat up (pro-inflammatory cytokines) or slow down (anti-inflammatory cytokines) immune reactions.

In case of a massive overreaction of the immune system, especially in the respiratory tract, an increased release of pro-inflammatory cytokines occurs. Study 4.1: "High serum levels of pro-inflammatory cytokines (IFN Interferon-γ, IL Interleukin-1, IL-6, IL-1 and TGFβ) ... Conversely, SARS patients with severe disease had very low levels of the anti-inflammatory cytokine, IL-10. ".

Exactly for these cases I developed two frequency chords (more info www.sophiaviva.de) of original substance already one year ago. The original cytokines from the laboratory were used as the basis with the aim of regulating the release and effect of these messenger substances:

**Frequency Chord Neuroinflammation Zytokine 1**
- based on the mainly pro-inflammatory cytokines
  - TNF-α, IFN-γ, Interleukine 1β, 6, 17

**Frequency Chord Neuroinflammation Zytokine 2**
- based on the mainly anti-inflammatory cytokines
  - TGF-β, BDNF (brain-derived neurotrophic factor), Interleukine 4, 10

Thus the two frequency chords neuroinflammation 1 and 2 are both prophylactically and in acute cases super important remedies for me.

Neuroinflammation Frequency chords have proven to be effective for the regulation of excessive immune reactions, especially in the nervous system | brain, as we see for example in neurological symptoms or concentration and attention disorders or after mild traumatic brain injury and brain movements after hits. In my new book "My Microbes are Me" you will find a detailed chapter on the topic of "Neuroinflammation".

**Andrographis (Kalmegh) may reduce this cytokine storm** (Study 4.3): "Treatment with andrographolides could increase survival, reduce lung pathology, decrease viral load and infection-induced expression of inflammatory cytokines".

All herbs that I have summarized in **VivaCalma** a long time ago have the potential to be anti-inflammatory.

In this cytokine storm, histamine is also increasingly released by mast cells in contact with corona virus (study 4.2): "Virally activated mast cells release early inflammatory chemical compounds including histamine and protease. This study was published very recently in February 2020!"
Therefore I am also considering my well-proven combination:

- **Frequency Chord Histamine**
- **VivaHista**, Herbs that have the potential, according to studies, to reduce histamine release and regulate the sensitivity of histamine receptors, thereby reducing histamine overreaction

## 2 Possible virus interference between flu vaccination and corona viruses

I expressly do NOT comment on the subject of vaccinations, but I would like to repeat the statement of the vaccination commission of 27.2.2020: there is NO general recommendation for flu vaccination during the Corona pandemic, contrary to what Mr. Spahn still said at the end of February! (chapter 7)

Today I would like to share studies and information that suggest that there may be cross-reactions, so-called viral interference, between flu vaccination and corona viruses. I deliberately dissociate myself from conspiracy theories, but make my research available here.

A significant virus interference between the flu vaccination and corona viruses was observed (Study 2.1, published in October 2019, “Receiving influenza vaccination may increase the risk of other respiratory viruses, a phenomenon known as virus interference. Receiving influenza vaccination may increase the risk of other respiratory viruses, a phenomenon known as virus interference. interference was significantly associated with coronavirus and human metapneumovirus“).

Study 5.2 comes to similar conclusions for children: “Over the following 9 months, TIV (flu vaccine substance) recipients had an increased risk of virologically-confirmed non-influenza infections. Being protected against influenza, TIV recipients may lack temporary non-specific immunity that protected against other respiratory viruses.”

According to these studies, it could be that flu vaccination increases the risk of developing more serious corona virus infections. According to the vaccination calendar of the STIKO (Standing Vaccination Commission of the Robert Koch Institute), flu vaccination is recommended annually from the age of 60 as a standard vaccination (7.1). Could this be one of the possible reasons why this pandemic affects mainly the elderly?
Here are the vaccination rates of over 65-year-olds in some countries from 2018

Source: https://data.oecd.org/healthcare/influenza-vaccination-rates.htm

In Italy and Spain, according to this survey, around 53% of people over 65 years of age are vaccinated against influenza. In Germany only 34.8%.

The Vaccination Commission also recommends that patients over 60 years of age as well as those with previous illnesses be vaccinated against influenza (see Chapter 7.2). The list of the above-mentioned groups of persons almost completely corresponds to the list of persons at particular risk for a serious Covid-19 disease.

After the SARS corona virus epidemic, there were various studies (under 6.) that recommend mass flu vaccination for health care workers and the elderly across the board, particularly in areas at risk of epidemics. The reason: should the corona viruses return, corona disease could be detected more quickly in this group, as influenza is less likely to occur with the vaccination.

Some time ago, I developed a frequency chord from numerous flu vaccines (www.sophiaviva.de, frequency chord influenza vaccines). I will certainly consider this in the future. Whether a virus interference can be mitigated with it, I cannot say at present.
3  My treatment strategy

First of all, I am now more alarmed with patients who have received a flu vaccination and I am focusing even more on curbing the inflammatory reactions as quickly as possible.

When treating my patients I take the following into consideration amongst others:

3.1  Regulate inflammatory reactions

- Frequency Chord Neuroinflammation 1 pro-inflammatory Cytokines
- Frequency Chord Neuroinflammation 2 anti-inflammatory Cytokines
- Frequency Chord Influenza Vaccines
- Frequency Chord Histamine

Prophylactically: 1-2 times a day one spray each into one side of the nose (reaches the brain immediately) and into the throat (reaches the lungs during the embryo collection)

Acute, depending on the severity, but in any case immediately in case of respiratory problems or shortness of breath: spray once every hour into the throat and breathe deeply. It can eventually be used more often if this improves the breathing quality and keeps the inflammation under control.

- Kalmegh (Andrographis) alcohol extract
- VivaCalma mixtures of herbal alcohol extracts
- VivaHista mixtures of herbal alcohol extracts

Prophylactically 2 x 5-15 drops each

Acute, depending on severity, also every 1-2 hours.

3.2  Symbiosis with viruses

- VivaRespira – Effect on coronaviruses with symptoms of the respiratory tract (see Info 2)
- VivaVira – Herbs with effect on viruses in general

Prophylactically 2 x 5-15 drops each
Acute, depending on severity, also every 1-2 hours.

- HNO Colloid, colloidal silver, gold, copper in the acute phase, spray 3-10 x day in nose and throat and inhale deeply
- Liquorice alcohol extract, 2-3 x 5-15 drops,
children 1-2 teaspoons of **liquorice juice**, (Attention: do not use if you have known high blood pressure!)

- **schwarzer Tee** als Getränk zur Hemmung der Replikation von Coronaviren im Darm
- **Zistrosen Tee** Zistrosenkraut 1 Teelöffel in einer Tasse heißem Wasser 15 Minuten ziehen lassen

### 3.3 Support and regeneration of the lungs

- **VivaPulma** – Herbs with supporting effect on the lungs and respiratory tract

  2 x 5-15 drops each, in acute cases also every 1-2 hours

- Inhale **propolis** (5-10 drops alcohol tincture in hot water and steam
- **essential oil rosemary**, inhale several times a day

### 3.4 Probiotic support of the microbial environment

I prefer to use the real fermentation vinegars, which have been fermented with mother vinegar bacteria for months and not heated. For example:

- **Thymian- und Salbeiessig** bei Viren
- **Fenchelessig** bei Beteiligung des Darms
- **Apfeleessig** als Breitband klassisches Mittel

  each ½ to 1 teaspoon in a little water, pull through the teeth, gargle, swallow.

- make your own probiotic nose and throat sprays as described in info 1,2

### 3.5 additionally

- in acute cases, i.v. **vitamin C**, between 50 and 200mg vitamin C i.v. per kilogram body weight, 3 days in a row
- **Vitamin D** is tested at the moment

Alcohol extracts can be put together in water to let the alcohol evaporate until the next dose, at least 3-4 hours.
4 Studies: Cytokine storm in severe Covid-19 disease

4.1 Study 1


Published online 2017 May 2. doi: 10.1007/s00281-017-0629-x

Pathogenic human coronavirus infections: causes and consequences of cytokine storm and immunopathology

Rudragouda Channappanavar and Stanley Perlman

Human coronaviruses (hCoVs) can be divided into low pathogenic and highly pathogenic coronaviruses. The low pathogenic CoVs infect the upper respiratory tract and cause mild, cold-like respiratory illness. In contrast, highly pathogenic hCoVs such as severe acute respiratory syndrome CoV (SARS-CoV) and Middle East respiratory syndrome CoV (MERS-CoV) predominantly infect lower airways and cause fatal pneumonia. Severe pneumonia caused by pathogenic hCoVs is often associated with rapid virus replication, massive inflammatory cell infiltration and elevated pro-inflammatory cytokine/chemokine responses resulting in acute lung injury (ALI), and acute respiratory distress syndrome (ARDS). Recent studies in experimentally infected animal strongly suggest a crucial role for virus-induced immunopathological events in causing fatal pneumonia after hCoV infections. Here we review the current understanding of how a dysregulated immune response may cause lung immunopathology leading to deleterious clinical manifestations after pathogenic hCoV infections.

High serum levels of pro-inflammatory cytokines (IFN-γ, IL-1, IL-6, IL-12, and TGFβ) and chemokines (CCL2, CXCL10, CXCL9, and IL-8) were found in SARS patients with severe disease compared to individuals with uncomplicated SARS [44–47]. Conversely, SARS patients with severe disease had very low levels of the anti-inflammatory cytokine, IL-10 [44]. In addition to pro-inflammatory cytokines and chemokines, individuals with lethal SARS showed elevated levels of IFN (IFN-α and IFN-γ) and IFN-stimulated genes (ISGs) (CXCL10 and CCL-2) compared to healthy controls or individuals with mild-moderate disease [48–51].

4.2 Mast cells, histamine and corona virus


Mast cells contribute to coronavirus-induced inflammation: new anti-inflammatory strategy.

Kritas SK1, Ronconi G2, Caraffa A3, Gallenga CE4, Ross R5, Conti P6.

Coronavirus can cause respiratory syndrome which to date has affected about twelve thousand individuals, especially in China. Coronavirus is interspecies and can also be transmitted from man to man, with an incubation ranging from 1 to 14 days. Human
coronavirus infections can induce not only mild to severe respiratory diseases, but also inflammation, high fever, cough, acute respiratory tract infection and dysfunction of internal organs that may lead to death. Coronavirus infection (regardless of the various types of corona virus) is primarily attacked by immune cells including mast cells (MCs), which are located in the submucosa of the respiratory tract and in the nasal cavity and represent a barrier of protection against microorganisms. Viral activate MCs release early inflammatory chemical compounds including histamine and protease; while late activation provoke the generation of pro-inflammatory IL-1 family members including IL-1, IL-6 and IL-33. Here, we propose for the first time that inflammation by coronavirus maybe inhibited by anti-inflammatory cytokines belonging to the IL-1 family members.

4.3 Andrographis (Kalmegh)


Andrographolide inhibits influenza A virus-induced inflammation in a murine model through NF-κB and JAK-STAT signaling pathway.

_Ding Y^1, Chen L^1, Wu W^1, Yang J^1, Yang Z^2, Liu S^3._

Influenza viruses, the main cause of respiratory tract diseases, cause high morbidity and mortality in humans. Excessive inflammation in the lungs is proposed to be a hallmark for the severe influenza virus infection, especially influenza A virus infection. Strategies against inflammation induced by influenza A virus infection could be a potential anti-influenza therapy. Here, lethal dose of mouse-adapted H1N1 strain PR8A/PR/8/34 was inoculated C57BL/6 mice to detect the anti-influenza activity of andrographolide, the active component of traditional Chinese medicinal herb Andrographis paniculata, with or without influenza virus entry inhibitor CL-385319. Treatment was initiated on 4 days after infection. The survival rate, body weight, lung pathology, viral loads, cytokine expression were monitored in 14 days post inoculation. The combination group had the highest survival rate. Andrographolide treatment could increase the survival rate, diminish lung pathology, decrease the virus loads and the inflammatory cytokines expression induced by infection. (Die Behandlung mit Andrographoliden könnte die Überlebensrate erhöhen, die Lungenpathologie vermindern, die Viruslast und die durch die Infektion induzierte Expression von Entzündungszytokinen verringern.) Mechanism studies showed the NF-κB and JAK-STAT signaling pathway were involved in the activity of andrographolide. In conclusion, combination of virus entry inhibitor with immunomodulator might be a promising therapeutic approach for influenza.
5  Studies: Virus interference flu vaccination and corona viruses

5.1  Study 1


Influenza vaccination and respiratory virus interference among Department of Defense personnel during the 2017-2018 influenza season.

Wolff GG1.

Receiving influenza vaccination may increase the risk of other respiratory viruses, a phenomenon known as virus interference. Test-negative study designs are often utilized to calculate influenza vaccine effectiveness. The virus interference phenomenon goes against the basic assumption of the test-negative vaccine effectiveness study that vaccination does not change the risk of infection with other respiratory illness, thus potentially biasing vaccine effectiveness results in the positive direction. This study aimed to investigate virus interference by comparing respiratory virus status among Department of Defense personnel based on their influenza vaccination status. Furthermore, individual respiratory viruses and their association with influenza vaccination were examined.

CONCLUSIONS:
Receipt of influenza vaccination was not associated with virus interference among our population. Examining virus interference by specific respiratory viruses showed mixed results. Vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus (Impfstoff abgeleitete Virus-Interferenz war signifikant mit dem Coronavirus und dem menschlichen Metapneumovirus assoziiert); however, significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections.

5.2  Study 2


PMCID: PMC3404712
PMID: 22423139

Increased Risk of Noninfluenza Respiratory Virus Infections Associated With Receipt of Inactivated Influenza Vaccine
We randomized 115 children to trivalent inactivated influenza vaccine (TIV) or placebo. Over the following 9 months, TIV recipients had an increased risk of virologically-confirmed non-influenza infections (relative risk: 4.40; 95% confidence interval: 1.31-14.8). Being protected against influenza, TIV recipients may lack temporary non-specific immunity that protected against other respiratory viruses.

The increased risk could also indicate a real effect. Receipt of TIV could increase influenza immunity at the expense of reduced immunity to noninfluenza respiratory viruses, by some unknown biological mechanism. Alternatively, our results could be explained by temporary nonspecific immunity after influenza virus infection, through the cell-mediated response or, more likely, the innate immune response to infection [21–23]. Participants who received TIV would have been protected against influenza in February 2009 but then would not have had heightened nonspecific immunity in the following weeks. They would then face a higher risk of certain other virus infections in March 2009, compared with placebo recipients (Figure 1). The duration of any temporary nonspecific immunity remains uncertain [13] but could be of the order of 2–4 weeks based on these observations. It is less likely that the interference observed here could be explained by reduced community exposures during convalescence (ie, behavioral rather than immunologic factors) [14].

The phenomenon of virus interference has been well known in virology for >60 years [24–27]. Ecological studies have reported phenomena potentially explained by viral interference [3–11]. Nonspecific immunity against noninfluenza respiratory viruses was reported in children for 1–2 weeks after receipt of live attenuated influenza vaccine [28]. Interference in respiratory and gastrointestinal infections has been reported after receipt of live oral poliovirus vaccine [29–32].

6 Studies: Recommendation on influenza vaccination in SARS epidemic areas

6.1 Study 1


Influenza vaccine enlisted to prevent SARS confusion.

_Schlagenhauf P._

Starting in November (2003), the Hong Kong government plans to provide influenza vaccines to high-risk groups such as health-care workers, the elderly, and the disabled.

Speaking at a media briefing last week, Hong Kong’s new Director of Health, Lam Ping-yan, said that influenza jabs would be given to all health-care workers and to about 59 000 elderly and 10 000 disabled people. He explained the reasoning behind this initiative:
“Hopefully, if SARS [severe acute respiratory syndrome] actually comes back we will be able to distinguish between SARS and influenza because of the widespread vaccine programme.”

6.2 Study 2


The utility of preemptive mass influenza vaccination in controlling a sars outbreak during flu season.

Zeng Q\textsuperscript{1}, Khan K, Wu J, Zhu H.

Abstract

During flu season, respiratory infections can cause non-specific influenza-like-illnesses (ILIIs) in up to one-half of the general population. If a future SARS outbreak were to coincide with flu season, it would become exceptionally difficult to distinguish SARS rapidly and accurately from other ILIs, given the non-specific clinical presentation of SARS and the current lack of a widely available, rapid, diagnostic test. We construct a deterministic compartmental model to examine the potential impact of preemptive mass influenza vaccination on SARS containment during a hypothetical SARS outbreak coinciding with a peak flu season. Our model was developed based upon the events of the 2003 SARS outbreak in Toronto, Canada. The relationship of different vaccination rates for influenza and the corresponding required quarantine rates for individuals who are exposed to SARS was analyzed and simulated under different assumptions. The study revealed that a campaign of mass influenza vaccination prior to the onset of flu season could aid the containment of a future SARS outbreak by decreasing the total number of persons with ILIs presenting to the health-care system, and consequently decreasing nosocomial transmission of SARS in persons under investigation for the disease.
7 Vaccination Recommendations STIKO Robert-Koch-Instituts 2019/20

7.1 Vaccination calendar August, 22nd, 2019

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7.2 Vaccination recommendations STIKO Robert-Koch-Institute

Date: 03.09.2019

The Standing Vaccination Commission (STIKO) recommends influenza vaccination

- for all persons over 60 years of age (see "Why should older people necessarily be vaccinated against influenza?")

- for all pregnant women from the 2nd trimester onwards, in case of increased health risk due to a basic illness from the 1st trimester onwards (see "Why is seasonal influenza vaccination also recommended for pregnant women?")

- for persons with an increased health risk due to a basic disease (such as chronic diseases of the respiratory organs, cardiovascular diseases, liver or kidney diseases, diabetes or other metabolic diseases, chronic neurological basic diseases such as multiple sclerosis with infection-triggered attacks, congenital or acquired immunodeficiency or HIV) (see "Why should persons with basic diseases be vaccinated against influenza?")

- for residents of old people’s homes or nursing homes and for
- Persons who, as a possible source of infection, may endanger persons at risk (see above) living in the same household or being cared for by them

Vaccination should also be carried out in the context of an increased occupational risk

- Persons with increased risk (e.g. medical personnel),

- Persons in facilities with extensive public traffic,

- Persons who may act as a possible source of infection for persons at risk who are under their care.

Persons in direct contact with poultry and wild birds should also be vaccinated (although vaccination does not protect against avian influenza, it does prevent problematic double infections).

7.3 STIKO regarding flu vaccination during Corona Pandemic

„Mertens is head of the Permanent Vaccination Commission (Stiko) at the Robert Koch Institute, which publishes vaccination recommendations for Germany. Stiko would therefore not make a general recommendation on influenza vaccination, says Mertens. "It is not trivial to vaccinate all 80 million Germans without having any data, what would be the additional positive effect of that." This is the opposite of evidence-based medicine. But that is exactly what Stiko's recommendations are based on, and not just on expert opinions."