

From: (Ex-) sepsis patients and relatives

In this represented by Idelette Nutma Sepsis en daarna, patient platform

Supported by Prof. Dr. H.M Oudemans-van Straaten, Emeritus, Amsterdam UMC

Dr. Ir. R. Graaff, assistant professor, UMCG, retired

To: The Minister of Health, Welfare and Sport, H.M.de Jonge

Subject: Provision of intravenous vitamin C as an adjuvant treatment COVID-19 in intensive care patients

In the midst of this Corona crisis, the (ex-) sepsis patient platform Sepsis and afterwards addresses you with an emergency call for the provision of a promising treatment of COVID-19 for intensive care patients, namely a high dose of vitamin C via the intravenous drip. Ex-sepsis patients have experienced first-hand what it means to suffer from a severe sepsis.

The impact of the COVID-19 virus on public health and the economy is enormous. We do not yet have a vaccine and the immunity level in the population is low, which means that many patients will still be infected. More than 20% of COVID-19 patients admitted to intensive care units die and there is no specific treatment against this infection. On the other hand, there is a drug that potentially increases resistance to infection and can reduce the harmful effects of the virus, pneumonia with leakage. This product is currently insufficiently available for intensive care patients in the Netherlands and from time to time not at all. We are talking about:

#### *Intravenous Vitamin C as part of the treatment protocol for COVID-19*

For vitamin C to be effective in intensive care patients, it must be given as a drip in a high dose for several days. The intravenous form is currently not available in the Netherlands. We ask you to commit to the production of intravenous vitamin C in the Netherlands. The raw material for this is prepared in the Netherlands (DSM).

The scientific evidence for the effectiveness of vitamin C in the basic sciences is enormous. Its application in intensive care patients with an overwhelming infection ("sepsis") has been investigated in recent years. On April 24 a large international vitamin C symposium would take place in Amsterdam <https://www.vitaminc2020.eu/>. It is a great pity that this has not happened.

#### *Role of Vitamin C.*

The first groundbreaking study of adjuvant treatment of patients with severe sepsis with a cocktail with high doses of vitamin C by Paul Marik, a celebrity in the intensive care world, head of the intensive care unit of Sentara Norfolk General Hospital (USA) found a decrease in mortality from 40% to 8%. Other studies followed, including a randomized study by the Alpha Fowler group in patients who had to be ventilated as a result of sepsis for severe lung disease, similar to COVID-19. The reason for the beneficial effect of vitamin C is that it strengthens the resistance of white blood cells to clear

the virus, reduces the inflammatory response in the lung and traps oxygen radicals. Oxygen radicals play a role in the immune system, but are produced in excess in case of a severe infection and then cause damage to the lung and other organs. Vitamin C captures them and is then recycled. It now appears that the vitamin C level is severely reduced in sepsis. The need is great and recycling is inadequate. Vitamin C can thus play an essential role in adjusting the 'pathway' that leads to the failure of organs during a viral sepsis (such as COVID-19), which requires intensive care treatment. Short-term adjuvant treatment with a high dose of Vitamin C via the drip can limit damage in the lung and promote patient recovery. Since overwhelming infection requires high levels and limited absorption in the gut, intravenous administration is necessary. More studies are needed to strengthen the scientific evidence of vitamin C's effectiveness in pneumonia that requires ventilation, but its safety has been established in several large studies. Vitamin C is part of the treatment protocol for severe COVID-19 infection in various centers around the world, including in the USA and in Shanghai. We therefore believe that the possibility should be created to treat intensive care patients with severe COVID-19 infection with high doses of intravenous vitamin C for a short period of time. In addition, intravenous vitamin C must become sufficiently available again for all intensive care patients to meet the daily requirement.

### *The ethical aspect, the voice of the patient*

This letter expresses a cry for help from the patient. The risks of the Corona virus and thus the number of patients with a serious infection in our country will continue to put pressure on our hospitals, health care and society for a long time to come, and the personal suffering of patients, relatives and relatives remains high. The overwhelming effects of the Corona virus require new, unbeaten roads. From that point of view, all "adult partners in this battle" who can limit or prevent even part of the damage, including high-dose vitamin C therapy, deserve a chance. While other treatments with little clinical evidence and greater risks such as the administration of antibodies and certain antivirals are gaining the benefit of the doubt and are part of the treatment protocol, it is incomprehensible that patients with a severe COVID-19 infection in the Netherlands cannot access a potentially life-saving inexpensive treatment that has shown no side effects in large intensive care studies. That is poignant. So there is every reason to embrace treatment with vitamin C. More than ever, infected patients in hospitals now need vitamin C to boost their immune systems and limit damage from the virus. Control from above is necessary We ask the minister to ensure the production of intravenous vitamin C in the Netherlands is being intensified and that intravenous vitamin C will be widely available in the Netherlands to provide maximum support for the treatment and recovery of intensive care patients.

Sincerely and best regards,

(Ex-) sepsis patients and relatives,

Idelette Nutma

Sepsis en daarna, patient platform

[www.sepsis-en-daarna.nl](http://www.sepsis-en-daarna.nl)

Tel: 06-41271004

Email: [nutma@sepsis-en-daarna.nl](mailto:nutma@sepsis-en-daarna.nl)

Supported by

Dr. Ir. R. Graaff, Assistant Professor UMCG, retired.

Prof. Dr. H.M Oudemans-van Straaten, emeritus professor of intensive care medicine, Amsterdam UMC location VUmc.