

ヨウ素がウイルス退治に効果的であるとする論文を次の2~3頁に2報紹介します。

➤ 医療者の感染リスクの低減

右に示す iode-mask, iode-glove, iode-hoodは、柔らかで伸びる布地に元素状ヨード(I_2)を安定担持した高い抗ウイルス機能を有するヨード担持マスク、手袋、ずきんです。ウイルス感染症の最前線で治療にあっている医療従事者の方々が、これらの抗ウイルス機能防護具で頭部や顔面などの露出部を覆うことで、安全で安心できる環境で感染症治療に専念できるようになると思われます。
(論文1参照)



iode-mask



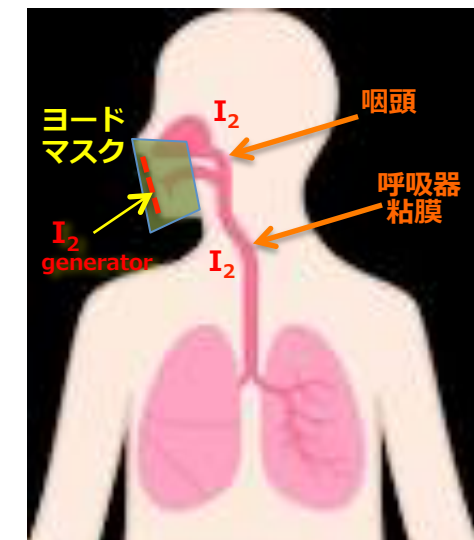
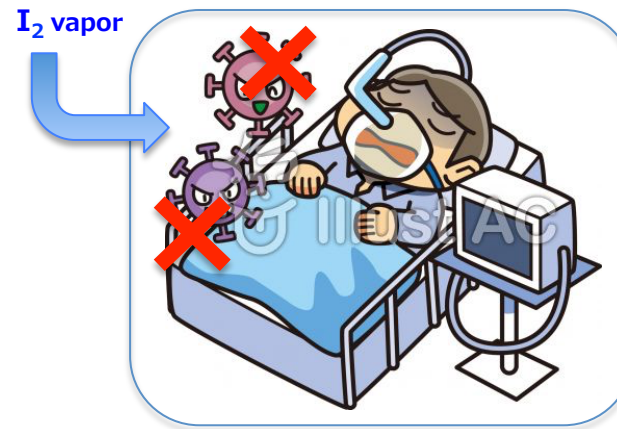
iode-glove



iode-hood

➤ 病室内の除ウイルス処理

病室内にヨウ素蒸気(I_2 vapor)を供給することで、病室空間、衣類や様々な物品の表面の除菌・除ウイルスを行い、安全で安心できる環境で感染症治療に専念できるようになります。(論文1参照)
病室内に供給するヨウ素蒸気の濃度は検討する必要がありますが、その一定濃度の発生・供給は可能です。



➤ 治療効果：可能性の提案として

論文1、2には、ヨード(I_2)を唾液腺・鼻粘膜・呼吸器の粘膜に吸着させることで、体内のウイルスの不活化に効果があり、ヨードによる“うがい”でコロナウイルスを完全に不活化できると述べられています。(論文1、2参照)

***お医者さまへご提案ですが、ヨードマスクは揮発性ヨード(I_2)の放出を制御できますので、感染した患者さんに付けていただき、その効果をご確認頂けませんか？**

[紹介論文 1]

ヨウ素：インフルエンザウイルスに対抗できる忘れられた武器

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

1918年に発生したインフルエンザパンデミック（スペイン風邪）を解析し、ウイルスに対する有効な消毒剤などに関する論文。

<概要：抜粋>

ヨウ素はウイルス（特にインフルエンザウイルス）を退治する上で最も効果的である。ヨウ素をミスト状でスプレーすればウイルスを退治でき、同様にヨウ素溶液も効果的である。1945年、BurnetとStoneは、インフルエンザウイルスを罹患させたネズミでヨウ素ミストの効果を調べることで、ヨウ素担持マスクがウイルス感染を防止できることを示唆し、重篤な患者の検査や治療のために、医療従事者はヨウ素エアロゾル処置室を持つことを勧めている。ヨウ素を担持したマスクはさらに効果的であり、マイルドなヨウ素溶液で手洗いすることも大変効果的である。エアロゾルヨウ素の雰囲気でも隔離すれば、患者や医療者がより安全である。上部口腔や呼吸器の粘膜からヨウ素を摂取することも身体防御機能を高める。

標準的な70%アルコールで手洗いすることは病原性細菌には効果的であるが、ウイルスには効き目がない。特にインフルエンザウイルスに対しては、ヨウ素は毒性が低く最も効果的な広い殺菌スペクトルを有する消毒剤である。ヨウ素溶液を100万分の1に希釈した溶液はウイルスを不活化する。ヨウ素のエアロゾルは多くのウイルスを30秒以内で不活化する。日本の感染死亡者が少なかったのは、チリと同様にNitrate(著者は「チリ硝石に含まれるヨウ素の意味か?」)の摂取量が多いため」と述べている。

BurnetとStoneは「ヨウ素を担持したガーゼマスクの着用は、重篤なインフルエンザウイルス感染者の治療にあたった医者、看護婦などの防御の効果著しく向上させた。ヨウ素蒸気はインフルエンザの室内感染を抑える役割がある。ヨウ素エアロゾルはインフルエンザウイルスの飛散防止に有効である。」と述べている。

<Conclusion>

ヨウ素を含むマスクやヨウ素を含む溶液・エアロゾル・口腔処置などは、インフルエンザウイルスを退治し、H1N1パンデミックを収束させる助けになる。

Iodine: the Forgotten Weapon
Against Influenza Viruses

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論文の1頁目
のみ以下転載

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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 effective 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

[紹介論文 2] 分子状ヨウ素：歯医者にとってGame Changerになるか？

<論文の概要>

うがい薬として、Povidone Iodine(PVP-I), chlorhexidine gluconate(CHX), molecular iodine(I₂)を調べた。その結果、消毒力・即効性・毒性・炎症・抗菌スペクトルなどにおいて、molecular iodine(I₂)が最も優れており、I₂(25ppm)で30秒うがいすることで、ヒトライノウイルス(Rhinovirus)と**コロナウイルスを完全に不活化**できた。

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



論文の1頁目と図表抜粋を以下転載

Feature

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

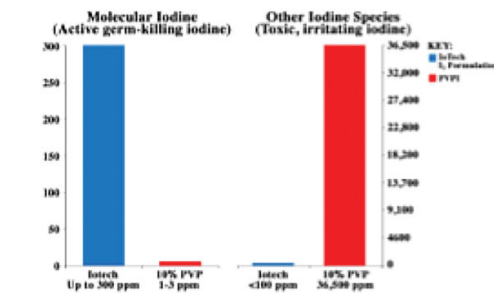
March 3, 2020

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 ChloroPrep. ChloroPrep 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 Yohida Pharmaceutical Co.



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