

# VIRUS REPRODUCTION IN CORRELATION WITH LOW PH

SOCIAL MEDIA REPORT  
JULY / SEPTEMBER 2020



The Solution for a Healthy Daily  
pH Balance

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**INFORMATION &  
RESEARCH PROVIDED BY**

PATHELEN HEALTHCARE AG 

**PREPARED BY**

UNIPHARMA GROUP 



# BACKGROUND

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**'PATHELEN® ALKALINE VITALITY COMPLEX' IS AN ADDITIONAL PRODUCT OF PHC, WHICH RECENTLY PASSED THE TEST PHASE AND IS SCHEDULED FOR MARKET ENTRY IN Q3 2020. DUE TO ITS INGREDIENTS AND THE UNIQUE MANUFACTURING PROCESS, PATHELEN® ALKALINE VITALITY COMPLEX PROMOTES HEALTHY IMMUNE FUNCTIONS**

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Pathelen Health Care AG is a public limited company under Swiss law, founded in 2014 by the main shareholder, CEO and Head of Development, Andreas Tausch. The company specializes in the development of medical products and supplements based on the scientific findings of modern medicine and the experience of naturopathy. PHC's main product is Pathelen® Hybrid, a Medical Device Class I, which is approved and registered in the EU, Switzerland, Turkey and Canada as well as Ghana and Nigeria.

Pathelen® Hybrid is a medical treatment for chronic wounds that is able to eliminate biofilms and to generate granulating tissue within a short period time, in general within five to ten days.

The dietary supplement 'Pathelen® Alkaline Vitality Complex' is an additional product of PHC, which recently passed the test phase and is scheduled for market entry in Q3 2020. Due to its ingredients and the unique manufacturing process, Pathelen® Alkaline Vitality Complex promotes healthy immune functions and could be used in a wide variety of scenarios. The main focus of PHC's research is on two areas that are considered very difficult in clinical practice and whose chances of success in treatment are considered low: The management of chronic wounds and the hyperacidity of the human body as a cause of chronic diseases.

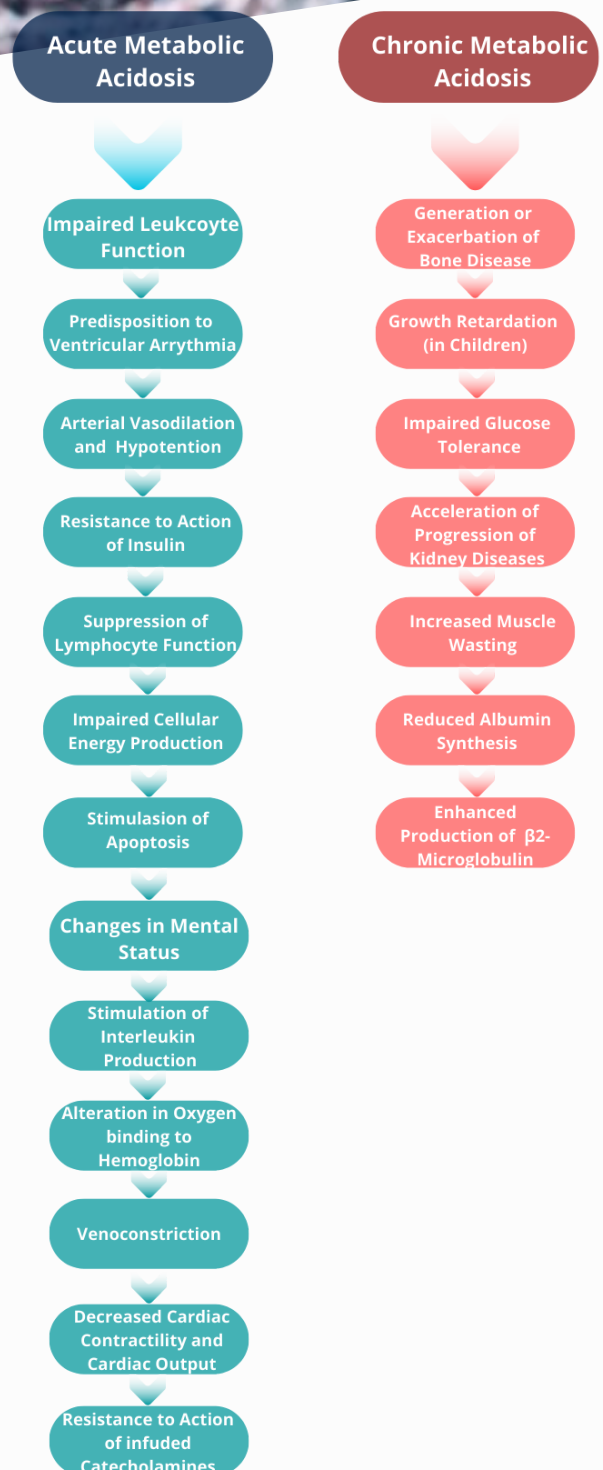


# ACIDOSIS AS A ROOT CAUSE FOR MANY DISEASES

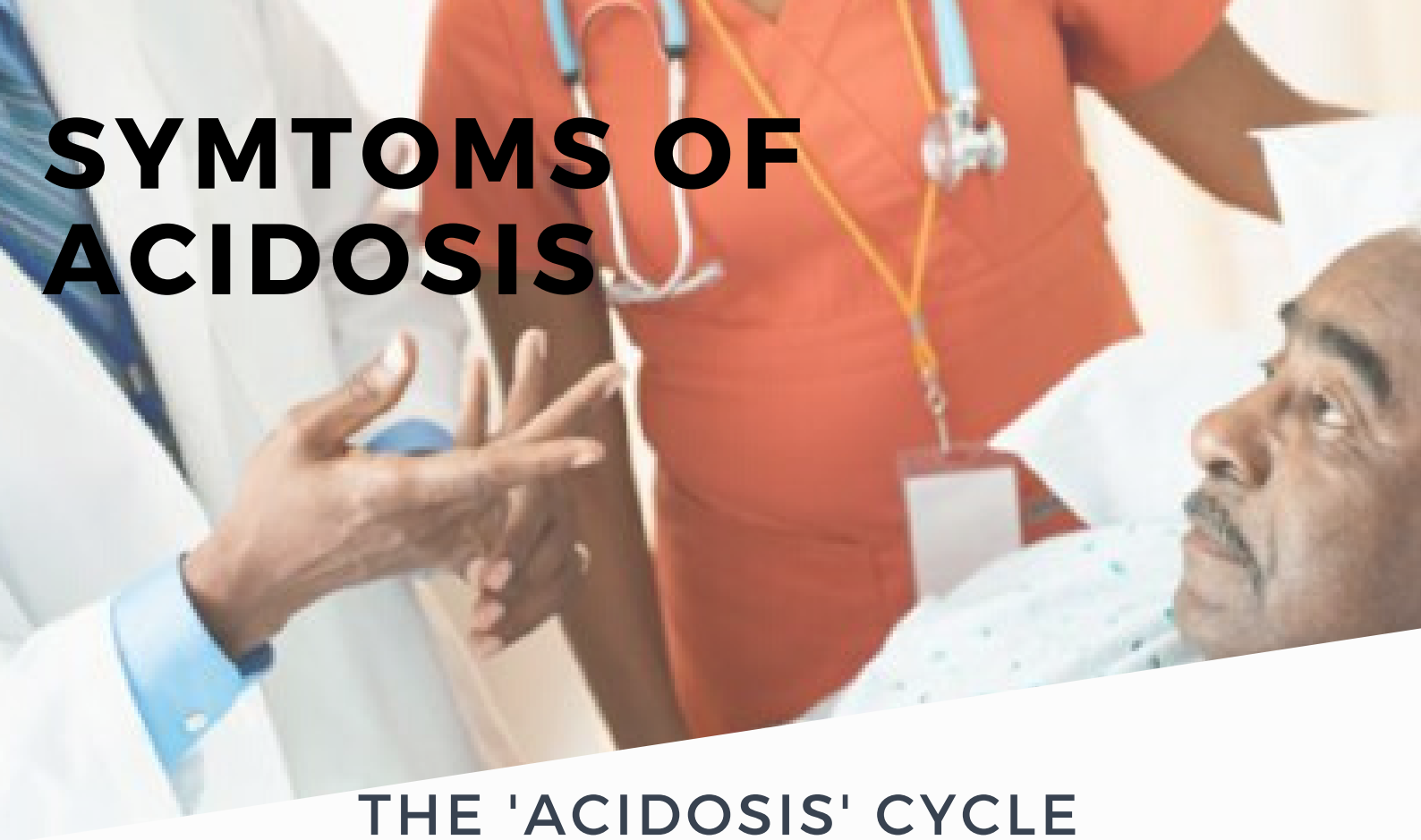
The idea that “being too acidic” contributes to disease susceptibility, especially cancer, has been around for a long time in the natural/integrative medicine world. This concept was easily discounted by conventional medicine as measuring blood pH on various types of diets showed no change.

Up until about 10 years ago, no research existed to counter this skepticism; However, since then, a growing body of research has documented not only that “acidosis” is a real phenomenon, but that it is now known to contribute to a wide range of diseases, such as metabolic syndrome, cancer, osteoporosis, kidney stones, and increased susceptibility to environmental toxins—and new research is adding to the list.”

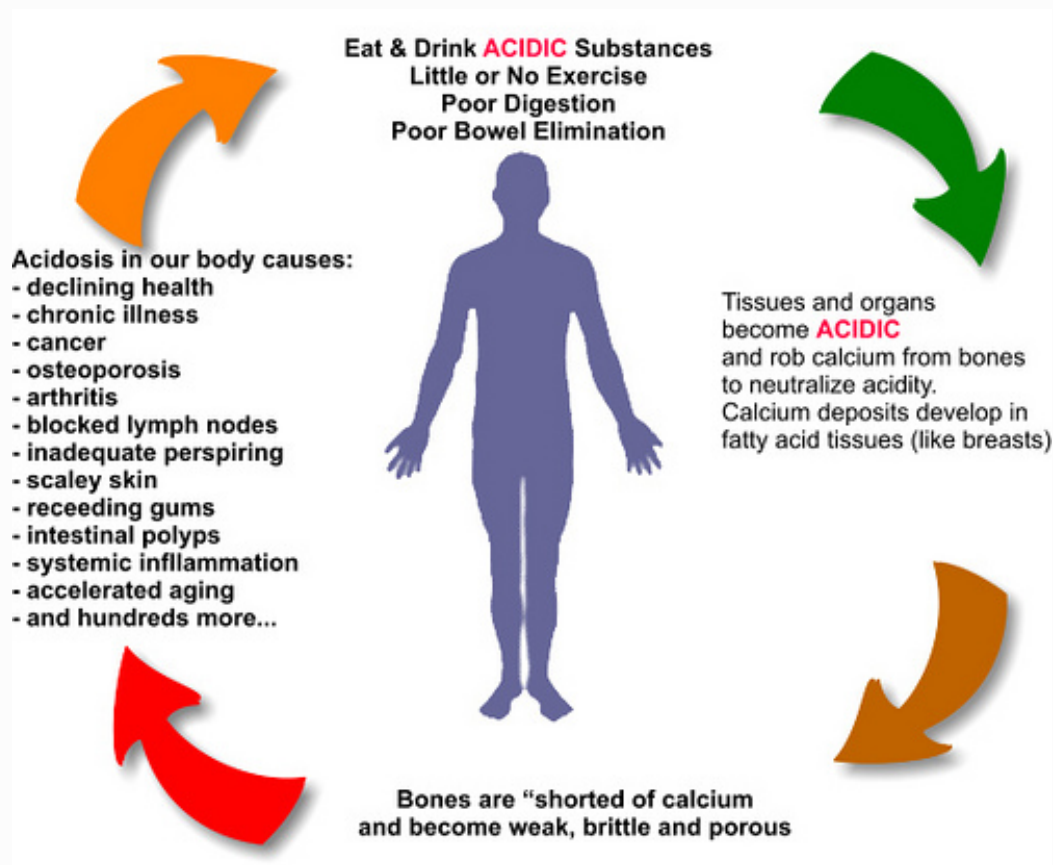
[Joseph Pizzorno, *Acidosis: An Old Idea Validated by New Research*, Integr Med (Encinitas). 2015 Feb; 14(1): 8–12.]



# SYMPTOMS OF ACIDOSIS



## THE 'ACIDOSIS' CYCLE



Understanding the effects of acid-base balance on the inflammatory response is highly relevant to clinical medicine for a variety of reasons. First, current deficiencies in our understanding of the effects of acidosis on a wide range of cellular processes have led to controversy in the way in which patients are managed in a variety of clinical settings. Most clinicians tend to ignore the effects of exogenous  $\text{Cl}^-$  on  $\text{pH}_o$ , but many will treat even mild forms of acidemia. In addition, all forms of metabolic acidosis appear to be associated with prolonged hospital and intensive care unit length of stay. **Because metabolic acidosis is both commonly caused and treated by clinicians, an understanding of the physiologic consequences of altered  $\text{pH}_o$  is imperative.**





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## EXAMPLES OF DISEASES & CONDITIONS THAT ARE CAUSED BY HYPERACIDITY

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There are different mechanisms, especially acids in our body that lead directly and indirectly to various disease symptoms, with some being life-threatening diseases.

In an acid environment, certain diseases and illnesses develop extremely well, conversely these illnesses overacidify our body even more, a vicious circle!

- |                                  |                        |                    |                         |                                  |
|----------------------------------|------------------------|--------------------|-------------------------|----------------------------------|
| SKIN DISEASES                    | WEAK CONNECTED TISSUE  | ASTHMA             | HIGH CHOLESTEROL        | TOOTH DECAY                      |
| ALLERGIES                        | BLADDER & GALL STONES  | EYE PROBLEMS       | INTESTINAL HYPERACIDITY | CANCER                           |
| AGEING                           | HIGH BLOOD PRESSURE    | HERNIATED DISC     | INTESTINAL ULCERS       | IRRITATION OF THE NERVOUS SYSTEM |
| LACK OF DRIVE                    | BRONCHITIS             | DEPRESSION         | DIABETES                | SLEEP DISORDERS                  |
| ARTERIOSCLEROSIS                 | BEXHAUSTION SYNDROMENT | DEPRESSION         | CIRCULATORY DISORDERS   | MENOPAUSAL SYMPTOMS              |
| ARTHRITIS/ RHEUMATISM/ ARTHROSIS | BEXHAUSTION SYNDROMENT | DIARRHOEA          | PURULENT TONCILS        | LACK OF CONCENTRATION            |
| HEMORRHOIDS                      | CELLULITE              | FEVER              | GRAY HAIR/ HAIR LOSS    | MULTIPLE SCLEROSIS               |
| PATHOGEN INFECTION               | PREMENSTRUAL SYNDROME  | IRRITIBILITY       | BACK PAIN               | FUNGAL INFECTION                 |
| SUSCEPTIBILITY TO STRESS         | OBISITY                | SKIN ULCERS        | PREMATURE AGING         | STROKE                           |
| GASTRITIS                        | GOUT                   | HEART ATTACK       | HAY FEVER               | HEARTBURNE                       |
| CATARACT                         | LYME DISEASE           | WEAK IMMUNE SYSTEM | CHILDLESSNESS           |                                  |



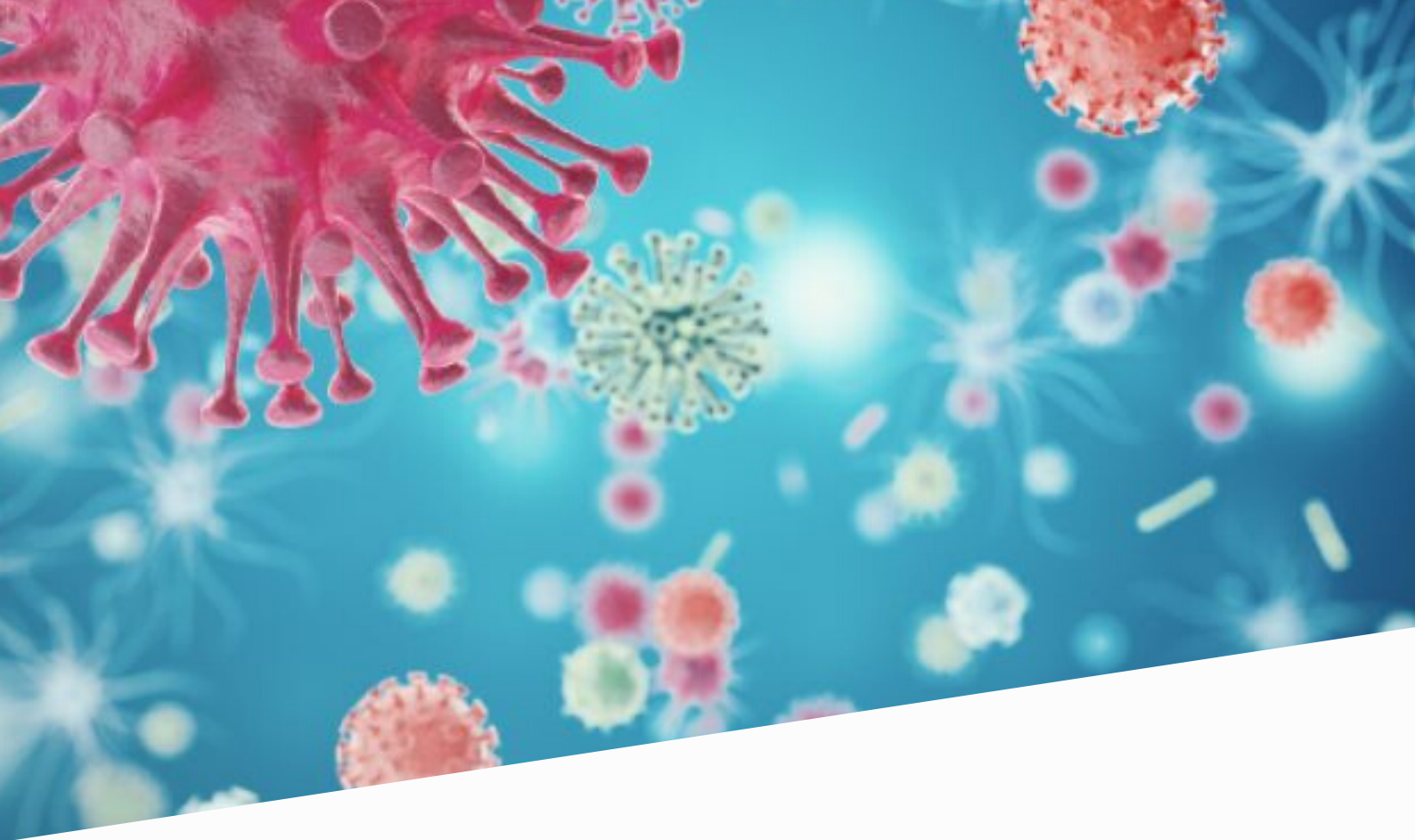
# VIRUS PRODUCTION IN CORRELATION WITH LOW PH

Infection by membrane-enveloped viruses requires the binding of receptors on the target cell membrane to glycoproteins, or “spikes,” on the viral membrane. The initial entry mechanism is usually classified fusogenic or endocytic. However, binding of viral spikes to cell surface receptors not only initiates the viral adhesion and the wrapping process necessary for internalization but can simultaneously initiate direct fusion with the cell membrane. Both fusion and internalization have been observed to be viable pathways for many viruses. Concerning the family of coronaviruses and especially SARS-CoV 2 medical research states the following:

While severe acute respiratory syndrome coronavirus (SARS-CoV) was initially thought to enter cells through direct fusion with the plasma membrane, more recent evidence suggests that virus entry may also involve endocytosis. We have found that SARS-CoV enters cells via pH- and receptor-dependent endocytosis.

[...] Further analyses using specific endocytic pathway inhibitors and dominant-negative Eps15 as well as caveolin-1 colocalization study suggested, that virus entry was mediated by a clathrin- and caveolae-independent mechanism. [*Hongliang Wang, Peng Yang, Kangtai Liu, Feng Guo, Yanli Zhang, Gongyi Zhang, Chengyu Jiang, “SARS coronavirus entry into host cells through a novel clathrin- and caveolae-independent endocytic pathway”, Cell Research (2008) 18:290-301*].

Coronaviruses are the causative agents of respiratory disease in humans and animals, including severe acute respiratory syndrome. Fusion of coronaviruses is generally thought to occur at neutral pH, although there is also evidence for a role of acidic endosomes during entry of a variety of coronaviruses. Therefore, the molecular basis of coronavirus fusion during entry into host cells remains incompletely defined.



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**HERE, WE EXAMINED CORONAVIRUS-CELL FUSION AND ENTRY EMPLOYING THE AVIAN CORONAVIRUS INFECTIOUS BRONCHITIS VIRUS (IBV). VIRUS ENTRY INTO CELLS WAS INHIBITED BY ACIDOTROPIC BASES AND BY OTHER INHIBITORS OF PH-DEPENDENT ENDOCYTOSIS.**

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[...] Using an established assay of virus-cell fusion, we show here that fusion of the coronavirus IBV with host cells does not occur at neutral pH and that fusion activation is a low-pH-dependent process, with a half-maximal rate of fusion at pH 5.5. Little or no fusion occurred above a pH of 6.0. The pH optimum for fusion was 5.0 at 37°C, where fusion occurred rapidly, reaching maximal extent (approximately 40%) within 60s. Fusion still occurred at lower temperatures (e.g. 20°C), albeit with reduced kinetics and extent. As such, the coronavirus IBV shows many similarities

“to pH-dependent viruses, such as influenza virus or VSV, and little or no similarity to retroviruses or paramyxoviruses, which fuse at neutral pH. [Chu VC], McElroy LJ, Chu V, Bauman BE, Whittaker GR.

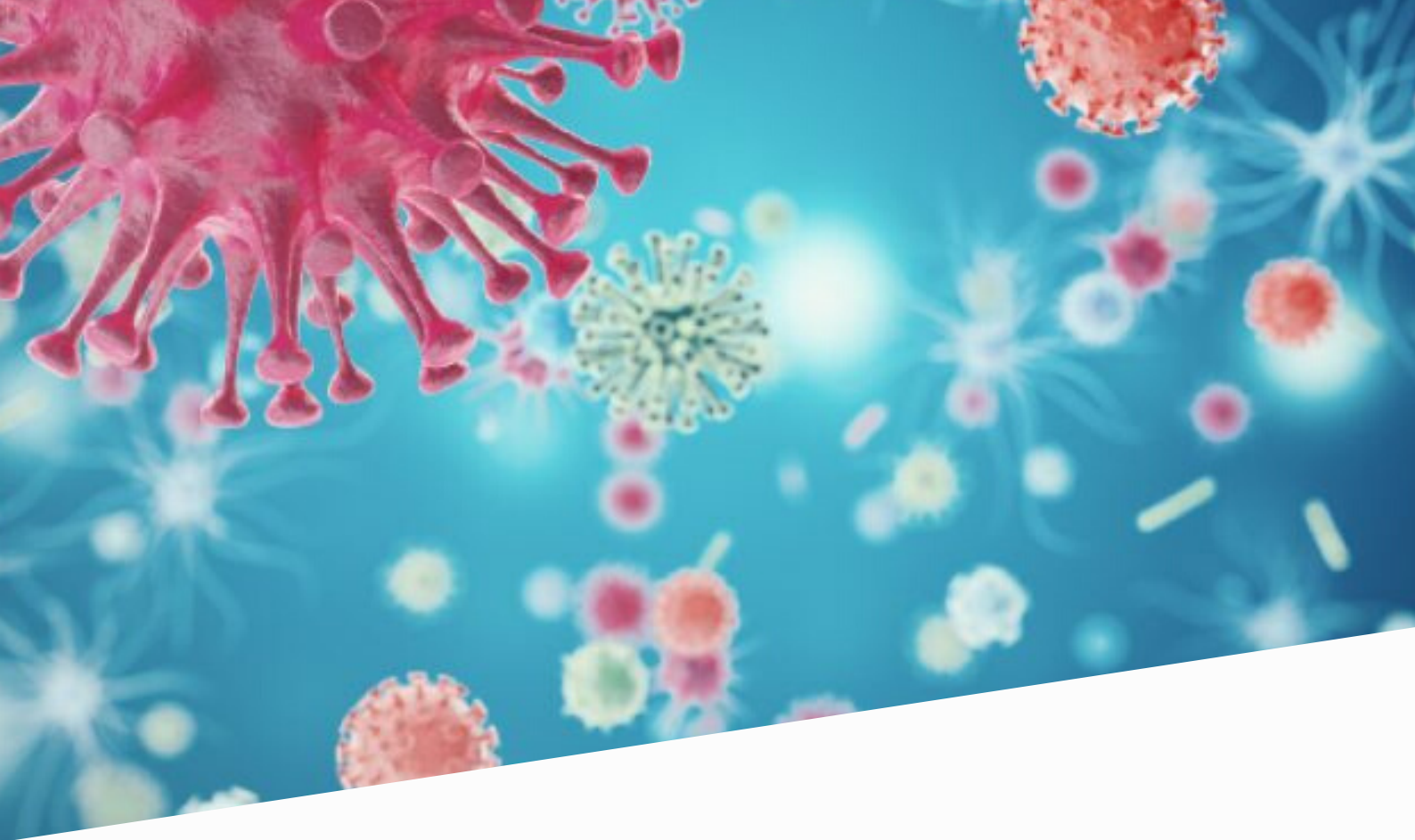
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**“THE AVIAN CORONAVIRUS INFECTIOUS BRONCHITIS VIRUS UNDERGOES DIRECT LOW-PH-DEPENDENT FUSION ACTIVATION DURING ENTRY INTO HOST CELLS”, *JOURNAL OF VIROLOGY*, APR. 2006, P. 3180–3188].**

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[...] At present, the entry mechanisms and the implication of the endocytic pathway of the new emerging SARS-CoV-2 have not been reported directly. It is now known that SARS-CoV-2 utilizes the same receptor of SARS-CoV, which is angiotensin converting enzyme II (ACE2) for viral entry into the host cells. ACE2 transcripts was originally only found in heart, kidney and testis of human.





However, it was later found that ACE2 protein expresses abundantly in the epithelia of the human lung and small intestine. Since SARS-CoV-2 also binds to the same ACE2 receptor as SARS-CoV and SARS-CoV-2 is also susceptible to the inhibitory effect of chloroquine (CQ), a lysosomotropic agent, it is highly possible that this new CoV utilizes the same endocytic pathway for entry into the host cells. Understanding this mechanism is important in the search of effective therapeutic agents in the treatment of COVID-19 caused by this new CoV. [Yang N, Shen HM. Targeting the Endocytic Pathway and Autophagy Process as a Novel Therapeutic Strategy in COVID-19. *Int J Biol Sci* 2020; 16(10):1724-1731].

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**CONSIDERING THE  
AFOREMENTIONED RESEARCH, IT  
CAN BE ASSUMED THAT SARS-COV  
2'S ENTRY MECHANISM IS SIMILAR TO  
THAT OF THE KNOWN FAMILY OF  
CORONAVIRUSES. THUS, THE  
INTRACELLULAR PH (PHI) PLAYS A  
CRUCIAL ROLE IN VIRUS  
REPRODUCTION. WHILE A LOW OR  
ACIDIC PHI PROMOTES THE  
REPRODUCTION PROCESS, A HIGH  
OR ALKALINE PHI INHIBITS IT.**

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Current research focuses on Chloroquine as a potential treatment:

SARS-CoV-2 delivery of virus particles into the host cell requires binding of the virus to cellular receptors followed by a clathrin-mediated endocytosis to create a viral endosome. This process is mediated by a viral surface glycoprotein termed Spike, a homotrimer of S proteins, binding to the type I integral membrane receptor angiotensin-converting enzyme-2 (ACE2), followed by a pH-independent endocytotic reaction.



[...] Once internalized, only then does the fusion of virus with lysosomes depend on a low endosomal and lysosomal pH.

[...] Chloroquine (CQ) is a 4 aminoquinoline discovered in 1934 and has predominantly been used to prevent and treat malaria. In addition, it has been used as an anti-inflammatory agent for the treatment of a number of diseases. CQ and its derivatives act as weak bases, which preferentially accumulate within intracellular compartments (including endosomes, lysosomes, and Golgi vesicles) causing a number of downstream effects; in particular, a relative increase in the endosomal and lysosomal pH although the mechanism of action of CQ remains under continuous study in modern molecular medicine. [...] The most common adverse effect of these antimalarial drugs are gastrointestinal effects including nausea, vomiting, diarrhea, and abdominal discomfort. An important consideration is that several studies have reported the incidence of cardiotoxic effects, including rhythm disorders (such as a prolonged QT Interval and the development of

cardiomyopathy in patients with rheumatic diseases [...] *[John E. Kearney, B.S., Department of Family Medicine, University of Washington School of Medicine, "Chloroquine as a Potential Treatment and Prevention Measure for the 2019 Novel Coronavirus: A Review", 17.3.2020, not peer-reviewed]*

Acidic extracellular pH caused rapid intracellular acidification, and the IL-1 $\beta$ -inducing effect of acidic medium could be mimicked by acidifying the cytosol with bafilomycin A1, a proton pump inhibitor. [...] In support of this idea, a considerable drop in intracellular pH has been shown to occur during early apoptosis and to enhance the activation of apoptotic caspases by the apoptosome complex. *[Kristiina Rajamäki, Tommy Nordström, Katariina Nurmi, Karl E.O. Åkerman, Petri T. Kovanen, Katariina Öörni, Kari K. Eklund, "Extracellular acidosis is a novel danger signal alerting innate immunity", March 25, 2013 Journal of Biological Chemistry]*

In addition, extracellular acidification may exert its effects by altering [...] intracellular pH (pHi). Indeed, several studies have identified a relationship between pHi and pHo, regardless of which milieu is altered experimentally. For example, when pHo was increased a subsequent increase in pHi, mediated by the N+/H+ exchanger (NHE-1), was observed, along with augmented leukotriene release by neutrophils. These events were followed by extracellular acidification. [John A Kellum, Mingchen Song, and Jinyou Li, "Extracellular acidosis and the immune response: clinical and physiologic implications", *Critical Care*. 2004; 8(5): 331–336].

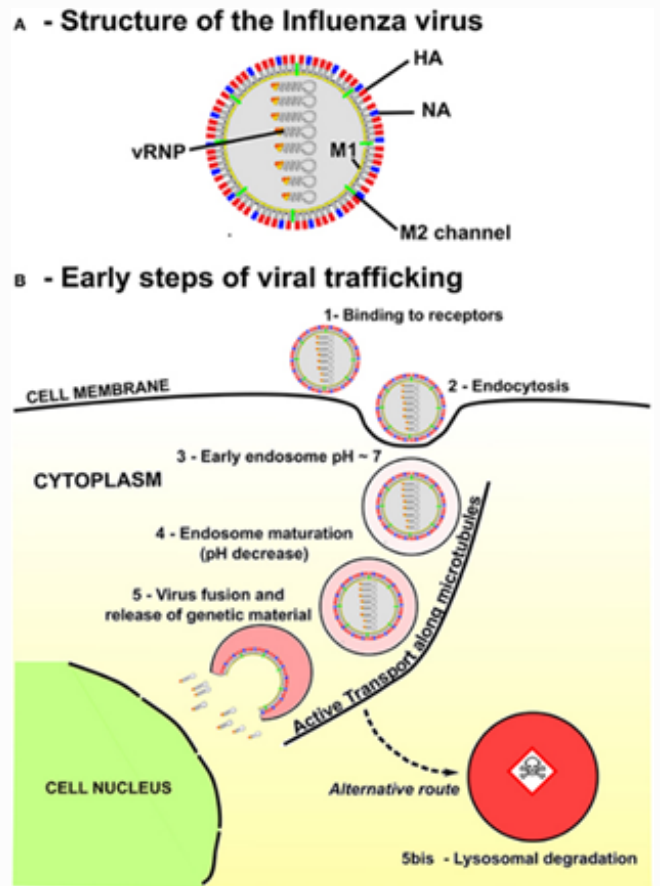


Figure 1 pH levels and reproduction success rate of the corona IBV

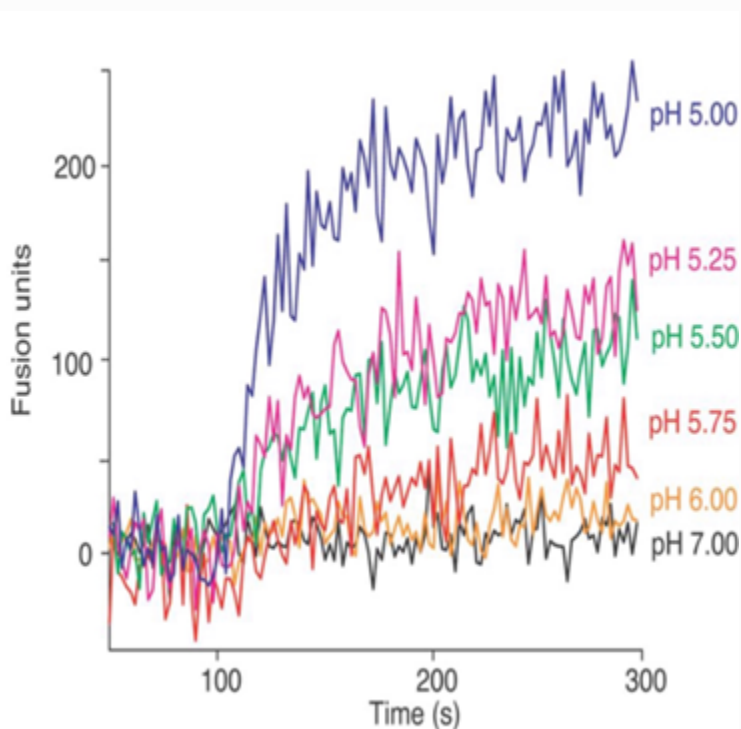


Figure 2 pH levels of the endocytic entry of the influenza virus

While the drug **Chloroquine** is currently tested as a potential treatment to raise intracellular pH, this treatment **would not be without severe side effects**. Since it seems to be established that a raise in extracellular pH triggers a subsequent raise in intracellular pH, medical research should focus on the question whether an agent that is capable of raising extracellular pH could raise intracellular pH without side effects and thus inhibit virus reproduction.





# VIRUS REPRODUCTION AND IMMUNE RESPONSES

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**EVEN MORE IMPORTANT THAN THE QUESTION IF AN ALKALINE EXTRACELLULAR PH COULD INHIBIT VIRUS REPRODUCTION, IS THE QUESTION, IF A FULLY FUNCTIONING IMMUNE SYSTEM IS ABLE TO FIGHT OFF THE VIRUS.**

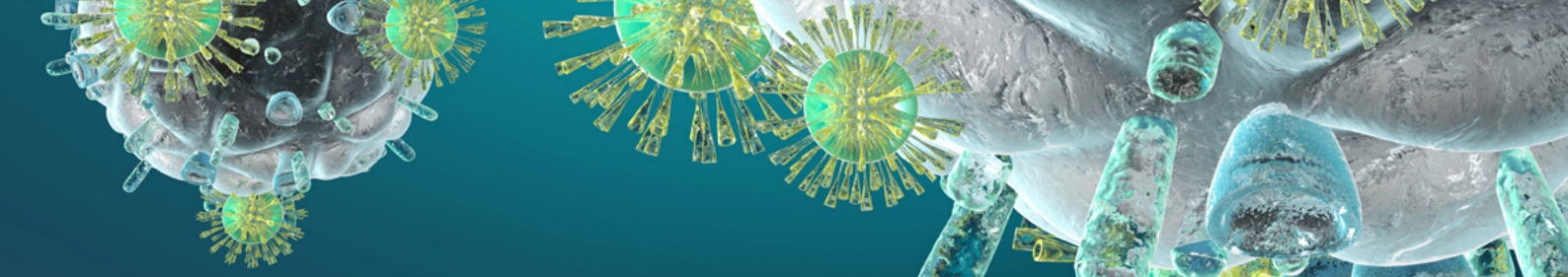
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In a new study in the journal *Nature Medicine*, researchers from the University of Melbourne at the Peter Doherty Institute for Infection and Immunity in Australia have outlined how the human immune system mounts its response to the new coronavirus. The scientists were able to conduct a case study using information about one of the first hospital patients with a SARS-CoV-2 infection in Australia.

This was a 47-year-old female who had traveled to Melbourne from Wuhan, China. The female was experiencing mild-to-moderate symptoms of the infection when she sought care, but she was healthy in all other respects.

In their study, the researchers analyzed blood samples that healthcare professionals had collected from the patient on four different occasions: on days 7, 8, 9, and 20 following symptom onsets. "We looked at the whole breadth of the immune response in this patient using the knowledge we have built over many years of looking at immune responses in patients hospitalized with influenza," explains study co-author Dr. Oanh Nguyen.

The researchers found that during days 7-9 following symptom onset, there was an increase in immunoglobulins – which are the most common type of antibodies – rushing to fight the virus. This increase in immunoglobulins persisted up to day 20 after symptom onset, according to the analyses.



At days 7–9 following symptom onset, a large number of specialized helper T cells, killer T cells, and B cells – all of which are crucial immune cells – were also active in the patient’s blood samples.

This suggested that the patient’s body had been using many different “weapons” effectively against the new virus. [Thevarajan, I., Nguyen, T.H.O., Koutsakos, M. et al. “Breadth of concomitant immune responses prior to patient recovery: a case report of non-severe COVID-19.”, *Nat Med* (2020)].

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**METABOLIC ACIDOSIS IS  
AMONG THE MOST  
COMMON  
ABNORMALITIES SEEN IN  
PATIENTS SUFFERING  
FROM CRITICAL ILLNESS.**

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Its aetiologies are multiple, and treatment of the underlying condition is the mainstay of therapy. However, growing evidence suggests that acidosis itself has profound effects on the host, particularly in the area of immune function.

Given the central importance of immune function to the outcome of critical illness, there is renewed interest in elucidating the effects of this all too common condition on the immune response. [John A Kellum, Mingchen Song, and Jinyou Li, “Extracellular acidosis and the immune response: clinical and physiologic implications”, *Critical Care*. 2004; 8(5): 331–336].

Recently, it has been suggested that acidic microenvironments may play a role

in inhibiting immune function in certain respiratory conditions such as cystic fibrosis, and during neoplastic growth and invasion.

Therefore, perhaps surprisingly, there are relatively few studies on the effect of altered extracellular pH on immune cells and their function. Also considering the clinical frequency of acid-base disturbances and how these might affect host immunity, an understanding of how direct and indirect immune function might be altered by ambient variations in pH is increasingly warranted. [Anne Larder, “The effects of extracellular pH on immune function”, *Journal of Leukocyte Biology* Volume 69, April 2001].

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**SINCE THE LYMPHATIC  
SYSTEM IS PART OF THE  
BROADER IMMUNE  
SYSTEM, IT IS SAFE TO SAY  
THAT BOTH SYSTEMS ARE  
INFLUENTIAL TO EACH  
OTHER. THE IMPORTANCE  
OF ACID-BASE  
HOMEOSTASIS IN THE  
MAINTENANCE OF NORMAL  
CELLULAR RESPONSES  
AND PHYSIOLOGICAL  
INTEGRITY HAS LONG  
BEEN RECOGNIZED.**

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Many cellular responses are diminished at lowered extracellular pH, including cytosolic- and membrane associated enzyme activities, ion transport activity, protein and DNA synthesis, and cAMP and calcium levels.





# 'NO DISEASE CAN EXIST IN AN ALKALINE ENVIRONMENT!'

DR. OTTO WARBURG - NOBEL PRIZE IN PHYSIOLOGY AND MEDICINE IN 1931

## THE FOUNDATION OF PERMANENT HEALTH - AN ALKALINE BODY!

Otto Heinrich Warburg, (8 October 1883 – 1 August 1970), son of physicist Emil Warburg, was a German physiologist, medical doctor, and Nobel laureate. He served as an officer in the elite Uhlán (cavalry regiment) during the First World War, and was awarded the Iron Cross (1st Class) for bravery.[2] He was the sole recipient of the **Nobel Prize in Physiology and Medicine in 1931**. In total, he was nominated for the award 47 times over the course of his career.

The permanent health of the human body by Dr. Warburg's knowledge requires an alkaline organism. Acidification is therefore the foundation of almost all diseases and is almost unchallenged today.

Acidification can be prevented by eating a healthy diet, but if there is acidosis in the organism, it is very difficult to eliminate it purely by changing the diet. Chronic acidity often develops through an unhealthy and unbalanced lifestyle.

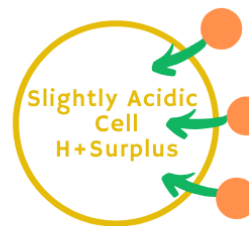
Stress, lack of exercise, plenty of stimulants and high meat consumption form far too many acids that our organism can no longer cope with. It is estimated that 70-80% of the population have an acidified organism. This results in a variety of complications. The activity of the immune system is particularly impaired.

## HEALTHY vs SICK CELL



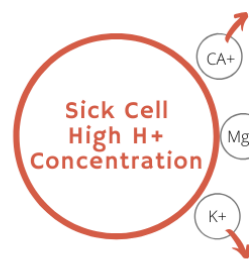
### Healthy Cell

- Slight negative charge
- pH value slightly basic, 7.2-7.4
- Well-functioning metabolism
- Well-functioning Potassium-Sodium pump
- Normal cell division
- Active communication
- Immune defence system intact



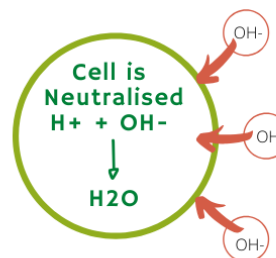
### Continuous Over-acidification of the Cell due to

- Wrong nutrition
- Stimulants, alcohol, nicotine
- Environmental impacts (i.e. smog, radiation)
- Personal environment (stress, anger etc.)
- Medication, chemotherapy
- Illness, accident



### A sick cell is characterized by

- High positive charge
- pH value acidic, under 6.2
- No more metabolism, formation of slag
- Positively charged minerals are rejected, as the charge is same as the cell
- Non-resistance against free radicals
- Fast cell division - tumour formation



### Neutralisation

- Share in OH- is increased
- H+ (positively charged Hydrogen) and OH- (Hydroxide) ions combine to form H2O
- Neutralisation of the cell environment
- Charge neutralisation
- No acidification of the cell environment



### Return to Healthy Cell

- Slight negative charge
- pH value slightly basic, 7.2-7.4
- Well-functioning metabolism (purification)
- Well-functioning Potassium-Sodium pump
- Normal cell division
- Active communication
- Immune defence system intact



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## SUBLINGUAL APPLICATION FOR FASTEST RESPONSE

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Since the early stages of research for the Pathelen® Alkaline Vitality Complex different kinds of application were tested. And although direct application on skin showed very promising results, the fastest reaction occurred after applying the complex sublingually. The active ingredients were absorbed much faster via the thin cell tissue of the oral mucosa under the tongue.

They do not have to pass the digestive system, so they aren't metabolized through the liver. This means that even at lower dosages the same results could be achieved.

Due to this, the sublingual application is predominantly used in emergency medicine and pain therapy.

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## CLASSIFICATION AS A SUPPLEMENT

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Pathelen® Alkaline Vitality Complex's ingredients are all natural and possess well researched and acknowledged abilities for supporting a healthy immune system. Key to the high bioavailability of the ingredients is the manufacturing process. This physical-mechanical process is based on cavitation. Cavitation is a phenomenon in which rapid changes of pressure in a liquid lead to the formation of small vapor-filled cavities, in places where the pressure is relatively low. When subjected to higher pressure, these cavities, called "bubbles" or "voids", collapse and can generate shock wave that is strong very close to the bubble, but rapidly weakens as it propagates away from the bubble.

**As a result, the bioavailability of the ingredients and nutrients is higher than in their unprocessed state, resulting in faster and better effects for the lymphatic and immune system.**

Pathelen® Alkaline Vitality Complex qualifies as a dietary supplement as it is not acting directly on diseases but is supporting the development of a healthy immune system then to fight them off.

# PATHELEN® ALKALINE VITALITY COMPLEX

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## RESTORING OPTIMAL FUNCTIONS OF THE IMMUNE SYSTEM

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**Pathelen® Alkaline Vitality Complex promotes an optimal extracellular pH of the lymphatic system in order to develop a healthy immune system.**

This holistic approach is an integral part of eastern medicine and recommends a specific diet and/or exercise in order to reach a better pH. Observational studies have shown that to reach an optimal pH through nutrition takes a comparatively long time, i.e. up to 18 months.

Therefore, the nutritional path is better suited as a long-term lifestyle than a treatment against diseases. The special selection of ingredients as well as the unique manufacturing process ensure that Pathelen® Alkaline Vitality Complex's immune boosting abilities can be beneficial for long term as well as short term use.

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## REGULAR TESTING OF THE EXTRACELLULAR PH

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To be able to assess the state of each individual immune system it is important to regularly check the body's extracellular pH level. In contrast to the common view that the pH has to be sampled from urine, it is mandatory that the pH level of the saliva is tested and controlled. While the examination of samples of urine could be beneficial to check for blood, ketones and protein excretions, there will be no reliable data attainable to check for diseases. Clinical and diagnostic utility of saliva as a tool to detect diseases as well as to check the health of the immune system is getting more and more recognition in the medical field.

*[Lazaro Alessandro Soares Nunes, Sayeeda Mussavira, Omana Sukumaran Bindhu, "Clinical and diagnostic utility of saliva as a non-invasive diagnostic fluid: a systematic review", Biochem Med 2015 Jun; 25(2): 177-192]*

## WHY IS PATHELEN ALKALINE VITALITY COMPLEX SO EFFICIENT?

The ingredients of the Pathelen® Vitality Complex (Booster) have continuously been improved over the last 4 years. To generate significant positive extra- and intracellular effects the use of only the ingredients are not sufficient. It requires a special cavitation process.

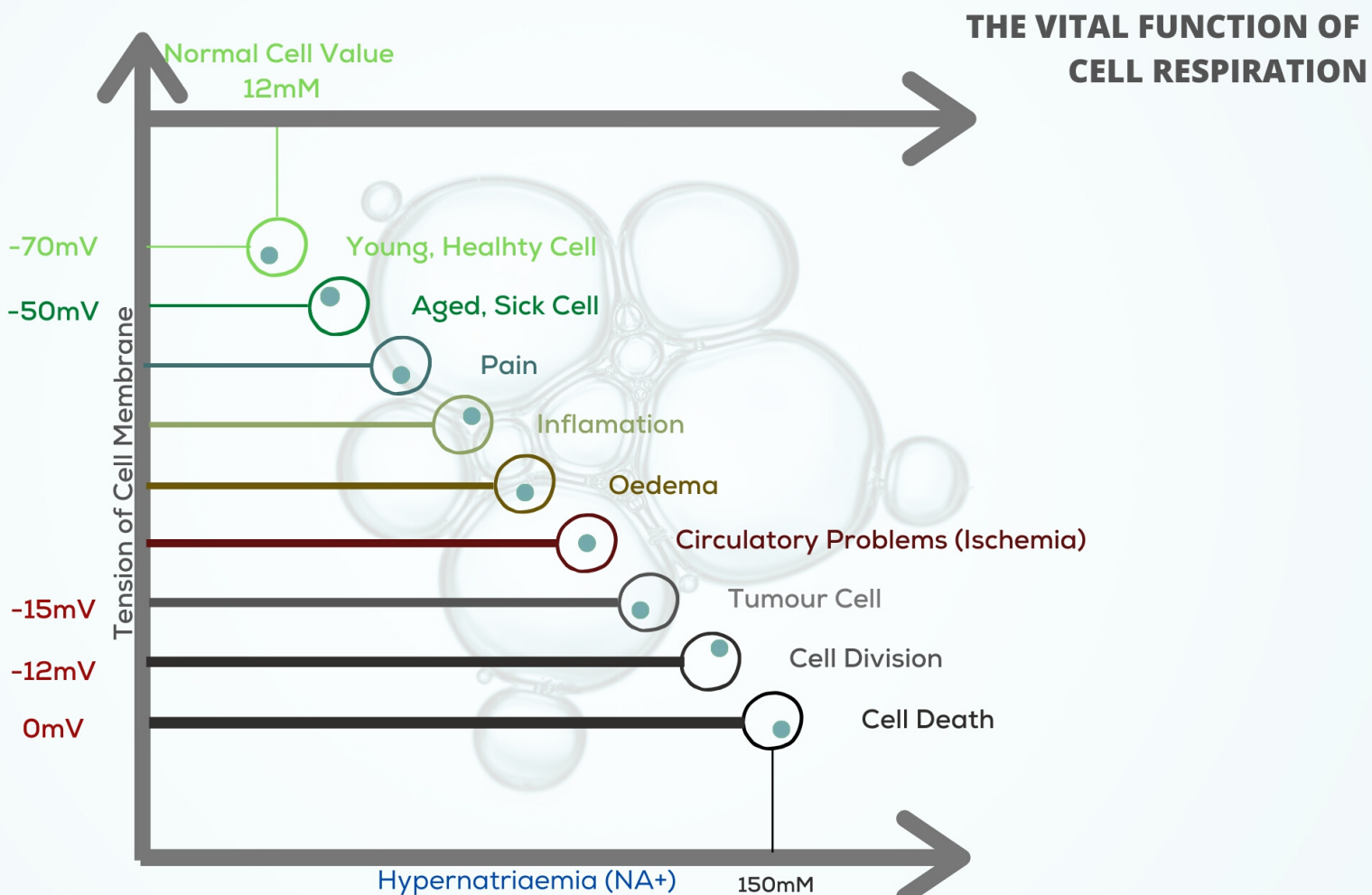
Without further treatment of the PHC teams' novel approach to the cavitation process, the contained active ingredients would not have an influence on cell respiration and tension.

A highly alkaline base is generated by the cavitation process.

Tiny little gas bubbles that surround groups of OH<sup>-</sup> ions and thus prevent the highly reactive hydrogen ions from interacting with particles outside the gas bubble. Only in this way can a large proportion (80-90%) of the OH<sup>-</sup> ions penetrate the Gastric acid passage. An extremely high electron concentration is generated in the solution.

This high electron concentration generates the rapid increase of the pH values of the intra- and extracellular matrix and an optimal nutrient supply of the cells or the "disposal" of the intracellular waste products. If the cell tension is optimized to 70 mV again, it will drastically slow down the cell aging process. The booster is an anion with extremely high energy density.

This is the special feature of the booster, compared to normal H<sub>2</sub>O, the booster solution has an up to 100,000 times higher energy density, which also has a direct positive effect on the intracellular charge and reregulates the optimal supply and disposal of cells.



The vital function of cellular respiration can be described qualitatively by means of such electrical charge values of cells. This voltage drops in parts by more than half i.e. in cancer (from about -70mV to about -15mV).



# LABEL INFORMATION

The ingredients of our food supplement contributes to the promotion of normal cell function and helps maintain a healthy body. Always consult a recognised medical doctor or pharmacist on health issues before taking food supplements.

Free of Gluten, Lactose, Wheat, Gelatine & Allergens

**DIRECTION OF USE:** Shake bottle vigorously for at least 10 seconds, making sure no sediment is present inside the bottle.

Take 1 dropperful (5ml) under your tongue (keep under tongue for at least 60 seconds), 2 hours before or after each meal.

**CAUTION:** No substitute for a balanced and varied nutrition and healthy lifestyle. Keep away from children.

Not suitable for children and adolescents. In case of illness, pregnancy or breastfeeding, a doctor should be consulted before consuming the product. Store in a cold and dry place.

There are no known side effects. Please discontinue use and contact your healthcare professional immediately in the event of an adverse reaction.

**STORAGE:** Keep out of direct sunlight, in a cool and dry place.



High Strength  
Liquid Antacid  
Support



For a Healthy Daily pH Balance

INGREDIENTS:	DAILY DOSAGE	NRV%*
Tri Magnesium Dicitrate Anhydrate	4.360mg	100%
Tri Sodium Citrate Dihydrate	6.524mg	0%
Tri Calcium Citrate Tetrahydrate	820mg	0%
Tri Potassium Citrate Monohydrate	1.265 mg	100%
Vitamin K2 Menaquininone	10mg	100%
MK7 2.000ppm (Natto) Cholecalciferol mit 100.000 IE/g	1g	100%

\*Percentage of the recommended daily amount according to annex 13 of the Regulation (VO) (EU)1169/2011(LMIV)

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Best before: 03/2021

Item Number: NUDNAV.C.EU 100ml e

# INGREDIENTS

INGREDIENTS	DAILY DOSAGE	NRV*
Tri Magnesium Dicitrate Anhydrate	4.360mg	100%
Tri Magnesium Dicitrate Anhydrate	4.360mg	100%
Tri Sodium Citrate Dihydrate	6.524mg	0%
Tri Calcium Citrate Tetrahydrate	820mg	0%
Tri Potassium Citrate Monohydrate	1.265mg	0%
Vitamin K2 Menaquininone	10mg	100%
MGK 2.000ppm (Natto) Cholecalciferol with 100.000 IE/g	1g	100%

# THE FUTURE

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**PLEASE INQUIRE IF  
YOU WOULD LIKE TO  
KNOW MORE OR  
LIKE TO TEST  
PATHELEN  
ALKALINE COMPLEX**

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We sincerely hope, that we have grabbed your attention and there are many ways to join us in the fight against diseases and suffering.

Pathelen Alkaline Vitality Complex is protected by a novel cavitation process and is in the process to be patented. The initial plan was to launch in Q3 of 2020, but we strongly believe, that with the current Pandemic, everything will be delayed. We need to act now to make this product launch happen in the near future, especially taking the positive affects it can have in the fight against COVID-19 into consideration.

Detailed research is available on request and a call can be arranged with PHC AG CEO Andreas Tausch direct, if there are any detailed questions.

**We are looking at the following business option to bring the product to market should you be interested in our cause.**

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**INVESTMENT  
PARTNERSHIPS  
NETWORKING  
DISTRIBUTION  
MARKETING  
INTRODUCTIONS**

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