

Two papers that Iodine is effective for exterminating viruses are introduced on the next 2-3 pages.

➤ **Reduce the risk of infection for medical staff**

The iode-mask, iode-glove, and iode-hood shown on the right are iodine-impregnated masks, gloves, and hoods that have a high anti-virus function, in which elemental iodine (I_2) is stably supported on a soft and stretchable fabric. By covering these exposed areas such as the head and face with these anti-virus functional protective equipment, medical professionals who are at the forefront of viral infections can concentrate on infectious disease treatments in a safe and secure environment. I think it will be. (See paper 1)



iode-mask



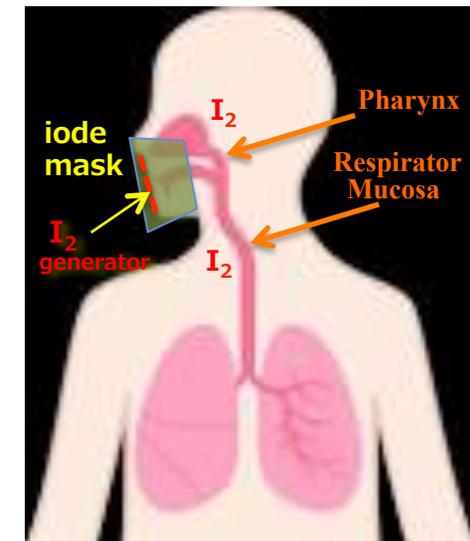
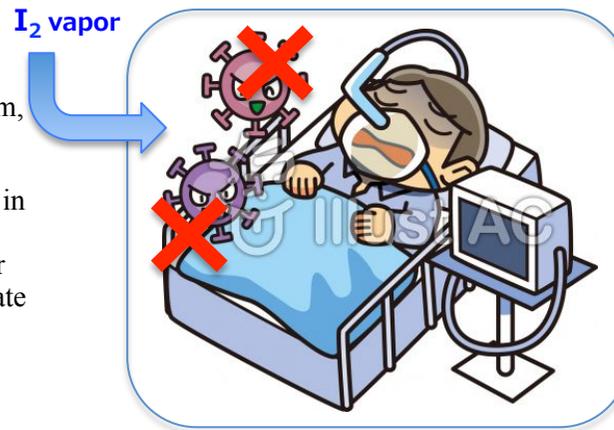
iode-glove



iode-hood

➤ **Virus removal treatment in hospital room**

By supplying iodine vapor (I_2 vapor) to the hospital room, it will be able to disinfect and remove viruses from the patient room space, the surface of clothing and various articles, and concentrate on infectious disease treatment in a safe and secure environment. (See paper 1)
It is necessary to study the concentration of iodine vapor supplied to the hospital room, but it is possible to generate and supply a certain concentration.



➤ **Treatment effect: as a proposition**

In papers 1 and 2, adsorption of iodine (I_2) on the salivary glands, nasal mucosa, and respiratory mucosa is effective in inactivating the virus in the body, and the "gargling" by iodine completely eliminates coronavirus. It is said that it can be activated. (See papers 1 and 2)

* It is a suggestion to the doctor, but since the iodine mask can control the emission of volatile iodine (I_2), Can you attach it to an infected patient and check the effect?

[Introduction paper 1]

Iodine: the Forgotten Weapon Against Influenza Viruses

David Derry, "Iodine: the forgotten Weapon Against Influenza Viruses",
Tyroid Science 4(9): R1-5, 2009

A paper on an effective disinfectant against viruses by analyzing the influenza pandemic (Spanish flu) that occurred in 1918.

<Summary: Excerpt>

Iodine is most effective in getting rid of viruses (especially influenza viruses). Spraying iodine as a mist can eliminate the virus, and iodine solution is also effective. In 1945, Burnet and Stone suggested that iodine-bearing masks could prevent viral infections by examining the effects of iodine mist in mice infected with the influenza virus, and for the examination and treatment of critically ill patients, Healthcare professionals recommend having an iodine aerosol treatment room. Masks loaded with iodine are even more effective, and hand washing with a mild iodine solution is also very effective. Isolation in an atmosphere of aerosol iodine is safer for patients and medical personnel. Ingestion of iodine from the upper oral cavity and respiratory mucosa also enhances the body's defense function.

Hand washing with standard 70% alcohol is effective against pathogenic bacteria but not viruses. Especially for influenza viruses, iodine is the most effective disinfectant with broad spectrum of sterilization and low toxicity. A solution prepared by diluting the iodine solution by a factor of 1 million inactivates the virus. Iodine aerosols inactivate many viruses within 30 seconds. As in Chile, the number of deaths from infection in Japan was low because the intake of Nitrate (the author says, "I mean iodine in Chile's salt glass?" Is high).

Burnet and Stone said, "Wearing an iodine-carrying gauze mask has significantly improved the protection of doctors and nurses who treat severe influenza virus-infected persons. It has a role to suppress. Iodine aerosol is effective in preventing the spread of influenza virus. "

<Conclusion>

Masks containing iodine, solutions containing iodine, aerosols, oral treatments, etc. will help get rid of the influenza virus and allow the H1N1 pandemic to converge.

Iodine: the Forgotten Weapon Against Influenza Viruses

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Only the first
page of the paper
is reprinted below

Received: August 29, 2009
Accepted: September 2, 2009

Abstract. After the 1918 Influenza Pandemic which killed an estimated 30 million people, governments financed research on the Pandemic's causes. Over 25 years, influenza viruses were isolated and methods for killing them with various agents discovered. Iodine was the most effective agent for killing viruses, especially influenza viruses. Aerosol iodine was found to kill viruses in sprayed mists, and solutions of iodine were equally effective. In 1945, Burnet and Stone found that putting iodine on mice snouts prevented the mice from being infected with live influenza virus in mists. They suggested that impregnating masks with iodine would help stop viral spread. They also recommended that medical personnel have iodine-aerosol-treated rooms for examination and treatment of highly infected patients. Current methods of dealing with influenza infection are isolation, hand washing, antiviral drugs, and vaccinations. All of these methods can be improved by incorporating iodine into them. When impregnated with iodine, masks become much more effective, and hand washing is more effect when done with mild iodine solutions. Isolation techniques coupled with aerosol iodine would make them safer for patients, medical personnel, and all persons working with the public. Public health authorities could organize the distribution of iodine and at the same time educate the public in the effective use of iodine. Oral iodine might also boost body defense mechanisms in the upper oral and respiratory mucus. **Conclusion:** Iodine incorporated into masks, solutions, aerosols, and oral preparations could help to kill influenza viruses and fight off an H1N1 Pandemic.

Keywords. H1N1 • Influenza virus • iodine • aerosols • immunization • isolations • masks • prevention

Influenza Pandemic History

The 1918 Influenza Pandemic killed an estimated 30 million people within a year. In the quarter century following the Pandemic, governments financed intensive research into the Pandemic's causes and treatments for the viruses that cause influenza.^[1] Iodine was the superior anti-septic that at low concentrations killed the airborne viruses that cause influenza. Iodine was without toxicity.^[2-12]

The 1918 Pandemic was unusual in that it affected young healthy men, especially soldiers.^[1] Normal flu infections are most virulent against young children and older persons.^[14] H1N1 virus also concentrates its lethality on young healthy persons between ages 5 and 18, as reported by Dr. Thomas Frieden, director of the U.S. Centers for Disease Control and Prevention.^[13-14] In this manner, the H1N1 virus resembles the 1918 virus.

The 1918 virus attacked again in the fall and

over two-months killed millions of people. It is anticipated that the H1N1 virus may behave similarly, and public health authorities and the medical profession are bracing for this potential outcome.

Treatment and Prevention

The time-tested weapons against influenza viruses are cleanliness, hand washing, isolation, masks, immunizations, and antiviral medications. In 1918, the last two were not available, and the other methods did little to stop viral spread. Washing hands in a standard 70% alcohol solution is effective against most pathogenic bacteria, but it has no effect on viruses, especially influenza viruses.

In a similar manner, masks used in 1918 showed barely detectable benefits in holding back influenza spread as viruses readily passed through the gauze. Isolation is difficult to institute and enforce in cities with large numbers of infected patients. In sparsely-populated communities such

[Introduction paper 2] Molecular Iodine: Could This Be a Game Changer for Dentistry?

<Summary of the paper>

Povidone Iodine (PVP-I), chlorhexidine gluconate (CHX), and molecular iodine (I₂) were examined as mouthwash. As a result, molecular iodine (I₂) is the most excellent in disinfecting power, immediate effect, toxicity, inflammation, antibacterial spectrum, etc., and by gargle with I₂ (25 ppm) for 30 seconds, human rhinovirus (Rhinovirus) and coronavirus could be completely inactivated.

<https://www.oralhealthgroup.com/features/molecular-iodine-could-this-be-a-game-changer-for-dentistry/>



Feature

The first page of the paper and the excerpts of figures and tables are reproduced below.

Molecular Iodine: Could This Be a Game Changer for Dentistry?

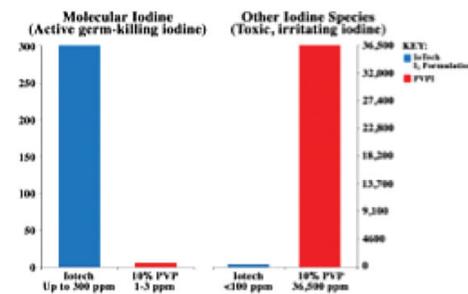
March 3, 2020

by Herb Moskowitz, DDS; Janice Goodman, DDS, MS Oral Medicine and Orofacial Pain

It looks like 2020 is bringing the Canadian dental profession a gift, in the new selection of molecular iodine (I₂) products from ioTech International. These products, surpass all of the existing gold standard disinfectants. Coming out of the gate, these products appear to be game changers in antimicrobial chemistry. Dr. Gordon Christenson named ioRinse the “Best in Class” antimicrobial agent in Clinicians Report for 2019. This technological breakthrough appears to have unlimited indications in medical, dental, agricultural and veterinary fields. To top it off, I₂ is an essential element, natural, organic and safe for chronic use and it is being priced with the most affordable of all the antimicrobials.

History of Iodine Use

The recorded use of iodine in medicine, dates back to 5000 BC when seaweed and sea sponges were used to shrink goiters. Lugol’s iodine was introduced in 1829, tincture of iodine in 1908 and finally povidone iodine PVP-I in 1955 (brand name: Betadine). ioTech’s patented molecular iodine products first surfaced in 2017 after several years of research and development to make iodine soluble and stable in aqueous solutions (Fig. 1). Betadine has 31,600 ppm of total iodine but only 3 ppm of molecular iodine; Iotech has less than 1000 ppm of total iodine but up to 600 ppm are actually molecular iodine. Since it is ONLY the molecular iodine that is a biocidal species of iodine, all the other species in Betadine or Povidone Iodine (PVP-I) contribute to staining or toxicity but DO NOT kill microbes (Figs. 1 & 2).



Molecular Iodine vs. Other Antiseptics

Characteristic	CHX	PVP-I	Molecular Iodine
Stronger	×	×	✓
Faster	×	×	✓
Less toxic	×	×	✓
Less irritating	×	×	✓
Non-staining	×	×	✓
Spectrum of activity	×	×	✓

Molecular iodine alone inactivates *Aspergillus brasiliensis* in 1/4th the time compared to ChlorPrep. ChlorPrep is a widely used surgical prep containing 17 times the concentration of CHX as CHX oral rinse (2.0% vs 0.12%) and a second active, 70% isopropyl alcohol.

Virucidal Efficacy at Varying Concentrations of Molecular Iodine in Povidone Iodine

Molecular Iodine Concentration	Poliovirus – log kill		Adenovirus – log kill
	5 min	15 min	1 min
0.17 ppm I ₂ (10%)	0.5	0.6	0.6
1.5 ppm I ₂ (1.0%)	0.7	2.5	2.4
1.84 ppm I ₂ (0.01%)	1.7	3.6	3.5
4.88 ppm I ₂ (0.1%)	2.6	>4.2	4.3

Increasing Dose = Increasing Efficacy => Dose dependency
Concentrated molecular iodine completely inactivates Poliovirus in 90 seconds (4.5 log kill)

Source: Relationship Between Virucidal Efficacy and Free Iodine Concentration of Povidone Iodine in Buffer Solution, BioControl Science, 2016, Vol 21, No 1, 21-27 Yoshida Pharmaceutical Co.



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